

REVIEW

on the materials submitted by the candidate Chief Assistant Dr. Silvia Valentinova Vasileva, silviya.valentinova@gmail.com, for the academic position "Associate Professor" in Higher Education Area 6. Agricultural Sciences and Veterinary Medicine, Professional Field 6.1 "Crop Science", scientific specialty "Plant Breeding and Seed Production of Cultivated Plants", announced on the website of the University of Forestry, Sofia, on 26.06.2025. Procedure code: AGR-AsP-0625-175 and Faculty of Agronomy, No. 58/18.07.2025.

The documents and materials officially provided to me for the evaluation of the scientific value and achievements of the candidate in relation to her participation in the announced competition comply with the requirements of Article 4(3) of the ZRASRB* and Article 5(3) of the PPZRASRB*. The materials (copies and reference documents) submitted for the competition correspond to the truth, and the results and scientific contributions in teaching, research, and applied work are the personal work of Chief Assistant Dr. Silvia V. Vasileva.

Reviewer: Prof. D.Sc. Slavka Prodanova Lukipudis, lukipudis.slava@gmail.com, University of Forestry, Sofia (meets the requirements for serving as a reviewer), member of the Scientific Jury, appointed by Order No. 3PS-498/26.09.2025 of the Rector of the University of Forestry, Sofia, Bulgaria.

Brief biographical data for the candidate

Chief Assistant Dr. Silvia Vasileva was born on 20.02.1985 in the city of Plovdiv. She completed her higher education (2003–2007) at Plovdiv University "Paisii Hilendarski" with a degree in Biology. She obtained a Master's degree in Plant Protection (2007–2009) at the Agricultural University – Plovdiv. She completed a qualification course in Organic Farming (2009) at the "Bioselena" Foundation. Her doctoral studies (2010–2013) at the Agricultural University – Plovdiv, Department of Genetics and Breeding, meet all requirements for participation in the competition. After successfully defending her dissertation, she was awarded the educational and scientific degree "Doctor" (2014) and took the academic position "Assistant" in Plant Breeding and Seed Production at the Department of Genetics and Breeding, Agricultural University – Plovdiv. She has held the position of Chief Assistant in the same department since 2015.

Specialization and mobility: Her international activities date back to her student years (2012, 2013), when she participated in Erasmus student exchanges at Rothamsted Research (UK) and the University of Algarve (Portugal). During her teaching career (2018 and 2019), she completed a training course in Belgium on genome editing and participated in academic mobility in Moldova, teaching "Conventional breeding methods supplemented with molecular markers in cereal crop breeding."

Scientometric indicators of the submitted scientific output

The scientific achievements of Chief Assistant Dr. Silvia Vasileva convincingly demonstrate compliance with national requirements (ZRASRB and PPZRASRB) and reflect excellent theoretical preparation, high scientific activity, and notable effectiveness. Dr. Vasileva holds the PhD degree (Agricultural University – Plovdiv, 24.09.2014, dissertation topic: "*Breeding and Genetic Analysis of Quantitative and Qualitative Traits in Malting Barley*") and subsequently assumed the academic position "Chief Assistant" (Faculty of Agronomy, AU–Plovdiv, Order RD16-1165/25.11.2015).

Her documented academic and scientific experience amounts to 12 years (Assistant 2013–2015; Chief Assistant 2015–2025) at the Faculty of Agronomy, AU–Plovdiv, where she established herself as a competent lecturer and researcher.

Scientific output - The scientific works submitted for participation in the competition include 21 items, comprising:

- 10 publications in refereed and indexed journals and conference proceedings (Web of Science and Scopus);
- 10 articles and papers in non-refereed journals;
- 1 book, based on her defended doctoral dissertation.

