

REVIEW

Of the materials for acquiring the educational-and-scientific degree of "Associate Professor", Area of Higher Education 6-Agricultural Sciences and Veterinary Medicine, Professional Field 6.1- Plant Growing, scientific specialty "Fruit Growing", announced by the University of Forestry, procedure code: AGR - AsP - 0320-37.

Participant in the contest is:

Chief assistant Dr. Denitsa Dimitrova Serbezova - Department of Agronomy at the University of Forestry, Area of Higher Education 6-Agricultural Sciences and Veterinary Medicine, professional field 6.1- Plant Growing, scientific specialty "Fruit Growing".

Reviewer: Argir Todorov Zhivondov from the Fruit-Growing Institute in Plovdiv, Professional Field 6.1. 'Crop Production', Major 'Breeding and Seed Production of Cultivated Plants', member of the Scientific Board of Examiners in accordance with Order No. ZPS - 235 from 09.06.2020 of the Rector of the University of Forestry - Sofia.

1. Brief biographical data about the participant

In the current contest for educational-and-scientific degree "Associate Professor" the only candidate is Chief Assistant. Dr. Denitsa Dimitrova Serbezova. She was born on January 29, 1980. in the city of Varna. In 2002 graduated from the Agricultural University in Plovdiv - specialty "Viticulture and Horticulture". In 2003 specializes in ABI - Sofia, and in 2006 conducts a one-month specialization in the application of biotechnology in fruit growing in Skierniewice, Poland.

She successfully defended his doctoral dissertation in 2007 on the topic: "Raspberry selection - economic and biological assessment of elites". During the period 2009-2011. conducted a two-year specialization in China, and in 2008 is a researcher in the Department of Berry Crops, Kostinbrod at the Institute of Agriculture in Kyustendil. From the end of 2008 to 2011 is an assistant at LTU - Sofia, where in parallel with his research she conducts exercises in the

disciplines of fruit growing and viticulture. As a senior assistant, since 2011. at the same university she gives lectures and exercises in several disciplines related to fruit growing.

She speaks Chinese at a basic level, Russian at an independent level and English at a free level. Owns professional skills for leadership and participation in research projects and organizational skills and communication skills for teamwork. She has high computer skills - Word, Excel, Power Point, Internet.

2. Relevance of the participant's documents and materials with the required ones according to the Regulations for RAS – University of Forestry.

To participate in this competition, the candidate has submitted a full set, including 12 documents as follows:

- CV;
- a copy of the diploma for completed higher education;
- a copy of the diploma for the acquired educational and scientific degree "Doctor"
- document for AD;
- medical certificate;
- criminal record certificate;
- certificate for internship in the specialty;
- self-assessment report for fulfillment of the minimum national requirements for AD "Associate Professor";
- reference for the contributions in the works;
- list of publications;
- documents and materials certifying other activities;
- information card.

All publications of the participant are presented in full text, as well as an abstract of a doctoral dissertation. I believe that the submitted documents and materials fully comply with those required by the Rules of UF.

3. Evaluation of the teaching activity.

The teaching and teaching activity of the participant covers a 12-year period. As an assistant at the University of Forestry from 2008 to 2011. performs

exercises in the disciplines of Fruit Growing and Viticulture. Since 2011 until now, as a chief assistant, she has been conducting exercises in the disciplines of Fruit Growing and Shape and Decorative Fruit Growing. She gives lectures on Rare Fruit Crops, Shape and Decorative Fruit Growing, Berry Crops and Fruit Growing Technologies. During the period 2013 - 2018 teaches in the disciplines - post harvesting technologies in fruit growing, Production of fruit planting material, Urban, Suburban and Greenhouse horticulture, Pomology and Selection of fruit species.

