



REVIEW

regarding the competition for "Associate Professor" in the scientific specialty "Cattle and Buffalo breeding", announced in the State Gazette No. 41 of 05.05.2026 with candidate Svetoslav Biserov Karamfilov from Agricultural University, Plovdiv,

Reviewer: Prof. Zhivka Ilieva Gergovska DSc- Trakia University, Stara Zagora - retired, field of higher education 6. "Agrarian Sciences and Veterinary Medicine", professional direction 6.3 „Stock-breeding“, Doctor of Science in scientific specialty "Breeding of farm Animals, Biology and Biotechnology of Reproduction". Professor of the scientific specialty "Cattle and Buffalo breeding"

Appointed as a member of the scientific jury by order No. RD-16 - 813/29.06.2026.. of the Rector of the Agricultural University.

1. General data on the career and thematic development of the candidate;

The candidate for the competition for "Associate Professor" in the scientific specialty "Cattle and Buffalo Breeding" is Svetoslav Bisserov Karamfilov PhD, Chief Assistant Professor at the Department of "Animal Sciences", Faculty of Agronomy, from the Agricultural University, Plovdiv. PhD Karamfilov was born on 31.05.1986 in the city of Smolyan, graduated with a Bachelor's degree in 2009, specialty "Animal Breeding", professional qualification "Zooengineer" and a Master's degree in 2010 in the Master's program "Animal Selection and Reproduction". He obtained his PhD in 2015 in the scientific specialty "Breeding of farm animals, biology and biotechnology of reproduction", defending a doctoral dissertation on the topic "Development of a selection index for the Montbeliard breed bred in Bulgaria". During his doctoral studies, he worked as an expert breeder at the "Association for Breeding Local Cattle Breeds" (from 2011 to 2014), and from 2014 to 2017 - as a chief expert "Cattle and Buffalo Breeding", at the "Executive Agency for Selection and Reproduction in Livestock".

During the period 2017–2018 he held the academic position of "Assistant", and from 2019 to the present - the position of "Chief Assistant" in "Cattle and Buffalo Breeding".

Simultaneously with his teaching activities, he maintains a close connection with the breeding practice in the field of cattle breeding, carrying out breeding activities with specialized beef breeds - Aberdeen Angus, Hereford, Limousin and Galloway at the "National Association for Beef Cattle Breeding in Bulgaria".

2. General description of the submitted materials.

In the competition for "Associate Professor" Svetoslav Biserov Karamfilov PhD participated with a total output of 27 works, grouped as follows:

Scientific publications in the nomenclature specialty - 27 issues, of which 9 are in journals with impact factor and impact rank, and 15 - in peer-reviewed scientific publications, of which:

- *Publications related to the doctoral dissertation* - 3 issues, which are not subject to consideration;

- *Publications in peer-reviewed and refereed scientific journals* - 24 issues;

Of the total number of publications, 7 are in scientific publications with quartile Q4 and 1 with Q2. Total SRJ 1.93.

The personal participation of Svetoslav Karamfilov PhD in the mentioned 24 works is illustrated by the fact that 4 are independent (16.7%), in 8 - he is the first (33.3%), in 7 - he is the second (20.2%), and in the remaining 5 he is the third and subsequent author (20.8%).

To prepare the review, 24 issues are subject to analysis.

Fulfillment of the minimum national requirements for holding the academic position of "Associate Professor"

The information presented shows that Chief Assistant Svetoslav Karamfilov PhD covers all groups of minimum national scientometric requirements for scientific and teaching activities necessary for acquiring the academic position of "Associate Professor" in the indicated scientific field and professional direction, respectively:

According to criteria A (min. 50 points) - 50 points fulfilled.

Acquired PhD- defended dissertation in 2015, with 3 scientific publications presented on it.

According to point B (min. 100 points) - 374 points fulfilled. 10 publications presented.

According to criterion D (min. 200 points) - 225 points fulfilled. 14 publications presented.

According to criteria E (min. 50 points) - 90 points presented.

5 citations in scientific publications referenced and indexed in world-renowned databases of scientific information – 75 points, 1 citation in a scientific conference proceedings – 15 points. Two of the citations are in journals with IF (6.9) and one with SRJ (0.149)

Additional indicators in group E

Participation in scientific projects

Participation in four national scientific projects and programs, respectively: National scientific programs "Intelligent Animal Husbandry", "Reproductive Biotechnologies in Animal Husbandry in Bulgaria" and "Young Scientists and Postdoctoral Fellows" (2019 and 2020). Two with internal funding from the Plovdiv University of Applied Sciences, one of which he is the head.

Symposia and conferences

Two poster reports at an international scientific conference abroad (Bucharest, Romania) and four reported publications at national scientific conferences in the country.

Participation in the development of 5 breeding programs for different breeds of cattle, mainly in the meat sector.

