

## STATEMENT

on the materials for participation in a competition for the academic position of "Associate Professor", field of higher education 6. Agricultural Sciences and Veterinary Medicine, PF 6.1. "Crop production", scientific specialty "Fruit growing", in the discipline "Fruit growing", announced by the University of Forestry in SG no. 32/03.04.2020, procedure code AGR-AsP-0320-37

**A candidate for participation in the competition is:**

**Chief Assistant Dr. Denitsa Dimitrova Serbezova**

**The academic review was prepared by:** Dr. Boryan Mincheva Stefanova, Associate Professor in PF 6.1. Crop production in RIMSA, Troyan

**1. Brief biographical data of the applicant**

The candidate in the competition for associate professor, announced by the University of Forestry in State Gazette no. 32/03.04.2020, Chief Assistant Dr. Denitsa Serbezova graduated from the Agricultural University of Plovdiv in 2002, in "Viticulture and Horticulture", with a thesis on: "Project for creation and cultivation of 300 decares of apple orchard".

In 2007 she defended a PhD thesis: "Selection of raspberries - economic and biological evaluation of elites" for the acquisition of Doctoral degree in "Selection and seed production of cultivated plants" for the Institute of Agriculture - Kyustendil. She specialized (2 years) in Investigation of genetic resources and selection of raspberry at Heilongjiang Academy of Agricultural Sciences, Harbin, PRC.

Since 2008 up to now she has been a lecturer at the University of Forestry (UF), Faculty of Agriculture, with 11 years and 6 months of experience.

Member of the Scientific Council - Kyustendil She was awarded the **Gold Medal** for the research: "Technology for integrated raspberry production" Seventh National Exhibition. Inventions \* Transfer \* Innovations, ITI 2016, Sofia, Union of Inventors in Bulgaria

**2. Conformity of the submitted documents and materials of the candidate with the required ones according to the Regulations for DAS in UF;**

According to the normative requirements of the Law for development of the academic staff of the Republic of Bulgaria, of the **Regulations for application of the Law on Development of the Academic Staff (DAS) in the Republic of Bulgaria and the Regulations for DAS in UF** in the current competition for "associate professor", Chief Assistant Dr. Denitsa Serbezova participates as the only candidate, whose documents and materials are in full compliance in type and content.

Lists and copies of materials certifying the existence of 37 scientific publications are presented. It is evident after the verification that:

**According to indicator A** is presented Dissertation for Doctoral scientific degree - **50 points**.

**Indicators from group B** - peer-reviewed Monograph **100 p**.

**Total number of points from group "G" - 252.49 p, including**

- Articles and reports published in scientific journals, referenced and indexed in world-famous databases with scientific information with **179,57p.**; in unreferenced journals with scientific review **67.92** points; Studies published in unreferenced scientific peer-reviewed journals **5 p**.

**Total number of points indicators from group D** Citation – **95**.

No points for "Associate Professor" are required for the indicators from group E, but



nevertheless **Total number of points for indicators from group "E" 226.33 for** and participation in national and international scientific projects and published university textbook are presented. The minimum national requirements for holding an academic position **"Associate Professor"** for PF 6.1. Crop production is a sum of **400** points by groups of indicators. From the presented materials Ch. Assistant Professor Dr. Serbezova collects A + B+C + D + E **TOTAL 723.82 POINTS**. The overfulfillment of the points required by the Minimal National Requirements is more than 180%.

### **3. Assessment of the teaching activity of the candidate**

The candidate is a built lecturer with many years of pedagogical experience at UF. For the period 2013-2018 she participated in the development of various curricula, 3 of them for Bachelor's degree, the rest for Master's degree full-time and part-time training in the disciplines she teaches (I accept the presented reference for teaching in **10 subjects**).

She is a member of a number of programs and commissions, incl. examination commissions for state examinations in various specialties at the Faculty of Agronomy of UF; examination commissions on Individual curricula of doctoral students. Supervises training practices in fruit growing with full-time and part-time students from II and IV year on routes outside UF. She is the supervisor of five graduates, she has reviewed 2 diploma theses.

Her teaching activity gives me grounds to define her as an excellently prepared lecturer, who can fully perform the teaching activity related to the academic position "Associate Professor" for which she is applying.

The finished courses in various operational programs and projects at UF and other organizations, incl. Chinese language course 2009, accompanied by qualification certificates, expand and improve the candidate's ability to work at a high scientific level. Scientific expert visits to China (4) are a springboard to the high bar raised by Chinese science in the field of agriculture, crop production, in particular Fruit growing.