In addition to the mentioned significant teaching activity, Chief Assistant Dr. Serbezova participates in the development of 12 curricula in compulsory subjects studied by students for Bachelor's and Master's degrees. She is the author of 5 work programs and co-author of 7. She has supervised 4 graduates to obtain a Bachelor's degree. And one for the Master. She conducted 3 internships with students in the period 2016-2019. She has participated in 13 faculty working commissions, reviewed diploma theses, participated in courses. She has participated in student scientific conferences nationally and internationally. She has made 4 scientific and expert visits to China.

4. Evaluation of the scientific and publishing activity.

4.1. Participation in projects

One of the main criteria for assessing the ambition and volume of employment of the researcher is her participation in scientific, applied and educational projects.

The information provided by the candidate in this contest shows that she was an active participant in an international project developed by the Institute of Agriculture - Kyustendil in collaboration with the Agricultural Academy of Harbin Province, China and 13 national projects, distributed as follows:

- 7 pieces at the Agricultural Academy;
- 2 pieces financed by FNI;
- 1 piece financed by UF - Sofia;
- 1 piece funded by the America for Bulgaria Foundation;
- 1 piece financed by the "Human Resources Development" Program;
- 1 piece funded by the "Science and Education for Smart Growth" Program.

The projects at the Agricultural Academy in the field of fruit growing predominate, which is a very good indicator for the construction and specialization of the candidate. I highly appreciate the activity of Chief Assistant. Dr. Serbezova as a participant in the development of a significant number of projects.

4.2. Characteristics of the published scientific results.

In the current contest for "Associate Professor" the participant presents a total of 37 works, grouped as follows:

- monographs - 1 issue;
- studios - 1 piece;
- manuals - 2 pieces;
- in foreign peer-reviewed magazines - 7 issues;
- in Bulgarian peer-reviewed magazines - 2 issues;
- in unreviewed - 13 pieces;
- in collections of scientific forums - international - 4 issues
national - 1 number;
- popular science articles - 6 pieces.

The presented monograph on raspberries is an independent author's work of the participant in the contest. It comprehensively reflects both technological units of crop cultivation and selection achievements in raspberries. It is written professionally and is well illustrated. It is useful for researchers, specialists, technologists, breeders and students. In the presented study "Formation and pruning of fruit trees and shrubs" the candidate has developed a section for pruning shrubby fruit species - raspberries, blackberries, blackcurrants, red and white currants, which information is useful for professionals and farmers. The two guides presented are useful sources of information for students and farmers.

Amongst the 37 publications 6 popular science articles are included, which only promote the results of scientific activity. 18 of the total number of publications were printed in a foreign language and 19 in Bulgarian.

From the review of the self-assessment for compliance of the scientific production with the minimum national requirements under art. 2b of ZRASRB and art. 2a, para 1 of PRAS in LTU, it becomes clear that Chief Assistant Dr. D. Serbezova has fully met the criteria for AD "Associate Professor". The

presented table shows that the required minimum number of points on indicators A and B are fully met. Indicator G is significantly overfulfilled, and indicator D is overcompleted almost twice. Although there are no minimum requirements for indicator E, an additional 226.33 points are presented under it. The required minimum total number of points from all indicators is exceeded by 323.82 points. All points on the individual indicators are accurately calculated and correctly presented by the candidate.

Table 1. Minimum number of required points by groups of indicators for employment of AD "Associate Professor" in the professional field 6.1.- Crop production.

Group of indicators	Minimum national requirements (number of points)	Points about the candidate in the competition
A	50	50
B	100	100
G	200	252.49
D	50	95
E	-	226.33
Total number of points	400	723.82

4.3. Citation

The significance of the results obtained from the research activity is judged by the intensity of citations of publications. The presented reference for the citations includes a total of 16 citations, and the cited works are 9. In a referenced foreign journal there is one citation and one in a monograph. The other 14 quotes are in unreferred foreign and Bulgarian publications. The report shows that the candidate in the competition is performing well on the current indicator.

