OPINION

by Assoc. Prof. Georgi Ivanov Georgiev, Ph.D.

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Appointed as an internal member of the scientific jury for the awarding of the Ph.D. by Order of the Rector of University of Forestry - Sofia No.168/01.04.2024

SUBJECT: Dissertation on "THE EFFECT OF FEEDING WEANED LOCAL MALE GOATS *"BALADI"* BREED AND AWASSI MALE LAMBS FAVA BEANS AS COMPARED TO SOYBEAN MEAL ON BODY PERFORMANCE AND CARCASS QUALITY" with author Ph.D. student Master of Agricultural Engineering Rami Yaccoub, for the award of the educational and scientific degree "Ph.D.", field of higher education 6. Agricultural sciences and veterinary medicine, professional direction 6.3 Livestock breeding, scientific specialty "Selection of farm animals, biology and biotechnology of reproduction" with scientific supervisors – Assoc. Prof. Dr. Andrey Kurtenkov - University of Forestry, Sofia and Prof. Dr. Boulos Al Jammal – Lebanese University.

Ph.D. student Rami Yaccoub's dissertation examines a current and important issue related to the conversion of nutrients from food into animal production, using the most common farm animals to represent the local genetic resource.

The topic of the dissertation is scientifically relevant and practically necessary and justified regarding the research conducted and the results obtained in a very difficult situation in Lebanon.

The dissertation is constructed according to the requirements for this category of scientific works and is presented in good literary and professional English. The scientific work is printed on 144 typewritten pages and includes an abstract (1 page), list of abbreviations – 2 pages, table of contents – 5 pages, introduction – 3 pages, literature reference – 28 pages, aim and tasks 1 page, material and methods – 8 pages, results - 33 pages, discussion - 14 pages, conclusions and recommendations - 4 pages in total, bibliography - 27 pages, illustrated with 23 figures and 13 tables, separated and as appendices at the end of the dissertation. It contains all the main sections typical for this type of scientific work.

The introduction is general and complete, and through it the author was able to emphasize the problem and point to the need to carry out this research.

The literature review is comprehensive and laid out in 28 pages, and the dissertation provides sufficient information from world scientific research in all areas covered in the dissertation work. This gives me reason to conclude that his awareness of the issues that are addressed is at a high scientific level. The overview is a theoretical prerequisite for the development of the following sections to be in the right direction and to also expect correct results, adequate analyzes and interpretations at a high scientific level. Of great importance is the emphasis on the modern requirements for the method of energy distribution along the "forage-digestibility-intermediate exchange-productive energy" chain.

The aim of the dissertation work is clearly formulated and fully corresponds to the given title. With a view to achieving the set goal, **tasks** have been set that are properly directed and formulated to assess the impact on the fattening effect and the meat quality of the Baladi breed goats and the Awasi breed lambs when replacing or omitting soybean meal in the daily rations of based diet supplemented with a concentrated mixture containing soybean meal or fava beans and a percentage of both. Precisely set objectives point to categorical evidentiary material reflected in the figures and tables used in the dissertation work.

In the **"Materials and methods"** section, 3 animals in each subgroup are included as material, which is sufficient for biometric processing and outline the statistical reliability of the results and, from there, their correct scientific interpretation. If in the experimental settings there was an opportunity to examine the number of goats and lambs, it would lead to more accurate conclusions and more serious benefits and applicability of the scientific work. I have no objections to the **methods** and formulas for measurement and calculations, providing a basis for both accurate processing of primary data and adequate analysis of processed data.

The results are statistically correctly processed and are presented in 13 tables and 23 figures. Data analyzes are objective and done adequately and professionally. The data obtained are commented very carefully. I find the scientific and scientific-managerial potential of Rami Yaccoub to be extremely positive, as in this section, as well as in the next, they clearly show what is the basis of the categorical opinion about the educational and scientific merits that he acquired during the development of this work.

The discussion is a natural continuation of the descriptions under the tables and figures in the results. A part of what is described in the results can go to this section, and conversely part of the comments can be indicated in the results. This section shows that the Ph.D. student has acquired an optimal amount of knowledge and skills to research and interpret scientific results and case studies.

The obtained experimental results are summarized in 11 correctly and concretely formulated **conclusions.**

I also fully support the above two recommendations for practice as they would help in utilizing the local genetic resource and replacing or omitting soybean meal in the daily rations of the based diet in kids and lambs supplemented with a concentrate mixture containing soybean meal and fava beans or a percentage of both.

The bibliography is very rich, consisting of 394 publications (all in Latin) and corresponds to the citations in the other sections.

4 publications are presented, two of which are in the proceedings of a scientific conference and two in a journal that is referenced in some global databases, but without SJR/IF indexing. Publications use material and are compatible with the information contained in the dissertation.

As the sole author, the dissertation meets the minimum requirements for the "Ph.D." - having 40 points, which I fully recognize (4*10 in indicator G8), with the minimum required 30.

The abstract fully corresponds to the dissertation work, where the most important of the achieved results are reflected.

I must note that the Ph.D. student complied with almost all the remarks and constructive criticisms given by the members of the expanded department council during the preliminary discussion, which are reflected in the dissertation work and immeasurably increases its quality.

Opinion on the question of how far the dissertation is the PhD student's personal work: My search of the European Plagiarism Detection System gave a 58% and a 46% match, but upon careful and detailed examination it became clear that this percentage of similarity actually came from the use of personal texts and results of publications on the dissertation work, which is the full right of the author.

Critical notes.

I have no critical notes

Conclusion: The dissertation work "THE EFFECT OF FEEDING WEANED LOCAL MALE GOATS *"BALADI"* BREED AND AWASSI MALE LAMBS FAVA BEANS AS COMPARED TO SOYBEAN MEAL ON BODY PERFORMANCE AND CARCASS QUALITY" with author Ph.D. student Master of Agricultural Engineering Rami Yaccoub for the award of the educational and scientific degree "Ph.D." professional direction Livestock breeding, scientific specialty "Selection of farm animals, biology and biotechnology of reproduction" is up-to-date, relevant, undeniable in its originality and extremely well illustrated.

Despite some technical, spelling and stylistic errors, it does not diminish the high value of the dissertation work.

The dissertation work of the Master of Agricultural Engineering Rami Yaccub meets the set of criteria, indicators and scientometric data of the minimum national requirements for the acquisition of the relevant degree according to Law on Academic Development in Bulgaria, the Regulations for its implementation and the Internal rules for the development of the academic staff of University of Forestry from 2019.

No plagiarism was found in the dissertation submitted to me for evaluation, and the literary sources used were correctly cited. In support of this, I can point out that the dissertation work is a personal work of the Ph. D. student, carried out in close collaboration with the scientific supervisors Assoc. Prof. Dr. Andrey Kurtenkov – University of Forestry, Sofia and Prof. Dr. Boulos Al Jamal - Lebanese University.

Based on all of the above, I propose to the respected members of the Scientific Jury to support the dissertation work of the Ph.D. student Master of Agricultural Engineering Rami Yaccub and to award him the educational and scientific degree "Ph.D.", field of higher education 6. Agrarian Sciences and veterinary medicine, professional direction 6.3 Livestock breeding, scientific specialty "Selection of farm animals, biology and biotechnology of reproduction".

08.05.2024

Prepared the opinion: .

(Assoc. prof. Georgi Ivanov Georgiev)