

PERSONAL OPINION

from Prof. Eng. BORIS GEORGIEV BORISOV, PhD,

НА ПАПЕЖ ВЪВЕЖАТЕ	
ГР. ПЛОВДИВ	
Сх. № <u>1076</u>	Дело № <u>82</u>
Получено на <u>03.09.2021</u>	

appointed a member of the scientific panel, according to Order RD: 15-745 / 30.06.2021. by the Rector of the Agricultural University - Plovdiv, in a competition for acquiring the academic position of "ASSOCIATE PROFESSOR", in professional field 5.13 "General Engineering" and scientific specialty "Mechanization and Electrification of Crop Production".

The only candidate who participates in the competition, announced in SG No. 35 / 27.04.2021 and on the website of AU, for the needs of the Agricultural University-Plovdiv, is chief assistant professor eng. Manol Angelov Dallev, PhD.

1. General information and brief biographical data

Chief Assistant Eng. Manol Dallev, PhD was born in 1984 in Plovdiv. In 2006 he graduated from the Agricultural University - Plovdiv, majoring in Agricultural Engineering, Bachelor's degree. In 2007 he obtained his Master's degree. He defended his doctoral dissertation in 2013 in the scientific specialty "Mechanization and electrification of crop production". He has completed additional qualification courses in Word Processing - Computer Operator and Professional Pedagogy - Teacher. In the period 2011-2013 he was appointed assistant, and in 2015 he won a competition for Ch. Assistant Professor in the Department of Agricultural Mechanization of the Agricultural University - Plovdiv.

2. General description of the submitted materials

The candidate in the competition Ch. Assistant Professor Dr. Eng. Manol Dallev presents the following educational and scientific products:

- 2.1. Published book based on the dissertation work - 1 issue;
- 2.2. Scientific publications - 26 issues (2 in national and 24 in international publication journals) - 4 issues in IF publication journals and 2 citations in IF and SJR publication journals, 21 issues in refereed and indexed journals and 5 issues with scientific review. There are 24 publications in English. He is a leading author in 7.
- 2.3. Scientific reports - 23 issues, of which 7 oral and 16 posters (4 in national and 19 in international editions of scientific conferences);
- 2.4. Number of citations - 7, incl. in referenced and indexed scientific publications by Scopus, Web of Science and Google Scholar;
- 2.5. Auditorial work for the last 5 years - 2920.3 hours, of which the lectures are 312 hours in special technical disciplines in the three faculties of AU;
- 2.6. Participation in educational projects - 4 under the international ERASMUS programs - in Portugal, Hungary, the Czech Republic and Italy;
- 2.7. Participation in research projects - 7 (1 national by SAA and 6 institutional);
- 2.8. Lectures at other universities - abroad (Perugia - Italy);
- 2.9. Supervisor of successfully defended graduates from the three faculties of AU - a total of 26 of which 4 in EQD - "Master".

The significant volume of research, teaching-academic and pedagogical production characterizes the candidate as an in-depth scientist, researcher and erudite lecturer.

A total of 26 research papers, which are not included his dissertation work, are accepted for review. For the final evaluation of the scientific production are reported 10 scientific publications from group B4 and 11 issues from group G5 and G7 (published in indexed and referenced scientific publication journals in world-famous databases with scientific information on Scopus and Web of Science), 5 scientific publications from group G8 (published in unrefereed journals with scientific review or in edited collective volumes), 11 participations in international and national educational and scientific projects of group E18 and E19. In the present competition the candidate presented 19 reports from abroad and 4 in Bulgaria, some of which have been published in the respective editions and one published book based on his dissertation, which I do not review.

In summary, the candidate for occupying the academic position of "associate professor" fulfills the minimum national requirements for the individual groups as follows: for group A1 - from 50 to 80 points; for group B4 from 100 to 165 points; for group Г from 200 to 245.18 points; for group Д from 50 to 70 points. The points from groups E18 and E19 for participation in national and international projects, which are 150 points, are not taken into account.

Summarized from all groups, the candidate collects 560 points with a minimum requirement for ASSOCIATE PROFESSOR - 400 points.

3. Reflection of the candidate's scientific publications in the literature (known citations)

4 scientific publications from group D12 (from the list: II-11; II-7; II-6; II-9) of Dr. M. Dallev are cited in works of other authors in scientific journals on Scopus and Web of Science and in Google Scholar.

This is an indicator that the works of the candidate Ch. Assistant Professor Manol Dallev are known to the scientific community, both at home and abroad.

4. General characteristics of the overall activity of the candidate

4.1. Teaching activities (work with students and doctoral students).

The work of Ch. Assistant Professor Dr. Eng. Manol Dallev with students is characterized by the following:

- He has conducted and continues to conduct auditory classes - lectures and seminars and extracurricular practical engineering disciplines in the three faculties of AU;
- He has read lectures in other universities abroad (2018, 2019) at the University of Perugia, Italy;
- He has supervised 20 successfully defended graduates - in Bachelor's and Master's degree in the Faculty of Viticulture and Horticulture, in the Faculty of Agronomy and in the Faculty of Plant Protection and Agroecology of AU-Plovdiv;
- He has participated in 4 international Erasmus educational projects in 4 countries.

From the above mentioned it can be concluded that Ch. Assistant Professor Manol Dallev is an established lecturer at the university, knowing the problems of the learning process.

4.2. Scientific and scientific - applied activities

According to the reference for scientific papers, the candidate is presented with a total of 26 research papers, divided into groups B4, Γ5 and Γ7 - 21 pieces (81%) are published in indexed and referenced scientific journals on Scopus and Web of Science and in group Γ8 - 5 pieces (20%) has been published in unrefereed scientific journals on Google Scholar and in edited collective volumes.

