OPINION

on a **PhD thesis** for obtaining the educational and scientific degree **"Doctor (PhD)"** in field of higher education **6 Agricultural sciences and veterinary medicine**, professional field **6.1 Plant Growing,** scientific specialty **Plant Growing.**

Author of the dissertation: ***Radko Petrov Hristov***, Part-time PhD student at the Department of Crop science at the Agricultural University, Plovdiv

Topic of the dissertation&: Effect of leaf treatment products on some structural components in the yield of common wheat

Member of scientific jury: Assoc. Prof. Milena Hristova Yordanova, PhD, University of Forestry, Faculty of Agronomy, Sofia, field of higher education 6 Agricultural sciences and veterinary medicine, professional field 6.1 Plant Growing, scientific specialty Vegetable Growing

Appointed as a member of the scientific jury by order № RD-16-263 / 14.03.2022 by the Rector of AU.

1. Relevance of the problem.

Climate change is leading to a change in the conditions under which plants are grown. Various soil and foliar products are being developed to help plants cope with different stressful situations.

The topic is relevant because the influence of two foliar treatment products (biostimulator and foliar fertilizer) on the yield and quality of grain in the cultivation of common wheat, which is one of the main crops worldwide, is being tested.

2. Purpose, tasks, hypotheses and research methods.

The aim of the study is to determine the influence of foliar treatment products Plantafol and Bombardier on the yield and grain quality of common wheat varieties Enola, Annapurna, Ginra and Bilyana. To achieve this goal, several tasks have been developed related to: establishing the impact of products on plant growth and development, structural elements of yield, productivity of varieties, as well as to identify changes in grain quality indicators (physical and chemical).

The methodology lists and describes in detail both the materials with which the experience is based and the studied indicators. The methods for statistical analysis of the data are also indicated.

The methodological approach corresponds to the set goals and objectives.

3. Visualization and presentation of the obtained results.

The dissertation is illustrated with 49 tables, 9 photos and 1 figure, which reflect the conduct of the experimental part and the results obtained. They are arranged according to the set tasks, and the data are supported by statistical analyzes.

4. Discussion of the results and used literature.

The section, which includes the presentation of the results and their discussion, covers 77 pages. The results are interpreted concisely by the author, and at the end comparisons are made with other authors.

More than 79 literature sources have been used, most of them in Latin.

Based on the obtained results and comparisons with other authors, ten conclusions related to the varieties and the applied products were formed.

5. Contributions of the PhD thesis.

A total of 10 contributions were presented, the first four being proposed as scientific-theoretical and the other six as scientific-applied contributions.

Scientific contributions

The scientific and theoretical contributions are related to establishing the influence of the studied foliar treatment products on the growth and development, on the structural elements of the yield and on the productivity of the varieties.

Scientific and applied contributions

The scientific and applied contributions are again related to establishing the effect of foliar treatment on productivity, on the studied indicators and on the four tested wheat varieties. An important contribution is related to the establishment of the optimal combinations between the applied foliar treatment products, the phases of wheat development and the meteorological conditions.

6. Critical remarks and questions.

I have a few remarks to the doctoral student: the first is about the literature reference - I found some inaccuracies related to the citation of authors, there is a discrepancy between the cited authors in the literature review. There were also other small inaccuracies when discussing the tables. But these are usually technical errors, so I recommend the PhD student to be a little more precise in his next research activities.

My second remark is related to the contributions - there is an overlap in some scientific and applied contributions with scientific and theoretical ones. As the focus of the topic is on testing foliar treatment products, it may have been better to focus on their impact more clearly.

It would be good to make some recommendations regarding the use of these products.

All these critical remarks do not diminish the work of the doctoral student and do not reduce the value of his dissertation. These critical remarks aim to improve and refine the presentation of the doctoral student's future research activities.

7. Published articles and citations.

The PhD student presents seven published articles on the dissertation. Five in scientific journals and conference proceedings and two in scientific and professional ones. No citations were noted

The presented abstract objectively reflects the structure and content of the dissertation.

CONCLUSION:

Based on the learned and applied by the doctoral student, different research methods, correctly performed experiments, summaries and conclusions, I believe that the presented dissertation meets the requirements of the Law for the development of the academic staff in the Republic of Bulgaria and the Regulations of the Agricultural University for its application, which gives me reason to evaluate it **POSITIVE.**

I would like to suggest to the esteemed Scientific Jury also to vote positively and to award Radko Petrov Hristov the educational and scientific degree **"Doctor"** in the scientific specialty of Plant Growing.

Date: **31.03.2022**

Plovdiv