

## REVIEW

on the materials for participation in a competition for occupying an academic position, field of higher education scientific specialty "Agrochemistry", for the discipline "Agrochemistry", announced by the University of Forestry in State Gazette No. 59, p. 69 / 12.07.2024; Procedure code

### A candidate for participation in the competition is:

•

**Reviewer:** Dr. Ivanka Georgieva Mitova, retired, Sofia, professional field 6.1. Plant Production, scientific specialty "Agrochemistry", appointed as a member of the scientific jury by Order № ZPS-515/18.09.2024 of the Rector of the University of Forestry-Sofia

### **1. Brief biographical details of the candidate**

Associate Professor Vesselin Koutev was born on 16.02.1961 in the town of Byala Slatina. In 1987 he graduated from the State Agrarian University "V. V. Dokuchaev", Kharkiv, Ukraine with full honors with the professional qualification "Agronomist, Agrochemist, Soil Scientist". Since 1988 he has been a PhD student in the Department of Agrochemistry of the Institute of Agricultural Studies "N. Poushkarov" - Sofia. In 1991 he obtained the scientific degree "Candidate of Agricultural Sciences" with a dissertation on the topic "Study of nitrogen mineralization in laboratory conditions, pot and microfield experiments (using  $^{15}\text{N}$ )", in 2004 the Higher Attestation Commission awarded him the scientific title "Senior Researcher II degree", and in 2013 obtained the scientific degree "Doctor of Science" on the topic "Geostatistical approach to the study of the spatial variability of soil indicators for the needs of agrochemical studies and agriculture" in the scientific specialty: "Agrochemistry". In the period from 2012 to 2014 Assoc. Prof. Koutev is the Head of the Bureau for Transfer of Technological Solutions in Agriculture at the Nikola Poushkarov Institute of Agricultural Development. Since 2014, Assoc. Prof. Koutev has held the academic position of Associate Professor at the University of Forestry - Sofia, and between 2016 - 2019 is Head of the Department of Agriculture and Herbology. Since 2024 he is the Head of the Department of Agronomy. For the past time since 2014, Assoc. Prof. Koutev has been performing teaching work - lectures and exercises with students, teaching practices and internships, work with graduate and doctoral students, specializations, research work (laboratory, field and vegetation experiments), publications. The areas of competence of Assoc. Prof. Koutev include agrochemical research; mineral and organic fertilization; nutrients availability depending on the soil type and environmental influence; nitrogen transformations in soils; leaching of nitrates in groundwater (lysimetric studies); isotopically exchanged Zn and P in soil ( $^{32}\text{P}$  and  $^{65}\text{Zn}$ ); heavy metal contamination of soils; phosphorus pollution of water bodies – eutrophication; spatial variability of nutrients and heavy metals; monitoring and new methods for sampling, precision agriculture, organic farming. The candidate's scientific interests, areas of competence and research are in wide range of topics, which is reflected in his participation in teams of interdisciplinary studies, which in turn enriches his scientific results. The high scientific and research achievements of the candidate are also related to his leadership and participation in many national and international projects, for which an important role is played by the excellent skills for working with various computer programs - office, statistical, geostatistical, GIS, drone programs, etc., as well as fluency in English, French and Russian.

### **2. Compliance of the submitted documents and materials of the applicant with those required under the Regulations for advance of the academic staff at the University of Forestry;**



In the announced competition, Assoc. Prof. Koutev participated with 50 publications, 15 citations, as well as documents and materials proving the supervising of PhD students, participation in national and international projects and teaching aids, distributed in the table according to the minimum national requirements (MNR) as follows:

| Indicator | Publications/<br>Quotes | Candidate<br>Points | MNR   | for the<br>group of<br>indicators | According<br>to MNR |
|-----------|-------------------------|---------------------|-------|-----------------------------------|---------------------|
| B4        | 11                      | 121,7               | 60/n  | 121,7                             | 100                 |
| G5        | 1                       | 16,7                | 100/n | 342,6                             | 200                 |
| G6        | 2                       | 80                  | 40/n  |                                   |                     |
| G7        | 16                      | 174,8               | 30/n  |                                   |                     |
| G8        | 19                      | 51,1                | 10/n  |                                   |                     |
| G11       | 1                       | 20                  | 20/n  |                                   |                     |
| D13       | 15                      | 225                 | 15    | 225                               | 100                 |
| E16       | 1                       | 40                  | 40    | 425                               | 100                 |
| E17       | 4                       | 120                 | 40/n  |                                   |                     |
| E18       | 1                       | 5                   | 15/n  |                                   |                     |
| E19       | 1                       | 20                  | 20    |                                   |                     |
| E20       | 2                       | 60                  | 30    |                                   |                     |
| E21       | 4                       | 160                 | 40    |                                   |                     |
| E23       | 1                       | 10                  | 20/n  |                                   |                     |

The data in the table shows that the criteria for minimum national requirements have been significantly exceeded for all indicators presented.

