

## REVIEW

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**REGARDING: Competition for "Associate Professor" in the scientific speciality "Sheep and goat breeding", announced in SN No. 98/17.11.2020 with candidate Chief assistant Dr. Atanas Spasov Vuchkov**

**by Assoc. Prof. Dr. Penko Naydenov Zunev, appointed in accordance with Order № RD 16-49 of 22.01.2021 of the Rector of the Agricultural University - Plovdiv as a member of the scientific committee**

**Reviewer: Assoc. Prof. Penko Naydenov Zunev PhD**

Institute of Mountain Animal husbandry and Agriculture - Troyan, 6, "Agricultural Sciences and Veterinary Medicine", professional direction 6.3, "Animal husbandry" scientific speciality "Sheep and Goat breeding"

According to the announced competition for "Associate professor", the only candidate is Chief Assist. Prof. Atanas Spasov Vuchkov PhD. Currently, he holds the position of Chief Assist. Prof. at the Department of Animal husbandry, Faculty of Agronomy, Agricultural University - Plovdiv.

The presented materials, in type and content, meet the requirements of the Law for development of the academic staff in the Republic of Bulgaria, and the Regulation for the application of the Law for development of the academic staff in the Republic of Bulgaria, and the Regulations of the Agricultural University - Plovdiv for its application for participation in the competition.

### **1. General data about the career and thematic development of the candidate**

Chief Assist. Prof. Atanas Spasov Vuchkov PhD was born on may 22, 1976 in Pazardzhik town. In 1990-1994 he graduated from the High School of Life Sciences and Mathematics "Konstantin Velichkov" - Pazardzhik. In 2000 he graduated from the Faculty of Veterinary Medicine at the Trakia University – Stara Zagora town, Veterinary Medicine – Master degree. From 2002-2009 he was a PhD student in the scientific speciality " Sheep and Goat breeding ". In 2009 defended a dissertation on the topic: "Study on the mother ability of the White and Patched face Maritsa sheep and some characteristics of their meat productivity." The candidate graduated an educational and scientific degree " PhD ", certified by a decision of the Higher Attestation Commission, record №13/27.11.2009, diploma № 33840/28.01.2010. From 2005 to 2007 he was an Assist. Prof. in the Department of Animal Sciences, and from 2009 to the present he is Chief Assist. Prof., PhD.

The thematic development of the candidate is related to the accumulation of knowledge, experience and competencies in the research activity in the field of Sheep and Goat breeding. The conducted trainings and specializations, the participation in research projects and contracts, and the teaching work with students and PhD students contribute to the career development of the candidate.



## **2. General description of the submitted materials.**

In the competition for "Associate Professor", Chief Assist. Prof. Atanas Vuchkov participated with a production of 31 works, grouped as follows:

- Publications related to PhD dissertation - 4 issues that are not subject to review;
- Scientific publications in the nomenclature specialty - 27 issues, of which:
  - Publications in journals referred to and indexed in world-famous databases with scientific information - 10 issues;
  - Articles and reports published in scientific journals, referred and indexed in world-famous databases with scientific information - 7 issues;
  - Articles in unreferred journals with scientific review - 10 issues;
  - Books - 1 issue;
  - Study handbook - 1 issue;

27 scientific papers are subject to analysis for the preparation of the review.

The personal participation of Chief Assist. Prof. Atanas Vuchkov in these 27 publications is illustrated by the fact that in 4 issues (14.82%) is self-dependent author, in 8 issues (29.63%) is first author, in 13 issues (48.15%) - second author, and in the remaining 2 issues (7.40%) is the third and fourth author.

The submitted documents and materials of the candidate Chief Assist. Prof. Atanas Vuchkov indicates that they cover indicators (A and B) and exceed indicators (G and D) for the requirements of the Law for development of the academic staff in the Republic of Bulgaria, and the Regulation for the application of the Law for development of the academic staff in the Republic of Bulgaria, and the Regulations of the Agricultural University - Plovdiv for its application for participation in a competition for the academic position of "Associate Professor" in the scientific specialty "Sheep and Goat breeding".