4.4. Contributions to the works of the candidate.

A total of 32 contributions were formulated, of which 9 with original character, 9 with confirmatory character and 14 with applied character. In general, I accept and evaluate as significant the candidate's contributions. I believe that the most important are the following:

1. Contributions of an original nature

- The degree of manifestation of basic biological and economic qualities of 145 new raspberry genotypes has been established;
- It was found that the varieties Bulgarski Rubin and Shopska Alena are highly sensitive to soil pathogens, while the varieties Samodiva and Lyulin can be successfully used in the selection for resistance;
- Molecular methods prove a high level of genetic diversity in Bulgarian varieties of strawberries and raspberries compared to European and American;
- The most appropriate multifactor scheme for assessment of genetic resources in raspberries for resistance to soil fungal pathogens has been established;
- Differentiation of raspberry hybrids and elites has been carried out on the basis of a system of criteria.

2. Contributory contributions.

- The intermediate nature of inheritance of the characteristics of shoot thickness and fruit mass, as well as the dominant nature of inheritance of fruit shape and color have been confirmed;
- The taxonomic diversity of the genus *Rubus* has been confirmed;
- New studies have confirmed that the rootstocks Maxma 14 and Gisela 5 do not affect the chemical composition of the leaves and the quality of the fruit;
- Appropriate formations have been identified for intensive apple growing on rich and less fertile soils.

3. Contributions of an applied nature

- A database has been created for the main phenological phases of flowering and ripening of raspberry fruits;
- A collection plantation of berry crops has been created;
- It is recommended for the practice of apple varieties Breburn and Granny Smith grafted on M9 rootstock to be grown on the vertical axis system;
- For the soil and climatic conditions of the Sofia field are recommended for cultivation as the highest yielding blackcurrant varieties Tripleks and Leningradski velikan.

5. Evaluation of the personal contribution of the participant

The personal participation of the candidate in the publishing activity is distributed as follows:

- independent publications - 6 issues;
- with one co-author - 12 pieces;
- with two co-authors - 6 pieces;
- with three or more co-authors - 13 pieces.

6. Critical remarks and recommendations

1. In the first original contribution arising from the monograph (B.3.1), as well as in the monograph itself, it is stated that out of 145 raspberry getotypes there are 108 elites and only 37 hybrids. Usually, as a result of each selection program, hybrids are the predominant part, and only the best ones, passing into the category of elites, are selected from them, and they are the smaller part, even often they are units. Is the current anomaly in the ratio between hybrids and elites due to low selection criteria or high selection success?

2. In a large part of the scientific publications there is no mathematical data processing or only a partial one has been made. The availability of mathematical data processing implies a more reliable interpretation of the results and supports the conclusions made.

3. I recommend in the future publishing activity of the candidate to more clearly and distinctly stand out her personal participation in the collective developments (G7 / 4, G7 / 5, G7 / 9, G8 / 4, G8 / 5, G8 / 6, G8 / 7, G8 / 11, G8 / 14, etc.)

The critical remarks made do not lower the level of the candidate's research work. I am convinced that they will be taken into account and will be avoided in future career development.

7. Personal impressions

I have personally known Chief Assistant Dr. Denitsa Serbezova since the beginning of her development as a doctoral student. I have witnessed her good performance at international and national scientific conferences and symposia. She is a precise and persistent researcher and an accurate teacher. I am convinced of her successful future career development in both research and teaching.

8. Conclusion

Based on the thorough review and analysis of the materials submitted in this contest, I believe that they fully meet the requirements of ZRASRB and the Regulations for its application of the educational-and-scientific degree "Associate Professor". This gives me reason to evaluate them POSITIVE. I will vote positively for Chief Assistant. Dr. Denitsa Serbezova to take AD "Associate Professor" in the professional field 6.1 - Plant Breeding, scientific specialty "Fruit Growing".

I allow myself to propose to the colleagues, members of the Scientific Board of Examiners, to vote positively like me for awarding the educational-and-scientific degree 'Associate Professor' to Chief Assistant. Dr. Denitsa Serbezova

28.07.2020 r.

Plovdiv

Reviewer:

(Prof.