Over the past 10 years (2015–2024), she has authored 20 scientific publications and one monograph-like book. Notably, 50% of her publications are in impact-factor journals, of which 60% were published abroad and 40% in Bulgarian sources. The remaining 10 publications are in non-refereed journals, 60% of which were presented at international scientific events. A significant portion — 65% (13 publications) — is written in English. She is the single or first author in 20% (4 publications). Her publication activity shows increasing intensity in 2022–2023, indicating continuous development and scientific growth. In the last 5 years (2021–2025), she produced 55.3% of all her publications, demonstrating highly active and productive research work. The thematic focus of her scientific output is fully aligned with the competition requirements.

Citations

Nine of her publications have been cited 24 times, distributed as follows:

- In refereed and indexed journals and conference proceedings (WoS and Scopus): 8 citations
- In non-refereed journals: 16 citations

This represents an average of 2.66 citations per publication, a solid indicator of the impact and quality of her research.

Participation in scientific events. Between 2011 and 2023, Dr. Vasileva participated in 10 international scientific forums and the “Hemus 2022” Scientific Exhibition. Most participations were in Bulgaria (54.5%), followed by Turkey and Romania (18.2% each), and Bosnia and Herzegovina (18.2%). These participations contribute significantly to the dissemination of her research results and her academic development.

Teaching activity

Teaching is Dr. Vasileva’s primary professional commitment. After defending her PhD thesis, she was appointed lecturer in courses corresponding to the competition field, including:

- *Plant Breeding and Seed Production of Cultivated Plants*
- *Breeding and Applied In Vitro Techniques*
- *Genetics with Elements of Breeding*
- *Genetic Improvement of Perennial and Vegetable Crops*

in the Department of Genetics and Breeding / later reorganized as Crop Science.

Teaching load (2020–2025)

Total teaching hours: 2575 hours, including:

- 2124 classroom hours (82.5%)
- 451.1 extracurricular hours (17.5%)

Average annual load: 519 hours, including 424.8 classroom hours and 90.2 extracurricular hours.

Curricula development. She has developed 7 curricula under the current academic program:

- 4 for Bachelor's degree courses
- 1 for Master's degree
- 2 under Erasmus Programme (2021), with updates in 2024 and 2025

All correspond to the competition discipline.

Supervision of students. Between 2020 and 2025, Dr. Vasileva supervised 7 diploma theses, all defended with excellent results. Most topics (4 theses, 57.1%) were related to cereal crop breeding (winter wheat and malting barley), and the others involved vegetable and bean breeding. She has also prepared 7 official diploma reviews (2020–2025) for Bachelor theses in the Department of Genetics and Breeding, as well as peer reviews for the *Central European Agriculture Journal (JCEA)* and *Agrarian Sciences (AU–Plovdiv, 2025)*.

Participation in scientific projects (2015–2025). The candidate has participated in 14 scientific projects, including:

- 6 national research projects
- 7 research projects funded by scientific institutions
- 1 international project

ANALYSIS of the fulfilment of the CRITERIA for occupying the academic position of “Associate Professor” Scientometric indicators of the submitted scientific output:

INDICATORS (according to ZRASRB and PPZRASRB / PPZRASRB) of the University of Forestry, Sofia	Criteria for Associate Professor	Points		Implementation: Chief Assistant Dr. Silvia Valentinova Vasileva
		Pl an	Imple mentat ions	
Higher education. Total work experience / scientific experience	AU Plovdiv			12 years (2013 - 2025r.)
Educational and scientific degree	PhD	50	/ 50	24.09.2014 r.
Educational degree – Chief Assistant	Chief Assistant		-	Order RD 2 16.1165 / 25.11.2015r.
Total scientific output / for the competition with IF (Impact Factor)	5 / 5	-	/ 39.5	20 / 400.0%
o Single-author + first + second author (50%)	50.0%			10 - 200.0%
o Refereed publications in Bulgarian scientific sources	50.0%			4 - 20.0%
o Non-refereed scientific sources	-			10 - 100.0%
Applied and scientific–applied research	-	40	/ 40	1 book, single author
Supervisor of diploma theses	-		-	7
• Reviews	-		-	7
Participation in scientific projects – implementation	1	-	/ 60	7.14
With external funding	-	-	/ 20	6 + 1 international
Leader of scientific projects	-		-	4, 2 External funding.
International projects			/ 60	1
Number of citations (9 / 24 authors)	5		/ 200	24 - 480.0%
• ...in refereed sources	5		/ 120	8 - 160.00%
• ...in non-refereed sources	-	-	/ 80	16 - -