### 3. Evaluation of the applicant's teaching and teaching activities

Associate Professor Koutev has held his academic position at the University of Forestry since 06.10.2014. Until 2019 he held the position of Head of the Department of Agriculture and Herbology, and since March 2024 he has held the position of Acting Chief of Head of the Department of Agronomy at the Faculty of Agronomy. The ten-year teaching experience is enough time during which Assoc. Koutev has gained teaching and pedagogical experience. Associate Professor Koutev is the head of 2 national, 4 international educational projects and participates in 2 international and national educational projects. Under his leadership, 4 doctoral dissertations were defended. Associate Professor Koutev is also a co-author of "Technology for fertigation in growing vegetables", which is an important textbook not only for student education, but also for agricultural producers. For the needs of the teaching work Assoc. Prof. Koutev has developed curricula in the disciplines "Agrochemistry" and "Agrotechnics and Fertilization", which are currently taught. The curriculum included in the plan of the specialty "Agronomy", Department of Agronomy is for full-time and part-time forms of education of those obtaining the educational and qualification degree "Bachelor". At the same department he has prepared a curriculum in "Agrochemistry" and for the specialty "Plant Protection" for the educational and qualification degree "Bachelor", for full-time and part-time forms of education. Associate Professor Koutev has also prepared curricula for obtaining a bachelor's degree in the disciplines "General Plant Production" and "Crop Production" at the Departments of Plant Protection and Agronomy. For obtaining the educational and qualification degree "Master" Assoc. Prof. Koutev has presented several curricula developed by him at the Department of Agronomy, with full-time and part-time forms of education: in the disciplines "Agrotechnics and Fertilization", "Precision Crop Production", "Soil Fertility Management" included in the curriculum for the specialties "Field Breeding"; the disciplines "Management of Organic Residues" and "Minimum and Zero Soil Treatments" included in the curriculum of the specialty "Regenerative Agriculture"; program in the discipline "Good Practices in Manure Management" in the specialty "Sustainable Production of Fodder Crops" and in the discipline "Fertilization of Plants in Precision Agriculture", included in the curriculum of the specialty "Precision Agriculture". The presented scientific and educational projects with the guidance and participation of Assoc. Prof. Koutev, defended dissertations under his supervision, 11 curricula at the Departments of Agronomy and Plant Protection, as well as the completed reference for the scientometric requirements according to the Law on Scientific and Scientific Research, in which out of the required 100 points in the group of indicators "E" the candidate has



achieved 425 gives me every reason to give an excellent assessment to his teaching activity.