## **3. Main directions in the research work of the candidate. Demonstrated skills or talents for conducting research (project management, attracted external funding, etc.).**

- The candidate's research activity is focused on the following studies:

1. Studies on the magnitude of productive qualities, indication and characteristics in Bulgarian breeds of sheep and goats, and the influence of some factors on their phenotypic expression (I.1; I.2; I.4; I.5; I.6; I.7; I.8; I.10; III.1; III.2; III.4; III.5; III.6; III.7; IV.3; IV.4; IV.5; IV.9; IV.10).

2. Origin, condition and perspectives for development of some sheep and goats breeds (I.3; I.9; IV.1; IV.6; IV.7).

3. Genetic analysis, information and production systems (III.3; IV.2; IV.8).

- Participation and management or coordination of national and international projects and contracts.

From the reference of the research projects it is evident that Chief Assist. Prof. Atanas Vuchkov has participated in 8 projects, two of which are international:

- International project No BGR/SPG/OP5/CORE/BD/12/13

Increasing the capacity of Rare Breeds Center – Semperviva, Vlahi to achieve sustainability through infrastructure for processing and aging of traditional dairy products from local rare breeds. Promoting of the model for autochthonous breeds.

Project period – 01.04.2012 – 30.11.2013г. The project is implemented by a Bulgarian



company - SEMPERVIVA, in partnership with Slow Food Foundation for Biodiversity.

- International project: EU4SHEPHERDS 2020-1-E501-KA202-082722

ERASMUS INNOVATIVE TRAINING FOR SUSTAINABLE SHEPHERDS, coordinator FMM (Spain), Project duration – 36 months.

For the period 2010 - 2019 there is participation in five research projects and one participation in a national program on the topic: "Providing a modern educational surroundings " module "Modernization of the professionally education system".

This section of the scientific work of Chief Assist. Prof. Atanas Vuchkov shows his experience and rich potential for organizing and working in a team in university, national and international projects.

#### **4. Evaluation of the pedagogical preparation and activity of the candidate. His role in training young, scientific staff.**

The main place in the general assessment of the qualities of a teacher is his pedagogical training and experience, as well as the skills in the educational activity.

- *Classroom employment*

The review of the materials presented in this competition shows that in the last 5 years (2015/2016 - 2019/2020), the classroom employment of Chief Assist. Prof. Atanas Vuchkov of lectures and exercises is 2275 hours, and extracurricular - 533 hours. The hours worked for the period from 2015 to 2020 are a total of 2808 hours. His teaching experience at the Agricultural University of Plovdiv amounts to 15 years and 7 months.

- *Accepted study programs.*

Chief Assist. Prof. Atanas Vuchkov has developed and accepted four study programs for disciplines set in the study plans in various bachelor courses at the Agricultural University - Plovdiv: "Cynology", "Using of Livestock guardian and herding dogs", "Fundamentals of biological animal husbandry" and "Pastoralism". Conducts classes with students at the Agricultural University - Plovdiv for Bachelor's degree in compulsory and elective discipline (Sheep and goat breeding, Animal husbandry, Fundamentals of organic animal husbandry, Pastoralism, Cynology, Using of Livestock guardian and herding dogs), in the following specialties: Zoo engineering, Agronomy, Agro forestry systems and mountain agriculture, Breeding and seed production, Agribusiness, Agronomy of the tropics and subtropics, Agricultural Tourism). The candidate brings a total of 4 disciplines for the Master's degree (Technologies for production of sheep and goat production, Production systems in sheep and goat farming, Monitoring and management of sheep and goat breeds, Basics of sheep and goat breeding).

- *Publications of teaching materials*

The candidate is a co-author of a handbook in "Sheep and Goat breeding", which deals with issues related to breeds and the technological issues of livestock farms.