According to the minimum scientometric requirements of the LDASRB, 400 points are required to occupy the academic position "Associate Professor". The candidate has submitted documents for a total of 739 points or 339 points above the required ones. This is 45.87% above the required minimum.

3. Main areas of the candidate's research work. Demonstrated skills or aptitude for leading scientific research (project management, attracted external funding, etc.).

All of PhD Karamfilov's research is entirely in the scientific field of the announced competition on "Cattle and buffalo breeding". The main part of them is in beef cattle breeding, but there are several related to autochthonous, dairy and combined breeds of cattle.

Most of these studies were conducted with the author's participation in scientific projects, both in those with national funding and internally by the Faculty of Agronomy. This is also evidenced by the topics of the projects in question and the published results of them as scientific publications. All this shows skills when participating in scientific teams to achieve the necessary results and their presentation in the scientific community. Also, opportunities to lead scientific projects.

4. Assessment of the candidate's pedagogical preparation and activity. His role in the training of young scientific personnel.

Chief Asst. Svetoslav Karamfilov PhD has a work experience as an assistant and chief assistant for a little over 9 years. During all these years, he has over 500 hours of classroom and extracurricular employment (from 507 to 829 hours per year). He gives lectures and exercises in 6 disciplines, which he developed independently, respectively: "Biological foundations of cattle and buffalo breeding", "Technology of cattle and buffalo breeding", "Cattle breeding", "Geographical and breed-protected products", "Management of genetic resources in cattle and buffalo breeding" and "Technological design in animal breeding".

Of these, 3 are mandatory for the Bachelor's degree, 2 are elective for the Bachelor's degree and the Master's degree in the specialties "Zooengineering" and "Zooengineering with Information Technologies" and one is optional for the Bachelor's degree in the specialty "Agricultural Engineering".

As a Chief Assistant, he was the scientific supervisor of 14 successfully defended theses in the Bachelor's degree and 7 in the Master's degree.

He actively participates in the Erasmus program - mobility and training of teachers. Under the mobility program, he visited 8 foreign universities, of which 7 in European countries and one in one in Africa (twice). He was a student in 8 of the universities and in one - a student and taught.

All of the above presents Karamfilov PhD as an active and accomplished teacher, who has shown the ability to independently develop curricula, deliver a full course of lectures and exercises in several disciplines related to the topic of the announced competition, and prepare and scientifically supervise graduates at both the Bachelor's and Master's levels.

5. Significance of the obtained results, proven by citations, publications in prestigious journals, awards, membership in international and national scientific bodies, etc. of the publications

A part of PhD Karamfilov's scientific publications are published in journals registered in Web of Science with a total Journal Impact Factor (JIF) 5.3 and Scientific Journal Ranking (SRJ) 1.61, 8 are in scientific publications with quartiles Q4 and 1 with Q2. The citations report shows that they have a total Web of science JIF=14.9, Scopus SRJ=4.03, with 4 being in publications with quartile Q1 and 1 with quartile Q4. The presence of citations in indexed publications confirms the relevance and significance of the candidate's scientific research.

6. Significance of contributions to science and practice. Motivated answer to the question of the extent to which the candidate has a clearly outlined profile of scientific research work;

The main direction in the work of Karamfilov PhD is beef cattle breeding, to which in recent years there has been increased interest from practice. Most contributions in this area are of a scientific-applied and applied nature.

Exterior indicators of cows and heifers of meat breeds

In our country, cattle of both different breeds and origins (import countries) are bred. Imported animals are bred under different production systems, as well as for selection purposes. As a result, it is of interest how they adapt and develop under our breeding conditions (B4, B7, B8). For the first time in the country, detailed measurements of the physique of animals of specialized meat breeds - Aberdeen Angus, Limousin and Hereford bred in our country have been carried out. It has been established that the origin of the cows reliably affects the basic measurements of the body. In most of the breeds, animals born in our country are not inferior in the basic indicators of physique to those imported from different countries (Limousin) and even have better exterior indicators - greater height, well-developed chests such as girth and depth, oblique body length (Aberdeen Angus, Hereford). The same applies to young female Limousin calves born in our country, which reach over 90% of their

exterior appearance at the age of one year. This shows that the breeding conditions and the climatic and fodder characteristics of our country are suitable for the successful breeding of cows of these breeds for meat.

Growth and development of female and male calves of the Aberdeen Angus breed in certified organic farms

The growth ability of male and female calves of the Aberdeen Angus breed was studied within the suckling, growth and fattening period when reared on organic farms (B 5-6). Regardless of the fluctuations in growth during the individual periods, female calves of the Aberdeen breed reached optimal live weight for insemination (330-360 kg) at an optimal (15-16 months) age. Male calves raised on an organic farm reached optimal slaughter age at 16 months with an average live weight of 453.1 ± 47.21 kg. Under organic production conditions, both female and male calves of the meat breeds Aberdeen Angus and Limousin developed very well, achieving the necessary live weight indicators in optimal age periods.

