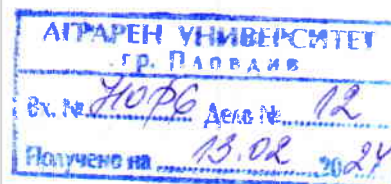


## OPINION



on a dissertation work for obtaining the educational and scientific degree of 'Doctor' in the field of higher education 6. 'Agrarian Sciences and Veterinary Medicine,' professional area 6.3. 'Animal Husbandry,' scientific specialty: 'Animal Breeding, Biology, and Biotechnology of Reproduction.'

**Author of the dissertation work:** Georgi Todorov Yordanov, a part-time student at the Department of 'Animal Breeding Sciences' at the Agricultural University – Plovdiv (AU-Plovdiv).

**Topic of the dissertation work:** 'Genealogical Structure of the Danube Horse Breed, its Place in the Nonius Breed Structure and Developmental Direction in the Context of the Overall Concept of the Breed Development.'

**Reviewer:** Prof. Dimitar Ferdinandov Grekov, DSc (field of higher education 6. Agrarian Sciences and Veterinary Medicine, professional area 6.2. Animal Husbandry, scientific specialty 'Animal Breeding, Biology and Biotechnology of Reproduction'), appointed as a member of the scientific jury by Order No. РД-16-1299 from 18.12. 2023 by the Rector of AU-Plovdiv.

### **1. Relevance of the topic.**

The chosen topic is a bold and ambitious task that, even as an objective, with its materials, methods, results, and discussion, surpasses the requirements for a doctoral dissertation for obtaining the educational and scientific degree of "Doctor." The literature review demonstrates a profound understanding of the material, highlighting the need to explore such a topic, and to a large extent justifies its extensive volume. The analytical review of a large number of literary sources logically and substantively leads to high scientific and practical interest. The use of contemporary methods, numerous zootechnical technologies, and the uniqueness of the breed attest to the high relevance of the dissertation thesis.

### **2. Aim, tasks, hypotheses and methods of study.**

The aim and objectives are clearly and precisely formulated based on phylogenetic, genealogical, molecular-genetic, and population-genetic analyses, aiming at assessing the current state of the Danube Horse breed and its genealogical structures. This serves as a prerequisite for developing a breeding concept and a future development of the breed. With this specific goal, the dissertation makes it clear that this represents the current perspective on the matter, providing a foundation for future exploration and development of the thesis at a higher level. I am confident that the contemporary methods, technologies, and equipment utilized by the dissertation author have allowed them to achieve the set goal and objectives.

### **3. Visualization and presentation of the received results.**

The dissertation is written in a very good scientific style and clear language. The overall volume of the dissertation is 299 pages, including 2 pages of introduction, 2 pages of contents, 43 pages of literature review, 2 pages for the aim and objectives, 7 pages for materials and methods, 200 pages for results and discussion, 5 pages of summary, 2 pages of conclusions, 1 page of recommendations, and 27 pages of references with 427 sources, 87 of which are in Cyrillic and 340 - in Latin. The dissertation includes a list of 9 publications related to the dissertation work on 1 page, a contribution section on 3 pages, and a citation section on 3 pages. The dissertation work is enriched with 34 tables, 93 figures, and 43 images, which are well-formatted and thoroughly analyzed.

### **4. Discussion on the results and the used literature.**

Based on a thorough review of the literature and the multitude of results obtained in Bulgaria and worldwide, a comprehensive analysis has been conducted. The obtained results are presented very well in tables, graphs, and figures. The correct methodological approach, adequate equipment, and the exceptional awareness and precision in the work of the doctoral student have contributed to the in-depth analysis. The presented material holds clear scientific value, as well as practical applicability in the development of horse breeding programs. The summary of the results regarding the high genetic diversity of the Danube Horse breed is impressive. High heterozygosity and within-line diversity have been observed. The lines of the Danube Horse breed exhibit exceptionally high similarity among themselves, a fact confirmed by the genealogical analysis. The in-depth analysis conducted by the author indicates that the work with the Danube Horse should continue in the direction of preserving the existing gene fund and should be oriented towards the sustainable development of the breed based on three components – "genetic stability," social, and economic impact.

### **5. Contributions of the dissertation work.**

The conducted studies and in-depth analysis provide the basis for the formulation of 15 original contributions with both scientific and applied significance. All of them result from experimental work and align with the discussions and conclusions made. Among them, 11 have original scientific contribution, 2 have original applied contribution, and 2 have both original scientific and applied contributions. Therefore, I accept all conclusions and contributions as the author's own work. The studies, analyses, and conclusions are considered a contribution to Bulgarian science and will fill a gap in the breeding programs of the Danube Horse.

### **6. Critical Remarks and Questions:**

None.

## 7. Published Articles and Citations:

Based on the developed dissertation work, the doctoral student has presented nine scientific publications, including one as a single author, four as a first author, and four as a second author. Five of them have been published in journals with SJR, IF, and Q. The total points accumulated from the publications are 71.31, exceeding the required 30 points. Four of the publications have been cited in 21 scientific works in Bulgarian and foreign peer-reviewed journals. This provides a strong basis for giving a high assessment of the dissertation work and the scientific contributions of the doctoral candidate, Georgi Yordanov.

The presented author's summary reflects objectively the dissertation work's structure and contents.

## CONCLUSION:

Based on the acquired and applied various research methods, correctly conducted experiments, and the received generalizations and conclusions by the doctoral candidate, I believe that the presented dissertation work meets the requirements of ADASRB and the Regulations of the Agricultural University for its implementation. This gives me grounds to evaluate it **POSITIVELY**.

I allow myself to propose to the esteemed Scientific Jury also to vote positively and to confer upon **Georgi Todorov Yordanov** the educational and scientific degree of "**Doctor**" in the field of higher education: "Agrarian Sciences and Veterinary Medicine", professional area: "Animal Husbandry," scientific specialty "Animal Breeding, Biology and Biotechnology of Reproduction."

Date: 26.01.2024  
Plovdiv

REVIEWER: 

(Prof. Dimitar Grekov, DSc)