- *Training of young staff.*

Chief Assist. Prof. Atanas Vuchkov leads purposeful work for the growth of young staff. Under his direct supervision, eleven diploma theses have been developed and successfully defended, and he is currently supervising another four. This shows the skills



and qualities of Chief Assist. Prof. Atanas Vuchkov to organize and lead students and graduates, which is an important part of the duties of every teacher.

**5. Significance of the obtained results, evidence with citations, publications in prestigious journals, awards, membership in international and national scientific organizations, etc.;**

The scientific works with which Chief Assist. Prof. Atanas Vuchkov participates in the competition contain summaries, results and conclusions, which have their contribution in the field of sheep and goat farming. The number of observed citations is a total of 4. He participated in a total of 4 scientific conferences, symposiums and forums abroad (Romania, Turkey, Macedonia, Bosnia and Herzegovina) and 13 scientific conferences in Bulgaria. The publications in which his works were published are:

- Livestock sciences (I.1; I.2).
- Agricultural sciences (I.3; I.4; I.5).
- Agricultural science (IV.4).
- Agricultural Science and Technology (I.6; I.8).
- Science & Technologies (IV.5).
- Journal of Mountain Agriculture on the Balkans (I.9; I.10; III.5).
- Trakia Journal of Sciences (III.6; III.7).
- Scientific papers-Agricultural University-Plovdiv (III.1; III.2; III.3; IV.1; IV.2; IV.10).

The rich professional experience, the good organizational qualities and skills for working in a team of Chief Assist. Prof. Atanas Vuchkov find application in his work on storage and breeding of two autochthonous goats breeds in Bulgaria.

The rich professional experience, good organizational qualities and teamwork skills of Chief Assist. Prof. Atanas Vuchkov are used in his work on preservation and sustainable breeding of two autochthonous goats breeds in Bulgaria - Kalofer longhaired goat and Bulgarian Screw-horned longhaired goat, as well as to improve White and Patched face Maritsa sheep, as part of the national gene pool of local breeds of sheep and goats breeding, which is a kind of wealth for our country. He is a leading author of two breeding programs for the Bulgarian local goats breeds - Kalofer longhaired and Bulgarian Screw-horned longhaired goats.

**6. Significance of contributions to science and practice. The motivated answer to the question to what extent the candidate has a clearly defined profile of the research work;**

The report on the scientific contributions in the works of Chief Assist. Prof. Atanas Vuchkov shows that the research work has mainly a scientifically applied character. Most of the researches are continued with developments recognized and implemented in the practice. This proves the original contribution of the conducted researches and outlines the profile of Chief Assist. Prof. Atanas Vuchkov as a modern lecturer and researcher.

## **I. ORIGINAL CONTRIBUTIONS**

1. The Kalofer longhaired goat and Bulgarian Screw-horned longhaired goat have been the subject of conservation activity since 2000. The coexistence and pure breeding of these



two local goats breeds in one area, requires a clear distinction between the breed types. For the first time, detailed descriptions of the exterior and characterization of the individual autochthonous breeds of goats are made (I.3; I.4; IV.4; IV.7).

2. Based on studies in the populations of the two autochthonous goats breeds - Kalofer longhaired goat and Bulgarian Screw-horned longhaired goat, bred in Southwestern Bulgaria, a differentiation of several main colors - black, reddish-brown, silver-gray (striped grey), „barza” (peacock type), and black and tan (I.9).

3. When research the exterior of the Kalofer longhaired goat in the two distribution areas, it was found that the region of distribution of the breed has a high and medium degree of probability on the following exterior features: height at the croup; head width; ear width; shin-bone girth and hair length at the croup (IV.3).

4. The meat of kids slaughtered at an early age is an extremely valuable product, with outlined dietary and taste qualities. Meat-producing characteristics at 90 days of age, without a period of intensive fattening, were studied (III.4).