In the context of organic production, for the first time in Bulgaria, the growth of Limousin calves during the suckling period (B 1) was studied. At the same time, the dynamics of live weight during the lactation period for two consecutive lactations of Limousin cows was also recorded. It was found that raising beef cows with suckling calves on organic farms ensures sufficiently good production efficiency and welfare of the raised animals, without the use of artificial fertilizers and the utilization of pastures for most of the year.

Slaughter performance and quality of meat from an indigenous breed

In Europe, specialized meat-producing breeds are mainly used to obtain high-quality beef production. At the same time, local cattle breeds retain their uniqueness in terms of their adaptive ability. There is increasing interest and research into the advantages they possess and the quality of the meat they produce compared to commercial breeds.

An analysis of the slaughter qualities of pasture-raised calves of the Bulgarian Grey Cattle breed (B 10) was carried out and original data were obtained on the quality of the fatty acid profile of meat from calves of the Bulgarian Grey Cattle breed (B 9). It was found that the relative share of meat, fat and bones does not differ significantly from other breeds. The results obtained when analyzing cuts from calf carcass halves confirm the balanced distribution of the main tissues and a very good yield.

Male calves of the breed are raised extensively on poorer pastures. Due to the specifics of their breeding, local cattle breeds possess unique meat-producing characteristics that can significantly contribute to the production of traditional meat products and those with geographical significance.

Effective management of reproduction and reproduction in cattle farms.

The general scientific concept of the studies is aimed at optimizing the reproductive, productive and behavioral qualities of cattle of different breeds, raised in Bulgarian conditions. The studies analyze the influence of main factors on the reproduction, productivity and well-being of cattle with different productive directions. The results of the studies have direct practical applicability in cattle farms, supporting the selection of appropriate breeds, sire lines and reproductive technologies.

New reproductive approaches and methods were used in the reproduction of beef cattle (G 12 – 13, 18). Protocols for synchronization of estrus and ovulation in cows and heifers of the Aberdeen Angus breed were tested. In heifers, the results obtained are similar when applying the different protocols and are lower than those in cows. The two cow protocols tested showed higher pregnancy rates of 61.29% (Cow Protocol 1) and 75.6% (Cow Protocol 2). Higher fertility rates with sexed semen in Aberdeen Angus heifers were found to be achieved when insemination was performed after signs of estrus were detected by behavioral monitoring without the use of intravaginal progesterone-releasing devices (G 18). When synchronizing estrus in beef heifers inseminated with sexed semen, the protocol in which

insemination was performed after detection of estrus was more appropriate, as it compensated for the low sperm count and reduced viability, although it was more laborious and time-consuming.

The influence of the father on the main reproductive indicators in cows of the Aberdeen Angus (G 14) and Limousin (G 24) breeds was studied. In both breeds, the father has a reliable influence on the studied reproductive and reproductive traits of the daughters. When choosing bulls for breeding from both breeds, attention should be paid to the breeding values for the traits concerning the reproductive and reproductive qualities of the daughters.

The reproductive traits of the combined Montbeliard breed (G 15) were studied. The breed was newly introduced in Bulgaria, and the studies are the first to evaluate its biological and economic qualities in the conditions of our country. Good reproductive and reproductive indicators were established in cows raised in our country. The age of first calving is significantly influenced by the farm, the father, the year and month of birth, and the duration of the intercalary period is significantly influenced by the farm, the year and month of calving. In relation to breeding, it has been concluded that the adaptation of the introduced animals is mainly determined by the economic conditions of the farm. In farms where the breeding technology and feeding are set at a good level, the Montbeliard breed animals adapt successfully and have good reproductive performance.

Study of calving ease and maternal instinct in beef cattle raised in Bulgaria

The calving ease of cows of the Aberdeen Angus and Limousin breeds (G 11) was studied. Daughters of bulls of Danish and Irish origin of the Aberdeen Angus breed had the easiest calvings, and in the Limousin breed - with French origin. It is recommended for the practice in Bulgaria for both breeds to start their own bull production on the principle of linear breeding with the inclusion of the indicator "calving ease" as the main selection trait of reproduction.

For the first time in Bulgaria, results have been obtained on the maternal instinct of cows of the Limousin breed in pasture farming (G 21). The maternal behavior after giving birth of cows of different origins in relation to the country of birth - Bulgaria, France, Austria and Luxembourg was studied. The next lactation, the origin and the sire have a significant influence on the manifestation of the maternal instinct. There is a tendency from the first to the third lactation for the maternal instinct to increase, and then to gradually decrease. The assessment of the maternal instinct can complement the assessment of the breeding value of the bulls used under the specific conditions of breeding. It is recommended to select for a strong maternal instinct in cows, so that they protect the calf and at the same time are not very aggressive for service.

