

REVIEW

ЛЕСОТЕХНИЧЕСКИ УНИВЕРСИТЕТ ФАКУЛТЕТ ПО ГОРСКО СТОПАНСТВО
Регистрационен индекс на дата
ФСС-2629 / 11.04.24

on the materials for participation in a competition for occupation of the academic position “**Associate Professor**”, scientific field 6. “Agricultural sciences and veterinary medicine”, professional direction 6.5. “Forestry”, scientific specialty “Forest management and mensuration”, subject “**Forest management**”, announced by the University of Forestry, State Gazette 102 of December 8, 2024, code of procedure: **FOR-AsP-1123-115**.

Applicant to participate in the competition:

Toma Ivanov Tonchev, Senior Assistant Professor, PhD

Prepared the statement:

Ivailo Ivanov Markoff, Associate Professor, Doctor of Sciences

Forest Research Institute (FRI) at the Bulgarian Academy of Sciences (BAS), scientific field 6. “Agricultural sciences and veterinary medicine”, professional direction 6.5. “Forestry”, scientific specialty “Forest management and mensuration”, appointed as a member of the scientific jury by order **ZPS-22/23.01.2024** of the Rector of the University of Forestry.

1. Short biography of the applicant

Senior Assistant Professor PhD Toma Ivanov Tonchev was born in 1973 in the city of Berkovitsa. He graduated from the Berkovitsa Forestry College with the degree of "forestry technician", then from the University of Forestry in Sofia with the degree of "forestry engineer" and defended his PhD thesis in the scientific specialty "Forest management and mensuration" at the Forestry Research Institute of the Bulgarian Academy of Sciences. He worked for a short time (1 chamber season) in the forest inventory institute Agrolesproekt Ltd. He has 26 years of experience at University of Forestry as an employee and teacher, including 16 years of academic experience as a Senior Assistant Professor.

2. Compliance of the submitted documents and materials of the applicant with those required under the Regulations for Development of Academic Staff at the University of Forestry (RDASUF)

I do not find any inconsistency of the submitted documents and materials with the requirements of the Regulations.

3. Assessment of the applicant's educational activities

Although not yet habilitated, Tonchev has been lecturing and leading exercises in the disciplines "Forest management", "Forest mensuration" and "Forest growth" since 2008. His teaching experience began in 1999, initially as a training organizer and part-time teacher.

4. Assessment of the applicant's scientific, applied and publication activities

The candidate exceeds the minimum number of publications required by the Law and the Regulation. The publications presented by the candidate are 37 (as he counts them, but as I count them – 31), which allows us to estimate his publication activity at an average of 2 articles per year. His scientific-applied activity is measured by his participation in 12 projects, which are primarily of a practical orientation.

4.1. Participation in scientific, applied science, infrastructure and educational projects

Tonchev led 1 project (Influence of atmospheric carbon dioxide concentration on the productivity of the beech *Fagus sylvatica* L. in the differentiation period, 2010-2013) and was a participant in 11 projects under the leadership of N. Aleksandrov (4), Mihov (3), Yurukov, Ignatova, Kostov, Karamfilov, Anev (1 each). The collectives are almost exclusively from FU. In a large number of projects (6), Tonchev was the only representative of the discipline "Forest management and forest measurement".

4.2. Characteristics of published scientific results

The candidate has submitted 3 monographs, of which 1 co-authored and 2 own, and 28 articles, of which 10 in journals referenced in WoS, of which 1 abroad. Nine of the publications are in English, the rest, including the monographs, are in Bulgarian.

4.3. Reflection of the applicant's scientific activity in the literature (citations)

The candidate has submitted 36 citations of his works, of which 13 in journals with an impact factor, of which 7 by foreign authors and 6 by Bulgarian authors in foreign journals (Stankova, Dimitrova, Petkova, Damyanova). The most widely cited work (10 citations) is D.13.1. *Forest mensuration manual*, with authors Poryazov, Tonchev, Dobrichov. Most of the cited works are co-authored. 1 is his own and 1 is with his leading participation.

4.4. Contributions in the applicant's work (scientific, applied)

The applicant's classification of contributions as scientific and applied science in his statement of contributions is quite arbitrary. The candidate has not submitted purely theoretical works, nor practical studies without scientific novelty, so all his contributions are scientific-applied. This, however, is natural for a relatively young man, especially given the applied nature of

forestry. Thematically, his contributions are divided into the disciplines "Forest management", "Forest mensuration" and ecology, which the candidate has given descriptive names. In the statement, the contributions are not distinguished and numbered, which makes it difficult to count and cite them. According to my reading, the contributions are 37, approximately as many as the submitted works.

Most contributions are convincing but not all are of equal importance. In my view, the main contributions are as follows

1. A large number of dendrometric equations and models have been established.
2. An assortment table for beech was developed (G8.1 and G8.2).
3. Differentiated rotations for pine plantations were proposed.
4. Stand Density Control Diagrams were applied for natural beech stands. This continues a line of research by Hubert Sterba, who linked these diagrams to Assmann theory of optimal basal area.
5. An attempt was made to apply the principles of ecosystem compliance on coniferous crops outside the range of conifers in our country.
6. etc.

5. Assessment of the applicant's personal contribution

In 9 of the 37 publications presented (by his own account), the author is in first place. This is primarily a clear recognition of his personal contribution by his co-authors. In another 12, he is the only representative of the discipline "Forest management and Forest mensuration" in the author's collective. In other 5, he is the second and only co-author of his late superiors Prof. Mihov and Prof. Bogdanov, which is also a sign of a significant personal contribution. There are few examples of minor contribution - for example, the critical levels of lead and cadmium in the Bulgarian forests (G7.5).

6. Critical notes and recommendations

6.1. Critical notes

1. In the monograph B3.1. (the habilitation thesis), a large number of sources are cited without unification of terminology (for example, SDCD height curves are height isolines) and notations (for example, stand density is denoted by N and ρ). An assessment of the relative merits of the methods and the relationships between them is also missing. Own results are given without material description. On the other hand, it makes a good impression that not only Japanese sources are cited on the issue of stand density. Also, that Duchovnikov's method is represented with an equation. On the other hand again, no conclusions have been drawn about its limited applicability, which is evident from this very equation. The main thing to note about this work is that it is not taken from the standard university course.
2. I consider the manner in which the monograph Adaptive management of Scots pine plantations, 228 pages by three co-authors, is cited to be incorrect and even frivolous. The monograph has been divided into 7 chapters, each of which is cited as a chapter in a collective monograph. In this way, authors can increase their points indefinitely. According to FRI, this monograph counts for a study (there are not 100 pages for each author). In my opinion, this way less points come out, but they are more indisputable.

I note that this objection does not change the finding that the applicant meets the requirements. Also, I don't understand why he has not included as a monograph his most cited work, the *Forest mensuration manual*, which is also not listed in the list of excluded works.

3. The proposal to count the undergrowth in the center of the Schmidt-Haas sample plot is inappropriate, because the center is trampled when the plot is measured.

6.2. Recommendations

I wish the candidate to persevere in his quest to keep up with world science - and at the same time not to lose sight of the realities, which is actually the harder part.

7. Personal impressions

Tonchev is a sane and constructive person who can be worked with.

8. Conclusion

Based on a comprehensive assessment of the qualities and the results presented by the applicant I PROPOSE the applicant Dr. Toma Ivanov Tonchev TO TAKE the academic position of "Associate Professor" in the subject "Forest management", scientific specialty "Forest management and mensuration", in the professional direction 6.5. "Forestry".

Statement delivered on: 11.04.2024

Author of the statement

in Sofia

Ivailo Markoff