Participation in scientific forums– total	10	-	10	- 100.0%
• ...in Bulgaria	5	-	5	- 100.0%
• ...abroad	5	-	5	- 100.0%
Specializations – mobilities	-	-	5	(Erasmus: UK, Portugal, Moldova)
Organized events – responsible leader	-	-	2	6p.
Teaching activity (2021–2025) – total	10 / 100 h	2575 / 258	2575 hours/ 515 hours	
• Including:			2124 hours / 425 hours	
o Classroom teaching hours	2		451 / 90 hours	
o Extracurricular / non-classroom hours	2			
Curricula / Educational programs – total: 7		- / 14	7	
• Including updated programs (2025): 2		- / 4	2	
TOTAL NUMBER OF POINTS –		745.5 including 276 for teaching		
Computer skills and competencies		OS Linux, Windows, MS Office, SPSS, Statistica		
Memberships (Scientific Council; Scientific Jury; etc.)	Scientific and Technical Union, Plovdiv			

Due to the specific scope of the competition — for the academic position “Associate Professor” in the discipline Plant Breeding and Seed Production of Cultivated Plants — I give a very high evaluation for the practically implemented and documented teaching activity of the candidate: 258 points in total for 2575 academic hours (an annual average of 515 hours) over the past five years, including 2124 academic hours of classroom teaching (82.5%). This corresponds precisely to the announced competition profile and the required teaching discipline, which ensures excellent preparation of future specialists in plant breeding and seed production in our country.

As project leader, the candidate has headed 4 out of a total of 7 projects (28.6%). Particularly valuable for the competition are the scientific projects “*Breeding evaluation of the genetic potential for productivity and ecological plasticity of two-row barley lines in relation to global climate change*” and “*Study of newly developed, promising two-row barley lines for submission to the State Variety Testing system*”, aimed at assessing their suitability under the specific conditions of Bulgaria and for their seed production.

Participation in the organization and implementation of forums and events:

– *Aurora Workshop – Tomato Plovdiv Event*, Plovdiv, Bulgaria.

Specializations and mobilities (8):

- EU Gene Editing Course, Alliance for Science, Ghent, Belgium;
- UN Biodiversity Conference “MOP9, COP14, MOP3” (2018), Egypt;
- Erasmus+ academic mobility for teaching at the National State Agrarian University (Moldova), Department of Genetics — lecture course on “Conventional methods supplemented by molecular markers in cereal breeding” (2019);
- Erasmus student exchange for training — laboratory work on the project: “*Identification of DNA markers linked to an induced mutated gene conferring resistance to powdery mildew in pea (Pisum sativum L.)*”, University of Algarve, Portugal;
- Erasmus student mobility for internship — laboratory activities at Rothamsted Research, UK, related to the project “*Genetic and environmental factors controlling acrylamide formation in wheat products*”.

Main areas of the candidate's teaching and research activity and key scientific contributions

Scientific–theoretical contributions

- The candidate demonstrates excellent theoretical preparation in the thematic scope of the competition. Notable contributions include:
- development of a methodology for evaluating breeding materials;
- methodology for combined use of phenotypic and genotypic data for breeding purposes;
- genetic analyses in segregating hybrid generations (barley and tobacco);
- demonstration of the overall phenotypic expression of morphological traits and determination of the optimal stages (F5–F6) for achieving better breeding results;
- determination of parameters of trait combinations related to quality in genotypes for malting purposes.
- For the first time in Bulgaria, the genetic diversity of the phytopathogen causing net blotch (*Pyrenophora teres*) in barley has been identified using an ISSR marker system. The distribution and genetic structure of pathogen populations in the country have been characterized; regional disease incidence has been assessed; and QTLs (quantitative trait loci) have been mapped.