#### **4. Evaluation of the scientific, scientific, applied and publication activities of the candidate**

##### **4.1. Participation in scientific, applied and educational projects**

For participation in the competition for "Professor" Assoc. Koutev has presented 8 projects, of which 2 national and 4 international projects of which he is the head of and 2 educational projects in which he participates - international and national. Associate Professor Koutev is Coordinator for Bulgaria of the project of the Sixth Framework Programme of the EU - FOOD-CT-2004 003375 "OPENING CHANNELS IN COMMUNICATIONS BETWEEN THE ASSOCIATED CANDIDATE COUNTRIES AND THE EU IN ECOLOGICAL FARMING"2004-2006; project funded by the Ministry of Foreign Affairs of Greece - "HELLENIC - BULGARIAN COOPERATION FOR THE PROTECTION AND MANAGEMENT OF NATURAL RESOURCES - 2004 - 2006"; Head of project BUL/017/06 funded by the Flemish Government for Bulgaria - "IMPLEMENTATION OF FARM GATE NUTRIENT BALANCES IN BULGARIA: A MANAGEMENT TOOL TOWARDS SUSTAINABLE AGRICULTURE", 2007-2010; He is also the head of a project at the National Science Fund - Contract DNTS/Austria 01/2 of 23.08.2017 - "Distribution of nutrients in the soil during intensive cultivation of vegetables with fertigation and optimization of the crop diet to reduce the impact of fertilizers on the environment" - Competition for projects under bilateral cooperation programs 2016 - Bulgaria - Austria. Associate Professor Koutev is also the head of 2 scientific projects with national funding: NFNI No INOV\_09\_0004 on the topic "Study of the spatial variation of nutrients in the conditions of intensive vegetable production with the use of fertigation to optimize the diet of crops and reduce the impact of the fertilizers used on the environment" - 2011-2013 and Contract No. 20 of 2016: "Movement of nitrates in the soil under the conditions of fertigation under the background of mineral and organic fertilization of vegetables". The participation of Assoc. Koutev is associated with 2 projects: international project: SEE/A/118/2.2/X MONITOR II Practical use of monitoring in natural disaster management. MONITOR II is supported by Means of the European Regional Development Fund (ERDF) – IMI, BAS – 2011-2012 and national NFNI No INOV\_09\_0004 on the topic "Study of the spatial variation of nutrients in the conditions of intensive vegetable production with the use of fertigation to optimize the diet of crops and reduce the impact of the fertilizers used on the environment" - 2011-2013.

In the presented projects, topics are directly related to the scientific searches, as well as to the research and teaching work of Assoc.Prof. Koutev. The project contents refer to the pathways to achieve sustainable agriculture: organic production, soil nutrient balance, climate change and soil monitoring, fertigation, fertigation and balanced plant nutrition, and precision agriculture.

##### **4.2. Characteristics of the published scientific results**

The publications submitted for review correspond to the scientific spirit and progressive ideas of their author. Proof of the high level of research work is the excellent academic preparation of the candidate, the applied modern, innovative and adequate research methods, such as competent handling of software products such as GlobSnow, Sigma Plot 14, software product GS+ Geostatistics for the Environmental Sciences by Gamadesign Software, version 5.3.2, etc. Most of the presented materials are related to the management or participation of Assoc. Prof. Koutev in national or international projects (B4,4; B4,6; G7,14; G7,15; G8,13; G8,14), as well as with PhD research. A significant part of the articles is published in internationally known and prestigious journals, refereed and indexed in Scopus and/or Web of Science. 14 of the submitted articles or 30.4% are with an impact rank (SJR) and 10.9% with an impact factor (IF).

The research work included in the peer-reviewed papers belongs to several areas:



- New and traditional fertilization and fertigation systems for field and vegetable crops based on both domestic and international experience and cooperation. Behavior of nutrients in basic soil types. (publications - B4, 11; G7.3; G7.4; G7.5; G7.13; G8, 8; G8.9; G8.12; G11).
- Testing under field and vegetation conditions of new and promising varieties of agricultural crops and fertilizers, depending on the type and method of their application (G7.9; G7.16; G8.1; G8.2; G8.4; G8.17; D8.19).
- Sustainable yields, fertilization, irrigation and quality of production and the environment in conditions of climate change (B4.9; D6.1; D7.11; G7, 10; G7.12; G8.10; G8.18; )
- Climate change and the role of the anthropogenic factor in dealing with emerging situations. Concepts of the influence of hydrological, meteorological conditions, as well as the role of the terrestrial and space cover and its use in the occurrence of climatic anomalies (B4.1, B4.2, B4.3, B4.7, B4.8, G7.1, D8.15) are discussed.
- Precision agriculture. By means of geostatistical analysis, a monitoring network has been built by determining the spatial variations of the available forms of N, P and K, as well as of the organic carbon in the soil profile and in the side area around the irrigation line (B4.5; B4.10; B7.7; D6.2; D7.2; D7.6; D8.3; G8.7; D8.11; D11, 1).
- Research, analysis, evaluation and recommendations at farm level. All applied and experimental knowledge gained from project and contract developments, work as head of the Bureau for Transfer of Technological Solutions in Agriculture, as well as a result of numerous contacts with farmers (G5; G7.8; G8.5; G8.6; E23.1).

#### **4.3. Reflection of the candidate's scientific activity in the literature (citation)**

According to the reference for citations with 100 points required for indicator D13, Associate Professor Koutev has 225 points, which exceeds the criterion for citation, with 15 citations presented. In this case, Associate Professor Koutev has presented only citations in scientific journals, refereed and indexed in the world database. Citations in non-refereed journals with scientific peer review are not indicated. The presented citations are from journals peer-reviewed and refereed in Scopus and/or Web of Science, with 46.7% of citations being in journals with high scientific ratings (Q1 and Q2). Open citations in journals with IF are 53.3% of the total number of citations presented with the documents.

