

OPINION

by **prof. Aleksandar Nikolov Tashev MD**

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for the materials presented by **Assoc. Prof. Dr. Nasko Aleksandrov Iliev** from the University of Forestry-Sofia, for participation in a competition for the academic position of "Professor" in the field of higher education 6. Agrarian Sciences and Veterinary Medicine, professional field 6.5. Forestry, scientific specialty "Forest Crops, Selection, Seed Production" in the discipline "Forest Crops", announced for the needs of the Department of Forestry, published in State Gazette, No. 107/20.12.2024 with procedure code: FOR-P-1124-153.

1. Brief biographical details of the candidate

Nasko Aleksandrov Iliev was born on 13.05.1967 in the town of Sofia. In 1985 he graduated from the 7th ESPU, Sofia. In 1992 he graduated as an engineer (master) in forestry at the Higher Forestry Institute (now the University of Forestry). From 1993 to 1998 he worked at Vitosha Nature Park as Head of the Maintenance Department, and since 1995 he has been conducting classes at the University of Forestry as a part-time assistant at the Department of Forestry. In 1997 he acquired the educational and scientific degree of "Doctor" in the scientific specialty "Forest crops, selection, seed production". The topic of his doctoral thesis is: "Opportunities for increasing the use of the giant sequoia (*Sequoiadendron giganteum* (Lindl.) Buchh.) by seed and vegetative propagation". From 1998 to 2005 he worked as Chief of Staff. He was an assistant professor at the University of Forestry, and in 2005 he became a habilitator and currently works as an associate professor at the Department of Forestry.

2. General description of the submitted materials

The candidate **Nasko Aleksandrov Iliev** has submitted a total of 35 scientific publications **for his participation in the competition**. Of these:

- ✓ Abstract of a dissertation for obtaining the educational and scientific degree of "Doctor" – 1 pc.;
- ✓ Monograph – 1 pc.;
- ✓ Articles in journals with impact factor (Web of Science, IF) – 1 pc.;
- ✓ Publications in Web of science journals without IF – 4;
- ✓ Articles in journals with impact rank (Scopus, SJR) – 11 pcs.;
- ✓ Non-refereed with scientific peer review – 17:
 - foreign - 7;
 - Bulgarian – 10.

The 35 posts scored can be classified as follows:

- for indicator A – **1 piece** – **50** points;
- for indicator B 3 – **1 piece** – **100** points;
- for indicator D 6 – **1 issue** – **40** points;
- for indicator D 7 – **16** – **163.5** points;
- for indicator G 8 – **17** – **67.3** points;
- for indicator D 13 – **37** citations – **555** points;

- for indicator D 14 – 20 citations – 200 points;
- for indicator D 15 – 20 citations – 100 points;
- on indicator E17 – 1 PhD student – 40 points;
- for indicator E18 – 11 projects – 165 points;
- for indicator E19 – 3 projects – 60 points;
- for indicator E20 – 2 projects – 60 points;
- for indicator E22 – 1 textbook – 13.3 points;

Total: **1614.1** points with a required minimum number of 550 points.

26 of the publications are in English and 8 are in Bulgarian. One publication is independent, 9 are with one co-author, 14 are with two co-authors, the remaining 10 are with three or more co-authors. In 14 of the submitted publications the candidate is the first author, also in 14 publications he is the second author, etc.

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

For the competition, the candidate has submitted a list of a total of 96 citations, of which 77 are scored. Of these, 37 citations were found in journals in Web of Science and Scopus, of 15 of his publications, which are scored according to the "Regulations". There are twenty citations in monographs and collective volumes with scientific peer review and another 20 in non-refereed journals with scientific peer review. Nineteen of the citations presented are not counted. These data testify to the high scientific level of the candidate's publications.

4. General characteristics of the applicant's activity:

4.1. Educational and pedagogical activities

The educational and pedagogical activities of Dr. **Nasko Iliev** consists in conducting lectures, exercises and practices in the disciplines "Forest Crops" with students from the specialty Forestry, EQD of "Bachelor", full-time and part-time education, "Forest Plantations" with students from the specialty "Forestry", EQD of "Master", full-time and part-time education and "Creation of New Forests" with students from the specialty of Economic Management, EQD of "Master", full-time education. He co-authored a textbook for students "Forest Cultures. Forest seed production". It presents the current classification of seed materials by durability, respectively storage opportunities with the newly differentiated groups – semi-dry seeds and wet seeds of species from the tropics. A newly developed issue is "Long-term storage of seed materials". New methods used in forest seed control have been added: "Hydrogen peroxide treatment", "Testing of extracted germs" and "X-ray method". For the first time in our educational literature, the concept of "vigor of germination" and the methods for its determination are presented.