The main research of the candidate in his scientific activity is directed in the field of tillage in order to intensify the processes and to fight against soil erosion (N: 1, 2, 3 from group B4), (N: 9, 10, 11 from group Γ7) and (N: 1, 2, 3 from group Γ8).

There is significant and diverse research in the fields of creating new constructions of agricultural machinery - plow body and seed box for the created experimental combined seed drill - STS-80 (N: 9 from group B4 and N: 2, 3, 5 from group Γ8), production of planting material and the use of ultrasound for seed treatment (N: 4, 5 of group B4), optimization of varieties for mechanized harvesting of sesame, peanuts, wheat, sunflower (N: 4, 5, 6, 7 of group Γ7), the use of RES - briquetting of waste biomass (N: 4 and N: 8 from groups Γ8 and Γ7, respectively), systems for efficient heating of greenhouses and application of precision agriculture.

Basic technological and constructive parameters of new working bodies, new technologies and schemes for optimization of the individual processes with effective economic assessments are substantiated, some of which are proposed for use in practice and in the educational process.

The above mentioned shows a significant large-scale research activity of the candidate, which characterizes him as a deep-thinking and outspoken scientist, researcher and innovator.

4.3. Implementation activity

Taking into account the implementation activity of Ch. Assistant Professor Dr. Eng. Manol Dallev, the following developments are listed:

A new active disc tillage machine has been created, combining the kinematics of a milling machine with a horizontal axis of rotation and displacement of the soil from the disc implements;

An experimental combined seed drill - STS-80, with a developed seed box and universal stirrer has been created;

A graphic method has been developed for the design of the lamellas of a plow body with a lattice sweeping board;

The above mentioned is indicative that in addition to his teaching and research work, the candidate has actively participated in implementation activities.

5. Main contributions from the scientific production of the candidate

Scientific - applied and applied contributions:

5.1. The optimal values of the main parameters of a working body combining the kinematics of a tillage cutter with a horizontal axis of rotation and the horizontal displacement of the soil from a disk working body have been experimentally established and substantiated (publ. 1, 2, 3 of group B4, publ. 9, 10, 11 of group Γ7 and publ. 1, 3, 5 of group Γ8).

5.2. A tillage machine with a combined working body has been created, during the work with which high quality of crushing and mixing of the soil particles for the pre-sowing preparation of the soil and fight against erosion is achieved (publ. 1, 2, 3 of group B4 and publ. 9, 10, 11 of Γ7 and publ. 1, 2, 5 of Γ8).

5.3. An experimental combined drill has been created, with established technical parameters, which can be used both in the learning process and in the production activity (publ. 9 from group B4).

5.4. A methodology for designing lattice plow bodies has been developed (publ. 2, 5 of group Γ8).

5.5. The process of straw briquetting has been studied and optimized. The construction of a device for thermal decomposition of biomass is substantiated (publ. 8 from group B4, publ. 8 from group Г7 and publ. 4 from group Г8).
5.6. Methods have been developed for research and determination of the main indicators for the approved in our country varieties of peanuts and sesame, for the purpose of their mechanized and efficient harvesting (publ. 4, 5 of group Г7).

6. Significance of contributions to science and practice

I evaluate the significance of the contributions from the scientific works as a personal work of the candidate Ch. Assistant Professor Dr. Eng. Manol Dallev. I classify them as scientific - applied and applied, which can be useful for science and practice. I also appreciate the fact that the quantitative indicators of the criteria for holding the academic position of "ASSOCIATE PROFESSOR" have been met at a minimum of 400 points. the candidate presents himself with 560 points. The citations and reviews of some works of the candidate are presented: in group Д12 - 7 pieces, scientific community at home and abroad.

7. Critical remarks and recommendations

- The year of publication is missing in the list of scientific papers for some of the publications, - section I - publ. 3,4,5; section II - publ. 1,2,3,5,7,9,10; sections III-1,2,5 and the international standard serial number of the ISSN edition - section II - pub. 11 and section III - pub. 1, which complicates the inspection and search;
- In his future scientific work Ch. Assistant Professor Dr. Eng. Manol Dallev to focus personal efforts on independent publications and to focus personal research in smaller and specific scientific fields.

8. Personal impressions

I have been knowing personally Ch. Assistant Professor Dr. Eng. Manol Dallev and his scientific and academic development for more than 5 years from his participation in conferences, dissertation defenses, as well as from the bilateral cooperation between the two departments of AU-Plovdiv and the University of Ruse "A. Kanchev". He is ighly intelligent and erudite scientist, researcher and lecturer in academia, practice and life. I was impressed by his constructive approach in dealing with problems and solving specific issues, which had a positive impact on his teaching, research and applied activities.

9. Conclusion

The documents and materials submitted by the candidate for the competition meet the requirements of the Law for Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its application and the respective Regulations of the Agricultural University - Plovdiv.

My overall assessment, based on the submitted materials, is unambiguous - in favor of the candidate. Considering the results of his teaching, scientific, scientific-applied and pedagogical work, the received scientific-applied and applied contributions and their significance, I CONSIDER, and I consider it reasonable, that he will be useful as a lecturer and researcher for the academic position "ASSOCIATE PROFESSOR" at the Agricultural University - Plovdiv, and with his experience - for the entire scientific community.

I propose to the Honorable Scientific Jury to award Ch. Assistant Professor Dr. Eng. Manol Dallev, the academic position "ASSOCIATE PROFESSOR", in the professional field 5.13 "General Engineering" and the scientific specialty "Mechanization and electrification of crop production".

Date 05.08.2021

Member of the jury:

/ Prof. Eng. Boris Borisov, PhD /