#### **4.4. Contributions to the candidate's works (scientific, scientific-applied, applied)**

In the announced competition for the academic position of Professor at the Department of Agronomy, scientific specialty Agrochemistry, in the discipline Agrochemistry for the needs of the Faculty of Agronomy of the University of Forestry, Associate Professor Vesselin Koutev has presented 46 contributions corresponding to the research and publication work of the candidate. The presented contributions reflect the creative spirit, professional knowledge and experience, broad knowledge and ability to work in teams with different professional orientations and Interests. In this regard, taking into account the indisputable competencies of Assoc. Prof. Koutev in the field of statistics and ability to work with various software products, I appreciate his participation and contribution to project No. 942 of the competition for financing fundamental scientific research at the NI Fund, but I partially accept contributions No. B4,4; B4,6; G7.6; G7.14; G11,13; G11,15 as applicable to the scientific specialty "Agrochemistry". I think that Associate Professor Koutev should have emphasized in more detail the statistical methods used in these publications and the fact of their identical applicability in agrochemical research.

Since Assoc. Koutev has not systematized his contributions, I allow myself at my own discretion to structure them in the following categories:

#### ***Scientific contributions***

1. Results were obtained on the genetic architecture of plant height in a set of 358 European winter wheat varieties plus 14 spring wheat varieties based on field data in eight countries. (G11:4)

2. Through a drone and a multispectral camera, original results were obtained for the change in the



NDVI index and the condition of wheat and rapeseed crops before wintering. Mapping allows for a more accurate determination of nitrogen fertilizer rates in different parts of the field. The real contents of nitrogen, phosphorus and potassium in the main soils of Eastern Bulgaria have been studied. A test for the frequency distribution of inorganic nitrogen in the soil allows you to determine the value that should be excluded from the calculation of the fertilizer rate - 30 kg of nitrogen per hectare. Results higher than 30 mg P<sub>2</sub>O<sub>5</sub>.100 g<sup>-1</sup> and 35-40 mg K<sub>2</sub>O.100g<sup>-1</sup> are deviations from the normal sample distribution and such soils do not need phosphorus and potassium fertilization (B4,5; G7.5)

3. For the conditions of a corn field near Shumen, a statistical analysis of the observed variable – mineral nitrogen – was carried out. For this purpose, descriptive statistics and the Shapiro-Wilk test of normality were calculated. Based on the calculated statistics, it was found that the observed variable has a normal distribution, which also implies adequate nitrogen fertilization (G11,8)

4. Numerical data related to the study of the spectrum of ions density variations in the magnetosphere related to gas dynamics have been processed. The results of the passage of a satellite in the upper zone of the magnetosphere are obtained and the variations of the parameters along the trajectory of the satellite are studied, and the solution of the model is achieved because of the self-consistent interaction between the modules of the magnetic envelope and the magnetosphere (B4.7; G7.1)

5. A connection has been established between the unsaturated soil zone and the net gravitational soil flow in the replenishment of water reserves in the groundwater in our country. An assessment of the expected changes in an important part of Bulgaria's water resources caused by the shift of the main precipitation to the warm seasons for the Struma and Mesta river basins is made by applying a hydrological model of precipitation and runoff, which is a submodel of the NASA climate model (B4.8; D11.15)

6. The trend of change in the amount of fallen snow, its water equivalent and the development of winter crops is analyzed. The results of hydrological modeling show a decrease in snow cover, which leads to a decrease in the water resource from snow - an indicator of changes in hydroclimatic conditions in winter. The change in hydrological conditions resulted in lower rye yields and relatively stable to increased yields of triticale over the period considered (D11,16)

7. Data from Copernicus Land Monitoring Service, NCEP Reanalysis, EFAS-EC (European Flood Awareness System), IMERG-NASA (Integrated Multi-Satellite Retrievals for GPM), national data and CLM modelling (B4, 1)

#### ***Scientific and applied contributions***

8. The main environmental parameters influencing the replenishment of water resources in our country through snowfall for the South-Central region have been studied. Results have been obtained for winter precipitation for a period of 22 years and their impact on winter crop yields (B4.2; B4.3)