Scientific–applied contributions

- Identification of Neda and Gorast as the most suitable barley varieties for cultivation (national Variety List “A”);
- Designation of donor forms for hybridization to create high-yielding and high-quality barley genotypes (Emon, Beta Ketzoras, Kamenitsa, Karavela, Kaskadjor, Orfei) for use as productivity donors in combinational breeding;
- Variety Orfei and line 96105023 identified as donors for improved drought tolerance;
- Identification of donors for improved malting quality (samples 96105023, 96105024, 96105050, 99105020, 99105030);
- Donors for earliness (lines 622, 508, 511 and several other samples) and variety Orfei;
- Selection of tomato plants with high antioxidant content from segregating hybrid generations;
- Comprehensive study of a large volume of genetic resources (local varieties, natural populations, mutant generations, hybrids, and breeding lines of common bean) for proposing candidate varieties for State Variety Testing.

Dr. Silvia Vasileva possesses strong teamwork capabilities and excellent communication skills. She demonstrates proficiency in teaching and working with large student audiences. She has experience in preparing and presenting scientific tasks and defending research results. Her organizational experience and skills in project development are at a high professional level. She is fluent in English, which enables her active participation in international scientific forums. This contributes to enhancing the authority and competitiveness of the academic unit and team, as well as her individual academic profile.

Critical remarks

The data and analysis (in the table) regarding the fulfilment of the criteria for occupying the academic position “Associate Professor” demonstrate the candidate's activity and specific knowledge with respect to theoretical preparation, as well as the knowledge and skills required for teaching the subject matter related to plant breeding and breeding methods in the respective discipline.

Note: Not all types of specific activities are evaluated within the point-based system (such as teaching activity, supervision of diploma students and doctoral candidates, preparation of reviews, and participation in scientific forums). These activities require knowledge, skills, time, and

substantial effort, and their exclusion results in a significant disadvantage for candidates during the evaluation process for a given academic position.

I have no critical remarks. I do, however, have one recommendation. The discipline in which the candidate will teach students is "Plant Breeding and Seed Production of Cultivated Plants." The candidate possesses good theoretical preparation and has participated in breeding teams as well as in teams evaluating the agronomic performance of varieties.

It is necessary to draw attention to the second, equally important component of the discipline—Seed Production, along with the related fields of Seed Control and Variety Maintenance. Only a small number of graduates will be directly involved in the breeding of new crop varieties, whereas a significant proportion of those completing agronomy programs will work in seed production and seed control.

My excellent impressions of the candidate's diligence, initiative, and theoretical preparation are based primarily on the precision shown in preparing the application documents for the competition, as well as on conversations and professional interactions with colleagues.

Conclusion

The documents submitted for participation in the competition demonstrate that the research and applied activities of Dr. Silvia Vasileva meet the requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB) and its Implementing Regulations, with regard to the acquisition of scientific degrees and the holding of academic positions at the University of Forestry, Sofia.

The evaluation according to the criteria for occupying the academic position amounts to 745.5 points, of which 276.0 points (37.0%) are allocated to teaching activities in the discipline specified in the announced competition.

This provides sufficient grounds for me to give a positive assessment of the candidate's overall activity and to recommend to the Academic Council of the University of Forestry, Sofia, Faculty of Agronomy, to appoint Dr. Silvia Vasileva to the academic position of Associate Professor in Higher Education Area 6: *Agricultural Sciences and Veterinary Medicine*, Professional Field 6.1 *Crop Science*, scientific specialty *Plant Breeding and Seed Production of Cultivated Plants*, for the Faculty of Agronomy at the University of Forestry, Sofia, Bulgaria.

10.10.2025 r



Reviewer: Prof. D.Sc. Slavka Lukipudis