



OPINION

on the materials submitted for participation in a competition for the academic position of "assistant professor" in a professional field 6.1. Crop production, scientific specialty "Soil Science", for the needs of the section "Forest Genetics, Physiology and Cultures", announced by the Institute of Forestry - BAN in DV no. 35/27 April 2021

Candidate for participation in the competition: Ch. Assistant Dr. Vanya Georgieva Kachova
Prepared the opinion: Doctor of Science Rossitsa Tsvetkova Petrova, professor of professional field 6.5. Forestry, scientific specialty "Forest reclamation, forest protection and special uses" LTU (retired)

1. Brief biographical data

Ch. Assistant PhD Vanya Kachova was born in 1964. She graduated from Sofia University in 1988 with a Master's degree in Analytical and Organic Chemistry, majoring in Chemistry. From 1996 to 1999 she worked as a chemist in the laboratory "Forest Soil Science" at the Institute of Forestry - BAS. In the period 1999-2006 he completed a part-time doctorate in the scientific specialty "Soil Science" at Institute of Forestry - BAS on the topic: "Heavy metals in soils from urban oak ecosystems in Sofia region" and acquired the educational and scientific degree "Doctor" in "Soil Science". From 1999 to 2007 she held the position of research associate III, II degree, and after 2007 to the present she is Ch. Assistant - initially in the section "Forest Ecology", and later in the section "Forest Genetics, Physiology and Cultures" at Institute of Forestry - BAS.

2. Compliance of the submitted documents and materials of the applicant with the minimum requirements, according to the Regulations for acquiring scientific degrees and holding academic positions at the Institute of Forestry - BAS.

Conformity of the scientific production of Ch. Assistant PhD Vanya Kachova with the minimum national requirements under Art. 2b of Law for development of the academic staff in the Republic of Bulgaria and the specific requirements adopted by the Supervisory Board of Institute of Forestry -BAS. The reference made exceeds more than twice (1063.5) the minimum required points by groups of indicators (500), as follows:

- Category A - 50 points with minimum requirements - 50 points;
- Category B - 240 points with minimum requirements - 100 points;
- Category G - 239.5 points with minimum requirements - 200 points;
- Category D - 280 points with minimum requirements - 100 points;
- Category E - 205 points with minimum requirements - 50 points;
- Additional indicators - 49 points.

3. General description of the submitted materials

To participate in the competition, the candidate presents the results, which are published in 27 scientific papers.

The presented scientific papers are related to the study of the composition and properties of soils under forest plantations and crops, soils in urban areas and forest parks, the degree of pollution with heavy metals, as well as some methods to improve their condition.

The characteristics of the published scientific results related to this competition are presented with indicators B and G in the Report - self-assessment. It is evident from the submitted reference that the scientific results have been published in a total of 27 scientific papers, presented

by:

- Scientific publications in publications that are referenced and indexed in world-famous databases with scientific information (indicator B) - 10 pcs .;
- Articles and reports published in scientific journals, referenced and indexed in the world databases (Web of Science and / or Scopus) - (indicator G7) - 9 copies;
- Articles and reports published in non-refereed journals with scientific review or published in edited collective volumes - Indicator G8 - 8 pcs.

The presented scientific production in quantitative and qualitative aspect exceeds the minimum national requirements under the Law for development of the academic staff and the Regulations for its implementation, as well as the Regulations for holding academic positions in Institute of Forestry -BAS.

The results are published as:

- Independent - 6 pcs. category G (G7.1; G7.5; G7.6; G7.7; G7.8 and G7.9), which are referenced and indexed in world-famous databases of scientific information (CABI, Web of Science and Scopus);
- Leading author - 16 pieces, of which: 10 pieces. category B (B4.1; B4.2; B4.3; B4.4; B4.5; B4.6; B4.7; B4.8; B4.9; B4.10; and 6 pcs. category G (G8.1; G8.2; G8.3; G8.4; G8.5 and G8.7),
- Second author - 2 pcs. category G (G7.2 and G8.6).
- Third author - 3 pcs. category G (G7.3; G7.4; G8.8).

Sixteen of the publications are in English and the rest in Bulgarian.

4. Main directions in the research work of the candidate and the most important scientific and scientific-applied contributions

I accept the proposal of Ch. Assistant Kachova author's reference for the scientific and scientific-applied contributions, summarized in the following scientific directions:

- 1) *Studies on the quality characteristics of forest soils* (B4.1; G7.2; G7.4; G7.8; G8.3; G8.4; G8.5);
- 2) *Characteristics of soils affected by anthropogenic activity* (B4.3; B4.4; B4.5; B4.6; G7.3; G8.2; G8.3; G8.5; G8.6; G8.7 ; G8.8);
- 3) *Ways to improve the quality of forest soils and man-made substrates used for afforestation activities* (B4.2; B4.7; G7.1; G7.5; G7.6; G7.7; G7.8; G8.1);
- 4) *Agroforestry* (B4.8; B4.9; B4.10).

Much of the research and the results obtained from them, related to: the composition and properties of urbogenic soils, as well as the effect of the conducted forest biological reclamation concern the demonstration with new means of already existing scientific problems and hypotheses. In this sense, their contributions are confirmatory.

The results obtained from the research work in the field of "Agroforestry" are a contribution of scientific and applied nature, in terms of opportunities for improving environmental conditions.

5. Reflection of the candidate's scientific publications in the literature

A total of 21 were identified. citations of 21 publications, respectively:

- in scientific publications, referenced and indexed in world-famous databases with scientific information or in monographs and collective volumes (D13) - 14 copies;
- in monographs and collective volumes with scientific review (D14) - 7 pcs .;

All this testifies to the interest of the scientific community in its developments and their results.

6. Participation in research projects

Ch. Assistant Professor Dr. Kachova participates in the competition in a total of 8 research and educational projects. From them:

- 4 pcs. international research projects, of which 1 pc. is a project manager;
- 4 pcs. national research projects, of which 3 projects she is the leader.

7. Teaching and learning activities (supervisor/consultant for doctoral students, student training, etc.)

A report on the mobility of teachers under the ERASMUS + program in Spain is presented. The curriculum covers the following topics: "Agroforestry in Bulgaria - past and prospects" and "Soil resources in Bulgaria and sustainable management" with a load of 12 hours.

8. Assessment of the personal contribution of the candidate

I appreciate the contributions of Chief Assistant Kachova for her personal work and for sufficient and fully consistent with the theme of the competition. The achieved results are of scientific and scientific-applied value.

9. Critical remarks, questions and recommendations

I have the following remarks to the candidate:

- The poor knowledge of some of the objects, subject of research has led to incompleteness in the citation of the used literature.

- Many of these contributions are results or conclusions from individual scientific developments, lacking the necessary generalization, which makes them highly fragmented.

- In the mentioned author's reference there are no derived contributions from the fourth direction of the research work - "Agroforestry".

- What are the ways to improve the quality characteristics of forest soils and do they have practical application?

I recommend more active publishing in renowned foreign scientific journals with an impact factor.

10. Personal impressions

I have no personal impressions of the work of Dr. Kachova and my evaluation is based entirely on the materials presented in the competition.

11. Conclusion

Regardless of the remarks made, my overall assessment of the submitted materials for participation in the competition is positive.

In connection with the above, I propose Ch. Assistant PhD Vanya Georgieva Kachova to be elected "Associate Professor" in the professional field 6.1. Crop production, scientific specialty "Soil Science".

Date 20.08.2021.

Member of the Scientific .
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