### **4. Evaluation of the scientific, scientific-applied and publishing activity of the candidate**

In the competition for Associate Professor, Ch. Assistant Dr. D. Serbezova announces participation with 37 scientific papers, covering the specific competencies and scientific interests of the announced competition. The scientific production is aimed at selection and cultivation of raspberries, as well as all fruit species (seed, stone, small-sized fruit) in the fields of biotechnology, selection, cultivation systems and elements of technology, such as formation and pruning of various fruit species, plant protection, fruit production in the Republic of Bulgaria, as well as the state and trends of world and European fruit production.

The classification of the publications in this competition starts with **Monograph Serbezova, D. 2019. Raspberry - cultivation and selection**. 144 pages, published by Intel Entrance, Sofia. Reviewers: Prof. Dr. Valentina Bozhkova, Prof. Dr. Stefan Gandev.

There are 12 scientific international and Bulgarian publications, indexed in Scopus and Web of science, such as: *Acta Horticulturae*, 6 pcs.; *AgroLife Scientific Journal*, Bucharest. 4 pcs.; *Biotechnology and Biotechnological equipment*, 1 pc.; *Bulgarian Journal of Agricultural Sciences* 1 pc.

13 pcs. in national peer-reviewed journals with scientific review: *Agricultural Science*, 1; *Plant Sciences*, 4; *Journal of Mountain Agriculture on the Balkans*, 4; *Management and sustainable development*. University of Forestry, 2; *Bulgarian Journal of Soil Science, Agrochemistry and Ecology* 1; *Ecology and future* - 1;

2 pcs. in conference proceedings.

1 pc. study of 113 pages: Domozetov D., Gandev, S., **Serbezova, D.** Formation and pruning of fruit trees and shrubs. *Biofruit Bg-EOOD*. Plovdiv. 2014, as well as a guide for fruit growing exercises and Handbook of the entrepreneur in perennials. II.G. Berry crops, considered as a university textbook.



The publications in which she is an independent author or with one co-author are almost equal in number to those in which the author's team is larger (50%). The personal contribution is expressed in 6 independent articles, 12 publications of which she is the first author, representing about 30% of the production. Participates in 12 issues with one co-author (30%), and with three even more - 13 (also about 30%). The reports show participation with posters at international (in Romania and Spain) and national scientific forums, as well as participation with students in youth conferences.

#### **4.1. Participation in scientific, scientific-applied and educational projects**

The total number of projects in the report is 13, of them

- 7 to Bulgarian Agricultural Academy, 2 under Scientific Research Fund, 1 project developed at UF, 1 project funded by the America for Bulgaria Foundation "Creation of a bioresource extension service (BIOREX) at the University of Forestry", with coordinator: Prof. Dr. Rumen Tomov. Member of target groups for 2 projects, with coordinator Prof. Dr. Rumen Tomov for 2 Operational Programs.
- She is a member of the organizing committee of the III International Symposium on Horticultural Crop Wild Relatives, **2018**, Plovdiv, Bulgaria, and is also a member of the editorial board of the respective edition Acta Hort. 1259. <https://www.ishs.org/ishs-book/1259>
- A member of the editorial board of the American Journal of Agriculture and Forestry (AJAF). 2020; <http://www.sciencepublishinggroup.com/j/ajaf>
- A member of the International Scientific Society of Horticulture (ISHS) Section Pome and Stone Fruits (2017).

#### **4.2. Characteristics of the published scientific results**

The published peer-reviewed, independent monograph deserves high praise, which aims to enrich fruit growing science and practice with new achievements in the cultivation and selection of raspberries. Along with classical research methods, biotechnological and molecular approaches are used to assess genetic resources.

Recently, there is a consistent trend for the application of high-yielding varieties and modern technologies in fruit production, which will lead to high quality yields for all fruit species that the applicant is engaged in.

The research is methodologically correct, the experiments cover many consecutive years and the results obtained, analyzed and supported by mathematical processing, allow for the formulation of specific, definite conclusions.

#### **4.3. Impact of the scientific activity of the candidate in the literature (citation)**

According to the Minimal National Requirements and the regulations for holding the position of Associate Professor, the submitted citations are completely sufficient to show a high level of impact of the scientific work of the candidate. The first of the above quotations from Serbezova from 2016 *BJ of AS* is in The American scientific edition, referred to in Scopus, *Scientia Horticulturae* (Reig, et al. 2019), and the second in a monographic work by Koleva 2020, citing the Monograph *Raspberry cultivation and selection 2019*.

