

POSITION

Regarding the contest for the academic position "Associate Professor" in the scientific specialty Land Improvement (including Soil Erosion Control) from professional field 6.1 Plant Growing, higher education area 6. Agrarian Sciences and Veterinary Medicine, issued in the State Gazette No 5 on 17.01.2020 for the purposes of the Department Physics, Erosion, Soil biota at the Institute of Soil Science, Agroecology and Plant Protection "N. Poushkarov" (ISSAPP)

Candidate for the contest: Chief Assistant Gergana Slavova Kuncheva, PhD

Reviewer: Prof. Dr. Martin Banov, ISSAPP "N. Poushkarov", scientific specialty Soil Science, professional field 6.1 Plant Growing, appointed as a member of the Scientific Jury according to the Order № ПД-05-107/22.04.2020 of the Chairman of the Agricultural Academy

1. Short presentation of the candidate

Gergana Kuncheva was born on May 7, 1971.

He graduated from high school in 1989. In 1995 he graduated with a master's degree in biochemistry and microbiology from Sofia University "St. Kliment Ohridski"- Sofia. From 1996 to 2001 he headed the biochemical laboratory at the Institute of Agriculture and Seed Science "Obraztsov Chiflik" Rousse. In the period up to 2001 he was a research associate of the 3rd - 2nd degree in the Institute of Agriculture and Seed Science "Obraztsov Chiflik". From 2005 to 2011 he worked as a Specialized Production Manager at "Parkstroy" EOOD, Rousse. In 2011 she was appointed Senior Expert at ISSAPP "Nikola Pushkarov", Sofia, Laboratory of Soil Analysis and Erosion Research, Rousse, and since 2017 she has been a senior assistant in the same laboratory.

After developing and defending a dissertation on the topic: „Soil protection and agricultural efficiency of advanced minimal and unconventional erosion control tillage when growing crops on slope lands" in 2016 received an educational and scientific degree "Doctor".

He speaks English and Russian.

2. Scientific production

In the competition Dr. Kuncheva presents a list of relevant materials, including research papers, research projects and tasks and other creative achievements, which reflect the general research and applied activities of the candidate and are distributed as follows:

- publications associated in her PhD thesis, which are not considered for evaluation in the contest - 5;

- Books and monographs - 2 issues;
- Articles and reports published in scientific journals, referenced and indexed in world-famous databases with scientific information - 1 issue;
- Scientific publications in non-peer-reviewed journals with scientific review or in edited collective volumes - 33 issues;
- Studies published in non-refereed journals with scientific review or published in edited collective volumes. Publications in conference proceedings - 1 issue;
- Popular science articles - 6 copies.

The personal participation of the candidate in the peer-reviewed 43 works is illustrated by the fact that in 24 of them he is the first author, in 5 he is the second, and in the others he is the third and next author. Separate protocols for the personal participation of the candidate have been prepared for the collective publications.

43 issues are subject to analysis for the preparation of the opinion. The research publications published for the dissertation will not be reviewed from the presented list. Their importance and their scientific contributions will be reflected in the overall assessment of the candidate. Nevertheless, the other research works of Dr. Kuncheva significantly exceed the requirements of the Higher Attestation Commission in terms of the minimum required number.

The review of the documents of Dr. Kuncheva shows that in their preparation the procedural and legal requirements arising from the Law for development of the academic staff in the Republic of Bulgaria, the Regulations to it and the Regulations of the Agricultural Academy have been complied with.

The candidate has specializations for acquaintance with new methods and technologies in the field of research of greenhouse gas emissions from soil, as well as ways to reduce them at the University of Helsinki under the Erasmus + program and at the Chisinau Institute of Maize and Sorghum, Moldova - by selection of corn.

Dr. Kuncheva participated in a seminar on "Skills for effective communication in business" at the Center for European Education and Multicultural Communications - Sofia.

Dr. Kuncheva leads exercises in "Plant Physiology" for the specialty "Plant Breeding" and "Physiology and Biochemistry of Plants" for the specialty "Agricultural Engineering" from the summer semester of 2015 until now. Since 2018 he has been conducting exercises in "Soil Science", "Plant Breeding 1" and "Genetics", for the specialty "Plant Breeding", at the University of Agriculture "Angel Kanchev", Faculty of Agriculture, Department of Agricultural Engineering as a part-time lecturer.

He is a co-author of curricula in the disciplines "Reclamation Soil Science" for Master's degree, specialization "Reclamation" and in "Soil Science" for Bachelor's degree, specialty Plant Breeding.

3. Research activity

The main scientific directions in the research work of Dr. Gergana Kuncheva are related to the loss of soil organic matter during water erosion processes and its forecasting, as well as the establishment of losses of mineral nitrogen and available forms of phosphorus and potassium.

Much of Dr. Kuncheva's research relates to the creation of methodologies for the application and economic evaluation of advanced soil protection technologies for minimal and unconventional tillage under certain soil and climatic conditions and the use of various mulching materials.

The goals and objectives of the presented developments are clear and well justified. The candidate has good preparation and in-depth knowledge on the studied issues.

Citing and abstracting scientific research

The total number of citations cited by the author is 12, grouped as follows:

- in scientific publications without impact factor - 9 pieces;
- in scientific publications with impact factor - 3 pieces;

Participation in research projects

The scientific and applied research activity of Dr. Kuncheva is related to the participation in a total of 12 research and applied research projects.

4. Significance of contributions to science and practice

As a result of the scientific and scientific-applied activity of the candidate, a number of specific contributions have been formulated, the most important of which are the following:

1. The loss of soil organic matter during water erosion processes is predicted, using an empirical approach to determine the coefficient of erosion washability of humus. In parallel with these studies, the losses of mineral nitrogen and available forms of phosphorus and potassium were determined.
2. Methodologies for application and economic evaluation of advanced soil protection technologies for minimal and non-traditional tillage on sloping terrains and under certain soil and climatic conditions have been developed.
3. The economic and ecological effect in preserving the soil and soil fertility has been established through the application of advanced soil protection technologies for minimal and non-traditional tillage.

5. Remarks and recommendations

Regarding the overall research and applied science of Dr. Kuncheva, I have no remarks.

6. Conclusion

Based on the analysis of the scientific and scientific-applied activity of the candidate, I believe that Dr. Gergana Kuncheva meets the requirements of Law for development of the academic staff in the Republic of Bulgaria, the Regulations to it and the Regulations of the Agricultural Academy.

The candidate is an established researcher, with significant scientific and applied contributions to current issues related to soil erosion by creating methodologies for application and economic evaluation of advanced soil protection technologies for minimal and non-traditional tillage in certain soil and climatic conditions. conditions and when using different mulching materials.

All this gives me reason to positively evaluate its overall activity.

I propose to the esteemed Scientific Jury also to vote positively, and the Scientific Council of ISSAPP "N. Pushkarov" to elect Dr. Gergana Kuncheva as an "Associate Professor" in the scientific specialty "Land Improvement (including Soil Erosion Control)", professional field 6.1. "Plant Growing".

Date: 20.07.2020 г.
Sofia

Position prepared by:



Prof. Martin Banov, PhD