STATEMENT
of a Member of the Scientific Jury
in the procedure for the defense of a doctoral dissertation
for awarding the educational and scientific degree "Doctor"
at D. A. Tsenov Academy of Economics – Svishtov
Prepared by: Assoc. Prof. Dr. Hristina Harizanova-Bartos
Author of the dissertation: Eng. Petar Angelov Chernaev

Title of the dissertation:
"Digital Transformation of Livestock Farming – Problems and Opportunities"

I. Administrative information on the doctoral studies and composition of the jury

Eng. Petar Angelov Chernaev was enrolled as a doctoral student in professional field 3.8 "Economics", doctoral programme "Economics and Management (Agricultural Economics)" at the Department of Agricultural Economics, by Order No. 1123/22.12.2021, in a full-time form of study, for a period of three years, starting from 01.02.2022. Pursuant to Order No. 213/28.02.2025, the period of study was extended by one year due to objective reasons, until 01.02.2026, which ensured the opportunity for finalisation and validation of the main research results. The doctoral candidate was discharged with the right to defense by Order No. 1284/24.11.2025, thereby confirming the fulfilment of all regulatory requirements.

The procedure for public defense was opened and the Scientific Jury was approved by Order No. 1285/24.11.2025, issued by the Rector of D. A. Tsenov Academy of Economics – Svishtov, on the grounds of Article 70 of the Regulations for the Development of the Academic Staff and a decision of the Faculty of Production and Trade Business.

II. General characteristics of the dissertation

The presented dissertation comprises 266 pages and includes an introduction, three thematically structured chapters, a conclusion, and a list of references. The theoretical framework is well developed, and the exposition is logically structured, in line with the traditional format of dissertation research in the field of agricultural economics. Of particular scientific interest is the focus on the opportunities and challenges related to digitalisation and the development of an "ideal farm" based on proprietary technological solutions, which is highly relevant in the context of European strategic priorities for green and digital transformation.

A distinctive feature of the dissertation is the formulated thesis that the implementation of a complex of interconnected digital technologies and automated solutions leads to increased profitability and optimisation of processes in livestock farms. This thesis is substantiated through the development of a comprehensive economic and managerial model (Chapter Two, Sections 2.3 and 2.4). The applied dimension of the research is well developed, particularly with regard to the implementation of ERP systems, IoT devices, and artificial intelligence solutions (Chapter Three).

The hypotheses of the dissertation are formulated in the introduction and address the dependence of digitalisation on the farm profile, managerial characteristics, the role of state-provided software solutions, the effects of support measures, and the possibilities for full traceability along the "from farm to fork" value chain. These hypotheses are

empirically validated through extensive fieldwork, analysis of real farms, and the development of practical solutions and prototypes, leading to confirmation of the author's thesis in the concluding section. Their validation is demonstrated through quantitative data, proprietary models, and proposed managerial frameworks and technological solutions, including ERP integrations and process traceability. As a result, the dissertation convincingly demonstrates that digital technologies can simultaneously enhance efficiency, profitability, and sustainability in livestock production.

III. Evaluation of the abstract

The dissertation abstract is presented in a volume of 57 pages and is structured in accordance with the regulatory requirements. It clearly reflects all key elements of the dissertation, including the research objective, tasks, hypotheses, methods, object and subject of the study, as well as the identified scientific and applied contributions. Of particular importance is the fact that the abstract is grounded in the core thesis of the dissertation and logically traces the development of the research topic, rather than serving merely as a descriptive summary. I highly appreciate the inclusion of highlights from the entire research work, as well as substantive elements of the practical contribution.

The structure and volume of the abstract allow the reader to gain a comprehensive understanding of the dissertation as a whole, fully complying with the regulatory requirements and established academic best practices.

IV. Scientific and applied contributions

Of notable scientific interest is the classification of livestock farms according to their level of digital readiness, participation in the "from farm to table" value chain, and technological infrastructure (Chapter One). A distinctive contribution of the dissertation is the proposed systematisation of technological processes related to identification, traceability, automation, and artificial intelligence-based control, which expands existing research in the field. The applied dimension, including the implementation and evaluation of ERP systems, is well developed, and the applied approach demonstrates potential for extension to other subsectors of the agricultural economy.

V. Publication activity

The doctoral candidate has fulfilled the minimum scientific requirements with a total result of 63.33 points, derived from six publications, both single-authored and co-authored, which indicates active research engagement and validation of the results. I highly value the thematic relevance of the publications and their direct connection to the core dissertation thesis. One publication is indexed in a global database, while the remaining ones are published in secondary databases or peer-reviewed scientific proceedings. The doctoral candidate has also participated in academic conferences, as evidenced in the submitted documentation, which contributes to the dissemination of the dissertation results and enhances the potential for synergy between science and practice.

VI. Critical remarks and questions

I have no critical remarks; however, I would like to request the doctoral candidate's opinion on the following two questions:

1. According to the author, what are the main barriers faced by livestock farms in the implementation of digital technological solutions—financial, technological, human resource-related, or administrative—and what is their relative significance depending on the scale of the farm?
2. To what extent do farms face constraints due to a lack of digital skills and access to qualified technical personnel, and which public policy instruments could realistically mitigate these barriers in the short and medium term?

VII. Conclusion

The dissertation represents a completed scientific study with high theoretical and practical significance. Based on the coherence of the exposition, the analysed data, the structured theoretical framework, and the demonstrated applied value, I consider that the dissertation fully meets the requirements for awarding the educational and scientific degree "Doctor". On the basis of the above, I give a positive evaluation of the dissertation and propose that the esteemed members of the Scientific Jury adopt a decision to award the educational and scientific degree "Doctor" in the doctoral programme "Economics and Management (Agricultural Economics)" to Eng. Petar Chernaev.

Date: 10 December 2025
Prepared by:
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