Study of the temperament of beef and dairy cattle during handling

Temperament in cattle breeding is assessed in relation to animal welfare, the implementation of humane treatment and safety of work with them. In modern breeding programs, the prediction of the temperament of the offspring and its assessment help to select calmer animals, exhibiting lower levels of stress under a given breeding technology. For the first time in Bulgaria, studies of the temperament of beef cattle during handling in a machine (B 2-3) have been conducted. With increasing age, Limousin cows have a calmer temperament when passing through a chute and machine. In Aberdeen Angus cows bred in Bulgaria, the method of breeding, as well as age, have a significant impact on the formation of behavioral reactions during handling. Animals are calmer when groups are formed with animals of different ages. Cows are calmer when handled when they have regular contact with people and are raised on the farm for most of the year.

A comparison of the temperament during milking of Holstein cows milked in a "Herringbone parlor" and with a "Central milk duct" (G 22) was made. With increasing lactations, the temperament of the cows during milking is calmer in both milking

technologies. The milking technology does not have a reliable influence on the studied trait. The sire and the next lactation have a reliable influence on the temperament of Holstein cows, which indicates the need to take this linear trait into account when choosing bulls for artificial insemination.

Study of milk productivity.

The main signs of milk productivity in cows of two relatively recently bred in our country combined breeds (milk-meat type) - Montbeliard and Simmental (**G 17, 16**) were studied. Studies in this direction in these breeds in our country have almost not been conducted. The conclusions made provide guidance for the adaptation of the breeds in our country and the possibilities for further use. Cows born in Bulgaria have a relatively high level of productivity, although lower indicators of milk yield compared to those of animals born in France,

For the conditions of the country, Simmental cows have high milk productivity. The calving season is a reliable source of variation. Cows that calved in winter and spring have the highest milk yield, milk butter and milk protein yield, and those that calved in autumn - the lowest.

The milk productivity of highly productive cows of the Holstein breed was also studied (**G 23**). The farm, the year of calving, the next lactation and the sire have a significant influence on the milk yield for a standard lactation. The daughters of 94% of the bulls achieved a milk yield of over 10,000 kg, and 76% of the bulls had daughters with a milk yield of over 11,000 kg. In addition to good feeding and breeding conditions, the correct selection of bulls is of great importance for a high level of productivity.

Study of biochemical blood parameters in relation to welfare in grazing cattle.

The physiological status of 3 introduced in Bulgaria meat breeds was studied: Blond d'Aquitaine, Chianina and Marchigiana, raised on the same farm at the end of the grazing period (**G 19**). The breed had a significant influence on the biochemical blood parameters in terms of glucose content, alkaline phosphatase levels, urea nitrogen and its ratio to creatinine and the amount of carbon dioxide. In the three breeds, increased values of total protein in the blood were recorded due to high values of globulin, tCO_2 , and slightly reduced values of Na. The remaining parameters studied were within physiological norms. It was concluded that natural pastures in Bulgaria, both in the plains and in the semi-mountainous regions, cannot provide the cattle with basic nutrients at the end of the grazing period, which suggests the need for feeding.

Results have been obtained for the biochemical indicators of the blood in cows of the Rhodope Short-horned Cattle (**G 20**) breed. The study confirms the adaptive capacity of the animals in our country. Given the lack of nutrition with concentrated feed, as well as the scarce grazing at the end of the autumn season, the animals are healthy with biochemical indicators of the blood within the norm and normal body condition. The blood analysis shows the suitability of the breed and its resilience and viability to cope with the less favorable conditions of the terrain and the prolonged summer droughts.

7. Critical notes and recommendations

I have no critical notes

8. Personal impressions and opinion of the reviewer

I have known candidate Karamfilov PhD since his student years and I am familiar with his scientific and teaching activities. I believe that he is an excellent teacher with a commitment to student education, as well as active research work and connections with cattle breeding practice.

CONCLUSION

Based on the analysis of the candidate's pedagogical, scientific and applied scientific activities, I believe that Chief Assistant Professor Svetoslav Karamfilov PhD meets the requirements of the LDASRB, LPERTRB and the Regulations of the Agricultural University for its implementation.

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

I would like to propose that the esteemed Scientific Jury also vote positively, and that the Faculty Council of the Faculty of Agronomy at the Agricultural University – Plovdiv to select Chief Assistant Professor Svetoslav Karamfilov PhD as an "Associate Professor" in the scientific specialty "Cattle and Buffalo Breeding".

Date: 31.08.2026

Reviewer:.....
(Prof. Zh. Gergovska DSc)