4.2. Scientific, applied and methodological contributions

The contributions presented in the competition are the result of research that can be summarized in the following areas:

I. FOREST SEED PRODUCTION

- For the first time, an up-to-date classification of seeds by durability is presented, with newly differentiated groups – semi-arid and wet seeds of species from the tropics;
- For the first time in Bulgarian literature, the concept of "vigor of germination" and methods for its determination are presented;

- The role of the breeding activity in Bulgaria for the creation of forest seed production sources for increasing the sustainability and productivity of the created forest crops is justified;
- The created seed production sources of white acacia in Bulgaria have been studied and the production of seeds from it, their sowing qualities and the applied pre-sowing preparation have been analyzed;
- All plantations and crops included in the National Database of Forest Territories in Bulgaria, in which the sixteen dominates in the composition, have been studied in order to include new basic sources of reproductive materials;
- The sowing qualities and the nature of the seed dormancy of the seeds of species of limited distribution and use in our country, in which the experience is relatively insufficient – *Acer platanoides* L., common cherry (*Prunus avium* L.) and common sycamore (*Acer pseudoplatanus* L.);
- The sowing qualities of seeds of *Sterculia platanifolia* L. have been studied.

II. NURSERY PRODUCTION

- The possibility of rooting pre-etiolated and deetiolated shoots has been proven;
- A methodology for long-term treatment of cuttings with indolebutyric acid (IMC) has been proposed;
- The influence of the type of auxin and its concentration, the optimal timing for harvesting cuttings and the genotype on the induction of calusogenesis, rhizogenesis and the quality of the formed root system of cuttings from three cultivars of *Chamaecyparis lawsoniana* have been studied;
- An attempt has been made for vegetative propagation and reintroduction of the common yew (*Taxus baccata* L.) in its natural habitats in Strandzha and Vitosha;
- The belief that grafting cannot be carried out in the summer season has been refuted. Based on this, the possibility of a free choice of grafting method in this period is outlined, depending on the morphometric characteristics of the components;
- In the common cherry (*Prunus avium* L.), the influence of the rootstock, the phenological state of the components and the method of grafting on the adhesion and growth of the graft have been tested;
- In Norway Maple (*Acer platanoides* L.) and its cultivars Drummondii and Faassen's Black, splitting, copulation, and lateral notch budding, all three methods were found to provide a high success rate in spring, and in summer, budding is preferable to grafting;
- Spring and autumn grafting of *Syringa vulgaris* L. and its cultivars Charles Joly and Mme Florent Stepman on rootstocks of biennial vegetative saplings of *Ligustrum ovalifolium* Hassk was achieved.
- Methodologies have been developed for cloning mountain ash (*Fraxinus excelsior* L.) and common sycamore (*Acer pseudoplatanus* L.) *in vitro*;
- The influence of selective herbicides on the reaction of seed and vegetative saplings has been established and the possibility of their application in practice has been proven.

III. AFFORESTATION (Creation of forest crops)

- Studies have been carried out on the condition, growth and productivity of forest crops of Common Cherry (*Prunus avium* L.), *Acer platanoides* L. and Common Sycamore (*Acer pseudoplatanus* L.) in Bulgaria; the three species can form clean plantations and create sustainable clean forest crops;
- An analysis of the distribution of *Robinia pseudoacacia* in Bulgaria, the areas it occupies, its economic value, the age structure of the plantations, the conditions of the

habitat, the classes of productivity, the technology of afforestation and crop management is made;

- The only studies of their kind in Bulgaria have been made on the effects of the use of mechanical protectors on survival, growth in height and diameter in deciduous and silty-leaved tree species;
- For the first time in Bulgaria, a theoretical and conceptual framework for the development of a unified methodology for quantitative assessment of the competitiveness of forestry companies in Bulgaria is presented.

5. Assessment of the candidate's personal contribution

From the materials submitted by the candidate, it can be seen that His solo publications are one, 9 are with one co-author, and 14 are with two co-authors. In 14 of the submitted publications, the candidate is the first author, and also in 14 publications he is the second author, etc. These data show the ability of Dr. Iliev successful work in the areas of his scientific research – to correctly formulate and solve the assigned tasks. He also demonstrates excellent teamwork abilities – teamwork is a natural phenomenon in modern science and is highly valued everywhere in the world.

6. Critical remarks

The following critical remark can be made on the materials presented:

1. Working with the 14-page report on contributions is extremely difficult, because in fact a collection of summaries of the publications with the results of the research carried out is presented, among which the scientific and applied contributions of the candidate can be found.

7. Personal impressions

I have known Assoc. Prof. Dr. **Nasko Alexandrov Iliev** as a junior colleague for many years. We do not have joint publications, but as a result of my personal contacts with him, I have the impression that he is a well-trained researcher, lecturer and practitioner in the field of forest crops.

8. Conclusion

The documents and materials presented by Assoc. Prof. Dr. **Nasko Aleksandrov Iliev** meet all the requirements of the Law on the Prevention of Corruption and Corruption, the Regulations for its Implementation and the Regulations of the IG-BAS and meet and even exceed the requirements for the academic position of "Professor". It is obvious that Assoc. Prof. Dr. **N. Iliev** is an experienced and highly erudite scientific researcher with a clearly defined scientific topic. **my positive assessment and to recommend to the respected members of the Scientific Jury to vote for him to be awarded the academic position of "Professor" in the professional field 6.5. Forestry, scientific specialty "Forest Crops, Selection, Seed Production".**

07.04.2025

Jury Member:

/Prof. Dr. A. Tashev/