The remaining 14 citations are in unreferenced journals with scientific review, 5 of them of foreign scientists, in *Acta agriculturae Slovenia*; *Iranian Journal of Rangelands and Forests Plant Breeding and Genetic Research*; *Problemy Rolnictwa Swaiatowo (2)*; *J. BioSci. Biotechnol* 2017; the remaining 9 of Bulgarian authors in international and Bulgarian publications. It can be confidently stated that her scientific work is recognizable in the scientific circles at home and abroad.



#### 4.4. Contributions in the works of the candidate (scientific, scientific-applied, applied)

In the reference for the scientific contributions in the works are formed and presented **9 contributions with original character**, which indisputably show the fundamental importance of the developed scientific problems in the field of biotechnology, in determining the genetic diversity of strawberries and raspberries by molecular methods (SSR and RAPD) proved a high level of genetic diversity ( $GD = 0.777$ ) in Bulgarian cultivars, compared to European and American.

The degree of manifestation of the main biological and economic qualities of 145 new raspberry genotypes has been established; The widespread Bulgarian raspberry cultivars - 'Bulgarian Ruby' and 'Shopska Alena' are highly sensitive to soil pathogens belonging to *Phytophthora sp.*, and the cultivars 'Samodiva' and 'Lyulin' can be successfully used as a reference in the selection for resistance.

Differentiation of raspberry hybrids and elites by groups has been made, through which the methods of selection, variety study and competitive variety testing of raspberries could be updated; A feature and core collection of raspberries has been created, as well as comprehensive information with new and original data on plant genetic resources in berries; A monograph with strictly methodical, fundamental and applied contributions is presented, which in practice includes a complete technology for growing raspberries.

Contributions **with confirmatory character - 9, which** confirm the taxonomic diversity of genus *Rubus*, which includes plants from many parts of the world. Studies were carried out with cherry varieties on different rootstocks, confirming the plant and reproductive manifestations and signs of economically and economically important varieties of cherries, appropriate formations and pruning systems for cherries and apples and the possibilities of using the cultivars 'Razhdavichka belvitsa' and 'Peresta belvitsa', characterized by very good taste qualities, as donors for early maturity, through the method of embryo-cultures.

The remaining **14 contributions are of scientific and applied nature**, represent proposals and recommendations for the practice in the field of creating plantations and expanding the range with different varieties, with established economic qualities, in the fruit species raspberry, blackcurrant, apple, pear, cherry, plum, walnut. A lasting trend of use and transfer of high-yielding varieties and application of modern technologies in the production of raspberries has been established.

The contributions can be defined as in-depth and original, some of them with an innovative character, which is a serious argument in support of the candidacy for associate professor of D. Serbezova.

#### 5. Assessment of the applicant 's personal contribution

My acquaintance with the presented publications gives me reason to say that the scientific achievements of Ch. Assistant Dr. Denitsa Serbezova enrich existing knowledge and have applicability in science and practice. The obtained scientific and scientific-applied results and achievements are published and shown in connection with the submitted tender documentation. The achieved research, teaching and applied results of Ch. Assistant Dr. Denitsa Serbezova have a significant contribution to the development of science.

#### 6. Critical remarks and recommendations

I have no significant critical remarks, except to point out that the field of higher education is **6. Agricultural Sciences and Veterinary Medicine**, not Crop Production and Veterinary Medicine, as stated in some administrative documents (the first one I noticed - an application to the Rector for admission in the competition and after it - a self-assessment report). I suppose it is a possible oversight, but it should not be allowed by the applicant, so as not to reduce the burden of all scientific achievements and contributions, through a superficial attitude to the organization of documentation.



### **7. Personal impressions**

I do not know personally Ch. Assistant Professor Dr. Serbezova, but I am left with good impressions from the general review of her scientific, research and teaching activities.

### **8. Conclusion**

Based on the analysis of the research, teaching and applied activities of Ch. Assistant Dr. Denitsa Serbezova and on the basis of the presented scientific productivity, academic employment and contributions in favor of science, in terms of volume, relevance and undisputed scientific contributions, I believe that it meets the requirements of Law for development of the academic staff of the RB, Rules for implementation and DAS at UF as a candidate for participation in this competition. I have reason to evaluate **POSITIVE** the overall activity of Ch. Assistan Dr. D. Serbezova and to vote for the award of the academic position "Associate Professor" in the scientific specialty "Fruit Growing", PF 6.1. Crop production,

I PROPOSE the candidate Ch. Assistant Professor Dr. Denitsa Dimitrova Serbezova to take the academic position of "Associate Professor" in the discipline "Fruit Growing", from PF 6.1. Crop production, Field of higher education 6. "Agricultural Sciences and Veterinary Medicine".

The review was submitted on  
July 28, 2020.

The statement  
Assoc. Prof. Boryana Minc