9. The organic carbon content after manure application in light soil decreases in depth of the soil profile, respectively 2.12%, 0.55% and 0.42% every 30 centimeters, and after two years there is a significant downward movement in the soil organic carbon profile – 1.69%, 1.55% and 1.47%, respectively, which differs from the perception that there is no strong leaching of organic matter outside the soil profile (G7, 2)

10. Original data were obtained in experiments with fertigation and fertilization based on ortho- and polyphosphoric acids and various forms of nitrogen fertilizers on the growth indicators, yield and quality of zucchini, onions and lettuces. The role of polyphosphates for vegetable crops has been established, compared with orthophosphate fertilizers under fertigation conditions with different nitrogen fertilizers. The NDVI index was measured and a relationship was made with the nitrogen fertilizers used and the phosphorus background. (G7.4; B4.11; G7.11; G7.12; G7.13; G18).

11. With the help of the EU, the parameters of the movement of nutrients during fertigation have been studied. During fertigation, dissolved salts move laterally and vertically. Accordingly, EC measurements also differ by up to 40 cm from the irrigation line. The results obtained allow adjustments to the applied irrigation and fertilizer rates, as well as the location of irrigation lines to vegetable plants. The results of fertigation studies show that soon after the application of manure, the soil carbon of the fertilized areas reaches 2.12 % in the upper layer of soil (30 cm) and drops sharply at the bottom. Two years later, the



soil organic carbon content was significantly washed away, below 90 cm. Such significant movement was observed only on sandy alluvial soil. Changes in soil moisture during the growing season in onion trials are clearly influenced by irrigation, rainfall, as well as root absorption (G11,10; G11,11; D11,12)

12. Data have been obtained on increased pollution of water in Bulgaria with nitrates over the past 20 years and on the need to use mathematical models to control this process in the production of corn on alluvial soils (B4,9)

13. The immobilization of labeled ammonium and nitrate nitrogen when applied together is different from that of their separate application. Nitrate nitrogen is immobilized from 2 to 11% (except for leached resin 28%), and for ammonium nitrogen the immobilization is from 42 to 77%, with the exception of cinnamon podzolic soil – 28%. (G7.3)

14. With 100 old and modern varieties of soft wheat tested without the use of fertilizers to determine the straw:grain ratio, very different results were obtained from the two breeding centers in our country, the ratio for the varieties from Sadovo is 2.18, and for General Toshevo it is 1.55. The presence of awns is a factor of variation. The straw:grain ratio for the awns varieties is 1.53, and for the non-awns varieties – 1.88. The determination of NPK fertiliser rates is influenced by the straw:grain ratio of wheat. Nitrogen fertilizer rates range from 16.5 to 18.5 kg N per acre. For phosphorus fertilizers, this variation is from 6.5 to 7.5 kg of P<sub>2</sub>O<sub>5</sub> per acre. The most varied fertilization rates with potassium 14.5 to 19.3 kg K<sub>2</sub>O per hectare. (G11:1; G11:2)

15. A study of the lands in Northwest and North-Central Bulgaria shows that the average load of agricultural lands with residual mineral nitrogen is highest in the district of Vidin – 41.5 mg/kg of soil, the lowest in the district of Montana – 20.9 mg/kg of soil. In the district of Pleven there are the largest number of cases of extremely high residual amounts of mineral nitrogen. In terms of total quantities of nitrogen potentially washed into the environment from the studied districts, the largest amounts are in the district of Pleven – 9047 tons for spring crops and 6254 tons for winter crops, and the smallest in the district of Lovech – 2035 tons for spring crops and 1320 tons for winter crops. On average, for the studied areas, losses of about up to 52 kg of nitrogen per hectare are possible. (B4,9; D7,8)

16. A study under the conditions of a three-year crop rotation showed the effectiveness of the following nitrogen norms: sunflower – N12 kg/ha, wheat – N10 kg/ha, corn – N10 kg/ha. A single application of P36K36 kg/da is more effective than the annual amount of P12K12 kg/da (G7.5)

17. The variation of fertilizer rates in the spatial heterogeneity of soil fertility in Vertisols for the application of precision agriculture has been studied. The results obtained for fertilization with a variable rate for barley and sunflower show that significant savings can be made in nitrogen and potassium fertilizers. For barley, the fertilizer rate for nitrogen ranges from 6.5 to 11.0 kg/da, and the potassium rate from 1.0 to 7.5 kg/da. For sunflower, the fertilizer rate for nitrogen varies from 1 to 9 kg/da, and the potassium rate from 1 to 9 kg/da. For both crops, the rate of phosphorus fertilization can be reduced by 50% or more, only to about 10% of the area (G11,3)

