



The applied agronomy practices are standardized and aligned with the requirements of the crop.

The statistical processing is appropriate for analyzing the results, interpreting them from different perspectives, and formulating well-grounded conclusions.

### **Visualization and presentation of the obtained results**

The dissertation is very well illustrated. It includes 26 tables and 27 figures. The information is systematically organized. The results are presented accurately, with the necessary measurement units and abbreviations. The data correspond fully to the discussion in the text. Their presentation allows for meaningful comparison and allows for an in-depth analysis.

### **Discussion of the results and reviewed literature**

A correct interpretation of the identified tendencies has been done. The achieved results are presented on several key levels:

1) The phenological development of the sunflower hybrids has been followed. The discussion is framed in the context of the specific characteristics of each location. Differences are commented on with regard to the effect of meteorological factors during the inter-stage periods.

2) The discussion of the data related to the formation and proportional distribution of the organs of the sunflower plant is particularly noteworthy. In many crops, individual plant parts contribute differently to yield formation and quality parameters. The discussed data and the analysis of variance outline clear tendencies that allow for summarising and coming up with recommendations for the practical introduction of the individual hybrids.

3) The realization of productivity as a complex parameter requires careful analysis of the effect of all contributing factors. During two of the vegetative growth periods, a genotype × environment interaction was established, reflecting the specific responses of the studied hybrids. The results are thoroughly discussed and convincingly supported. A well-structured comparison is made with another important trait - oil yield per unit area.

4) The large volume of data concerning the quality parameters is correctly interpreted. The results are presented in detail, with a focus on specific characteristics, the effect of the studied factors, and their interactions.

5) The application of correlation analysis and models for determining yield stability is considered a summarizing component of the dissertation.

The scientific style, the depth of discussion, the adequate interpretation, and the comparison with research conducted in other environments demonstrate a high level of preparation by the PhD candidate, as well as skillful use of terminology and specialized software.

### **Contributions of the dissertation**

The aim and tasks of the dissertation have been successfully achieved. The formulated conclusions and contributions fully correspond to the presented results and their interpretation.

The scientific contributions are consistent with the stated doctoral thesis. A recommendation for future research activity is that they should not be overly generalized, but rather supported with numerical parameters and/or their respective ranges.

The formulated scientific and applied contributions represent an important transfer of the obtained data into practical application. The research is timely and relevant. The publication and dissemination of the information are both necessary and strongly encouraged.

### **Recommendations**

In studies aimed at characterizing and determining the economic value of genotypes, the information should be accompanied by details on the method of their development, the appropriate technology for sustainable production, and their profitability.

### **Questions**

Based on the generated data, what characteristics should a sunflower hybrid possess in order to be suitable for efficient production under the specific conditions of the Republic of Bulgaria?

Climate change is a fact in various aspects. Is it necessary to update certain technological elements of the production system?

### **Published articles and citations**

The published articles correspond to the conducted research and the results presented in the dissertation. The PhD candidate is the leading author, and the manner of presentation demonstrates a well-developed scientific style, as well as the ability to formulate and verify hypotheses. The submitted abstract objectively reflects the structure and content of the dissertation.

### **CONCLUSION**

Based on the research methods learned and applied by the PhD candidate, the correctly designed experiments, and the formulated summaries and conclusions, I consider that the presented dissertation and accompanying documentation meet the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB) and the Regulations of the Agricultural University for its implementation. This provides sufficient grounds for me to evaluate it **POSITIVELY**.

I take the liberty to propose to the esteemed Scientific Jury to vote in favour and to confer upon Bozhidar Frantsov Tanchev the educational and scientific degree "**Doctor**" in the Field of Higher Education 6. **Agricultural Sciences and Veterinary Medicine**, Professional Field 6.1 **Crop Science**, Scientific Specialty: **Crop Production**.

Подписите в този документ са заличени

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PREPARED EVALUATION във връзка с чл.4, т.1 от Регламент (ЕС) 2016/679  
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Assoc. Prof. Galina Mihova, PhD