STATEMENT

Of a PhD thesis for the awarding the educational and scientific degree "Doctor", field of higher education 6.0 Agricultural sciences and veterinary medicine, professional field 6.4 Veterinary medicine, in the scientific speciality "Farm Animal Breeding, Breeding Biology and Biotechnology".

Author of the PhD thesis: **Victoria Emilova Marincheva**, PhD student in Faculty of Veterinary medicine, University of Forestry

Title of the PhD thesis: **"Analysis of selection criteria for natural nematode resistance in sheep"**

Member of the scientific jury: **Prof. Vasil Kostadinov Manov, DVM, PhD**, scientific speciality "Animal pathology", Faculty of Veterinary medicine, University of Forestry, according to Order ЗПС 607/19.12.2023 of the Rector of University of Forestry.

Brief introduction of the candidate

Victoria Emilova Marincheva is a Master in Veterinary Medicine, having graduated from the University of Forestry, Sofia in 2008 with an overall success rate from the training course: Excellent 5.79. From 2009 to 2016, she worked as a veterinarian in a multidisciplinary clinic for small animals, with the main area of responsibility being internal medicine and cardiology. In the period 2016-2020, she was the manager and chief physician of the "Franciska" Veterinary clinic at the Animal Rescue-Sofia foundation. In 2020, after winning a competition, started to work at LTU, FVM, Department of "Animal Breeding Sciences", as an Assistant Professor in the disciplines "Animal Genetics and Breeding" and "Animal Breeding". She is enrolled as a doctoral student in an independent form of study at the University of Forestry, with a scientific consultant Assoc. Prof. Andrey Alexandrov Kurtenkov, PhD. She was dismissed with the right of defense on 10/27/2023 (No. ЗСД-484 / 10/27/2023.)

Relevance of the topic

Diseases caused by infestation with gastrointestinal nematodes represent one of the most serious problems in sheep farming. Research through innovative methods for the selection of animals with natural high resistance to parasitosis is a particularly urgent scientific and applied task, especially in the context of the increasing and increasingly widespread resistance of parasites to a number of anthelmintic drugs that have been widely used over the years. It is necessary to search for relatively accessible, cheap and easily applicable criteria for the selection of animals resistant to gastrointestinal nematodes.

Literary awareness

The literature review is written on 55 standard pages and is based on 395 scientific sources. A comprehensive characterization of gastrointestinal nematodes in sheep is performed, as well

as an analysis of selection criteria that can be used to determine individuals resistant to such infections. The text is written in academic and at the same time fluent style.

Purpose, tasks and research methods

Until now, no complex studies have been carried out in our country on possible selection criteria for natural resistance to nematodes in sheep. On this basis, I can conclude that the selected research objective is contemporary and relevant to veterinary medicine. For the realization of this goal, nine tasks have been formulated. They include both classical laboratory methods (complete blood count, biochemical blood test, etc.) aimed at establishing the health status of the animals being examined, as well as newer and rarely used in our country parasitological and breeding methods. The application of statistical analysis to demonstrate the reliability of the obtained results and the possible correlations between the various criteria was performed. Sufficient numbers of animals were included to allow reliable conclusions to be drawn. All studies and analyzes are carried out on an individual level for each animal, which allows correct recommendations to be made.

Results

The section contains a sufficient volume of factual material, which is presented sequentially, based on the individual tasks, and is written in 49 pages. The results are reflected in 74 tables and 16 figures. Based on the obtained results, 19 conclusions were formulated. The results are subjected to statistical analysis, incl. correlation analysis to establish dependencies between the studied criteria, which should be appreciated.

Contributions and recommendations

The PhD student formulated 5 original and 8 confirmatory contributions. On the basis of the received data, 8 recommendations for the practice were made.

Published articles and citations

Three publications in English on the topic of the dissertation are presented, two of which are in refereed and indexed scientific publications in Web of Science. Dr. Marincheva is the first author on all three publications, so I accept her leading role in writing them. The total number of points from the presented publications is 48.33, which significantly exceeds the minimum national requirements and the Regulations of the LTU for its application. No data is presented on established citations of the mentioned publications.

Abstract

The submitted abstract for the dissertation is 43 pages long. It is prepared according to the requirements and reflects the main results achieved in the dissertation.

Critical remarks and questions

I have no significant critical remarks to the thesis presented in this way. The text is well structured and edited, and shows the good professional level of the PhD student. I would

recommend that these studies should be repeated in the future with other breeds, especially with some autochthonous breeds.

Conclusions

The presented PhD thesis on the topic: *"Analysis of selection criteria for natural resistance to nematodes in sheep"* represents a complex and in-depth study that has not been carried out in Bulgaria until now. Various scientific studies have been conducted, a large number of results have been obtained, some of which have been popularized in English in refereed scientific publications. All the requirements of the law and the Regulations of the Unuversity of Forestry been met.

All this gives me reason to vote POSITIVE and to suggest to the other members of the scientific jury also to vote positively and award Master Victoria Emilova Marincheva, the educational and scientific degree "doctor" in the scientific specialty "Breeding of farm animals, biology and biotechnology of reproduction".

Statement prepared by:

Prof. Vasil Manov, PhD

Sofia, 22.01.2024