## **II. SCIENTIFIC AND APPLIED CONTRIBUTIONS**

1. In order to preserve local longhaired goats as endangered genetic resources, the economic systems in which they are bred have been analyzed in detail. They are categorized as extensive farms and low-investment management systems. The animals are reared on traditional pastoral technology. Breeders are mostly young people registered as farmers by the Law for the Animal husbandry. The answers obtained in an analysis of this matter would focus on the risk points for sustainable development in the future of these valuable for our country autochthonous goats breeds. (III.3).

2. The general chemical composition and coagulation ability of the milk of local goats breeds have been established, largely determined by the quality composition of the milk, which has good technological qualities for the production of traditionally identical dairy products (I.6; IV.5).

3. The weight development of lambs of Karakachan sheep breed from the birth to weaning at 90 days of age was established, as well as the growth abilities after weaning lambs from White Maritsa sheep. (IV.10; I.7).

4. Original scientific information was obtained from the slaughter analysis of "milk lambs" from White and Patched face Maritsa sheep, and about the chemical and fatty acid composition of the meat (I.1; I.2; III.1).

5. An innovative approach is to consider the trait "maternal ability", as a specific trait of the meat productivity formed during the suckling period by the ewes. (II.1).

6. A description of the production technology is made, as well as a biochemical specification of the original "Tolum sheep cheese", produced by traditional technology from the milk of Karakachan sheep breed (I.10; IV.9).

## **OVERALL SCIENTIFIC CONTRIBUTION**

During the period 2005 - 2020, numerous targeted studies and research were conducted, thanks to which today in the country there are two clearly identified, well-studied, preserved and promising for development goat genetic resources - Kalofer longhaired goat and Bulgarian Screw-horned longhaired goat. Based on the research and the obtained results, breeding strategies for their preservation were implemented in the practice. Breeding programs have been prepared for the two autochthonous breeds of goats



and they have been successfully defended. The published book "Meat productivity of White and Patched face Maritsa sheep" is a valuable tool not only for farmers rearing these breeds, but also for the animal science.

#### **7. Critical notes and recommendations**

When I got acquainted with the materials on the competition, I did not reveal any significant weaknesses and errors that would be indicated in the review. Publication (I.4) states that local goats are reared in "semi-mountainous" regions. In my opinion, it is more correct to use the term "foothill". I would like to recommend to the candidate if possible to publish more materials in international journals, incl. with impact factor.

#### **8. Personal impressions and opinion of the reviewer**

I know Chief Assist. Prof. Atanas Vuchkov more than 15 years ago. My personal impressions are based on our collaboration in committees of exhibitions of farm animals, participation in scientific conferences, etc. He is a good organizer, has high qualification and competence in the problems of sheep and goat farming, skills to work in a team, especially with young colleagues. Keep good creative relationships with both local and foreign researchers in the field of animal husbandry.

#### **CONCLUSION**

As a result of the analysis of the pedagogical, scientific and scientific-applied activity of the candidate, I consider that Chief Assist. Prof. Atanas Vuchkov meets the requirements of the Law for development of the academic staff in the Republic of Bulgaria, and the Regulation for the application of the Law for development of the academic staff in the Republic of Bulgaria, and the Regulations of the Agricultural University - Plovdiv for its application. He is a proven and established researcher and lecturer with a clearly defined professional profile and scientific achievements. My personal assessment of his overall work is that his developments have made a large number of scientific and scientific-applied contributions in the field of sheep and goat breeding. Complexly evaluated materials fully cover the scientific criteria for the academic position of "Associate Professor" at the Agricultural University - Plovdiv.

All this gives me reason to evaluate **POSITIVELY** his overall activity.

I allow myself to propose to the esteemed Scientific committee to vote positively, and the Faculty Council of the Faculty of Agronomy at the Agricultural University - Plovdiv to elect **Chief Assist. Prof. Atanas Spasov Vuchkov for "Associate Professor" in the scientific specialty "Sheep and Goat breeding"**.

08.03.2021 r.

Troyan town

REVIEWER:.....  
/Assoc. Prof. Penko Zunev PhD/