



REVIEW

by **Dr. Stoil Ivanov Ivanov** – associate professor at **University of Plovdiv “Paisii Hilendarski”**
on the materials about the application for the academic position “Associate professor”
at **Agricultural University of Plovdiv**

Research area: 4. Natural sciences, mathematics and informatics;

professional field: 4.5. Mathematics (*Mathematical modeling and application of mathematics*)

announced in State Gazette, 7 edition, 23.01.2024 with a single applicant **Dr. Neli Todorova Keranova-Ivanova** from department “Mathematics and Informatics” of the Faculty of Economics at Agricultural University of Plovdiv.

1. Description of the procedure and the candidate

Due to the order № ПД-16-405 from 20.03.2024 by the Rector of Agricultural University of Plovdiv, I was appointed as a member of the Scientific jury and at the first meeting I was chosen to make a short review about the present competition.

The electronic version of the documents and materials presented by Dr. Keranova-Ivanova are in accordance with the Regulations for the development of the academic staff of Agricultural University of Plovdiv.

The application for the competition contains 10 papers including 1 in a journal with Q3 and 6 in journals with Q4 of WoS, also there are a monograph and a textbook. The provided materials meet the minimal national requirements for the academic position “Associate professor”, the scientific results are not included in the applicant’s Dissertation or previous competitions and fit the research area and the professional field of the present competition. I have not detected any plagiarism.

2. General characteristics of the applicant's activities

Assessment of the educational and pedagogical activity:

Dr. Neli Todorova Keranova-Ivanova was born in 1977, in 2000 graduated with a Master degree in FMI at University of Plovdiv “Paisii Hilendarski” majored in “Mathematics” and “Mathematics and Informatics”, and in 2016 got PhD in “Algebra and Number Theory” at University of Plovdiv “Paisii Hilendarski”.

Since 2001, with a short break, the applicant teaches many disciplines in the field of mathematics as part-time lecturer and assistant professor at Agricultural University of Plovdiv. I know Neli Todorova Keranova-Ivanova from 2012 when I was PhD student as well but I have no person-

al impressions of her work, because our active contacts are only in connection with the current competition.

Assessment of the scientific activity:

The research of the candidate is mainly focused on the modeling of processes in the agrobiological sciences. More precisely, in papers [1]-[9], based on appropriately selected mathematical models and using the methods of mathematical analysis and some statistical methods as correlation analysis, univariate and multivariate regression analysis, factor analysis, etc., the beginning and the duration of the grain growth phases of different grape varieties [1], the influence of the age and the density of the plantations on the yields and the main parameters affecting the genotype of some species of dogwood [2, 4], the content of antioxidants and the antioxidant activity of some hybrid vine varieties [3], different characteristics of laying and dual-purpose hens [5], the degree of frost of fourteen peach species [6], the spread of TEV virus on some tobacco varieties [7], the average honey yields in the countries of the European Union, between 1961-2014 [8] and the influence of egg shape and mass on some incubation parameters of three turkey lines [9], are investigated. Article [10] is devoted to the study of a binary code generated by a group algebra of a 15th order cyclic group.

By suitable choice of mathematical methods and detailed analysis of the experimental data, applied results have been obtained, which enable the deeper understanding of the essence of the investigated processes and open the door for future development of the studied branches of the agrobiological sciences.

Contributions and citations

The applicant is a single author of two of the provided papers and the monograph while the rest of the papers are coauthored. The provided allocation statements say that more than 48 % of the results are due to the applicant which represents a high contribution to the coauthored papers owing to the fact that they are of at least three authors.

For the present competition, the applicant has provided 8 citations including 5 in Scopus or WoS and 3 in other journals, but in the last two years she has got 11 more citations including 4 in Scopus. The obtained results have been presented before the scientific community in 12 international and national scientific forums.

3. Remarks and recommendations

The layout of the documents is not quite good which creates certain difficulties in their assessment. For example, the list of conferences is within the "List of publications-competition" document while the list of papers itself is divided into subsections that do not comply with the current evaluation criteria, the abstract of [8] is missing in "Scientific contributions", etc. However, these

remarks have nothing to do with the candidate's scientific achievements and do not downplay her contribution at all.

CONCLUSION

The documents and materials provided by Dr. Neli Todorova Keranova-Ivanova meet the requirements, conditions and criteria of the Law on the Development of the Academic Staff in the Republic of Bulgaria, Rules for applying of the above mentioned law and Rules for the conditions and order for acquiring academic degrees and academic positions at Agricultural University of Plovdiv.

Due to the analysis of the obtained results within the educational and research activities and the worldwide reverberation of the scientific results of **Dr. Neli Todorova Keranova-Ivanova** I do give my **positive assessment** and I recommend to the honorable Scientific Jury to make a proposal to the faculty council of Faculty of Economics at Agricultural University of Plovdiv in order to elect **Dr. Neli Todorova Keranova-Ivanova** for the academic position “**Associate professor**” at Agricultural University of Plovdiv in research area: 4. Natural sciences, mathematics and informatics; professional field: 4.5. Mathematics (*Mathematical modeling and application of mathematics*).

29.04.2024 г.

Signature: .

(Assoc. Prof. Dr. Stoil Ivanov)