18. Through soil and climatic information, a permanent monitoring network of Vertisols has been built, of 36 points, distributed in a simple network. There is a strong correlation of spatial variability between P and K. Phosphorus and potassium depend on soil formation processes and the prevailing parent rock. The differences in nitrogen are due to the application of nitrogen fertilizer. The spatial variability of soil organic matter in the conditions of the monitoring networks of Vertisols shows in the Glumche village network connectivity with different hydrological and relief conditions in a flat area. The spatial variability of humus in the Babaliata area network is related to soil erosion processes in hilly areas. The spatial dependence of humus in both fields is strong (G7.6, G7.7, G11.6, G11.7)

#### ***Applied contributions***

19. The growth manifestations of arugula, lettuce, wheat and oats have been tested by the influence of new and promising fertilizers: organic liquid fertilizer "Extra Force"; three types of liquid organic fertilizers with single and double application (every 14 days) - "Extra Force", "Zinovy Korn" and "Zinovy Oil"; organic fertilizers based on alfalfa extracts with foliar application - Sila Max, Sila and Sila B+Mo; as



well as fertilizer products "Eco Prop", "Biostar Top", StimAK, "Azariy" and "Ermey" (G7.9; G7.16; G11.17; G11.19)

20. A slight acidification of the soil was found during fertigation in the control treatment and when compost was applied. With applied manure, acidification is negligible (Y7,10)

21. The good possibilities for using multispectral cameras for assessing damage in forests by the beetles *Ips typographus*, *Ips acuminatus* and *Ips sexdentatus* have been proven. The NDVI index in the range of 0.7 to 0.95 characterizes green tree vegetation. The affected forests under stress have lower values of the NDVI index - 0.65. The NDVI index of damaged areas ranges from 0.45-0.5 (B4.10)

#### **5. Assessment of the candidate's personal contribution and personal impressions**

I allow myself to combine points 5 and 7 because the assessments I make are one-way. I have known Vesselin Koutev since 1987, i.e. from the time he started working at the Institute of Soil Science, Agrotechnologies and Plant Protection "N. Pushkarov". Over the years, I have had many professional contacts with him. He is a good colleague, very straightforward, which sometimes does not work in his favor, with excellent professional training, innovative thinking, willingness to work and willingness to share responsibilities. As head of the Bureau for Transfer of Technological Solutions in Agriculture at the ISSAPP "N. Pushkarov", Assoc. Prof. Koutev showed high competence and skill for practical realization of his scientific knowledge. I have participated in the scientific juries of three of his PhD students and I can confidently state that his contribution and support in the preparation, implementation and defense of these dissertations is enormous. As well as from the review of all documents accompanying the procedure, I strongly believe that Associate Professor Koutev is not a scientist who can and would like to take advantage of someone else's work.

*Based on the proven competence and professional knowledge and experience, I highly appreciate the personal contribution of Associate Professor Vesselin Iliev Koutev to the scientific production presented to me for evaluation.*

#### **• Critical notes and recommendations**

I have no serious remarks to the submitted materials for occupying the academic position of "professor". In point 4, I have expressed my opinion on publications related to participation in a project of the National Fund: "Study of DNA markers related to productivity in sheep breeds bred in Bulgaria". I think that Assoc. Koutev could have structured his contributions better and in accordance with the requirements of the Regulations for AAS at the University of Forestry.

#### **8. Conclusion**

**Based on the in-depth, original, multi-layered research and publication work, innovative approaches and fulfilled scientometric indicators related to scientific, pedagogical and applied scientific activities, I believe that Assoc. Dr. Veselin Iliev Koutev fully meets the requirements of the Academic Staff Advance Act and the Regulations of the University of Forestry for its application for the academic position of "Professor". I assess the overall activity POSITIVELY and suggest the members of the esteemed Scientific Jury to vote positively Associate Professor Vesselin Iliev Koutev to take the academic position "Professor" in the discipline "Agrochemistry" of the PD**

The review has been submitted to: 30.10.2024

Reviewer's signature:

(Prof. Dr. Iv. Mitova)