STAND POINT

On a PhD thesis for obtaining an educational and scientific degree "Doctor (PhD)" in the field of higher education 6. Agricultural Sciences and Veterinary Medicine, professional field 6.1 Crop production, scientific specialty Crop production.

Author of the dissertation : Hristina Atanasova Nedeva PhD student at the Department of Crop Science at the Agricultural University, Plovdiv

Topic of the dissertation: EFFECT OF NITROGEN FERTILIZATION AND HARVEST TIMING ON THE PRODUCTIVITY AND QUALITY OF GREEN BIOMASS FROM TRITICALEUSED FOR ENERGY PURPOSES.

Attituder: Prof. Dr Ivan Hristov Yanchev, Agricultural University, a field of higher education 6. Agricultural sciences and veterinary medicine, professional field 6.1 Crop production, scientific specialty Crop production.

Appointed a member of the scientific jury by order № RD-16-1100/ 27.10.2022 by the Rector of AU

1. **Brief presentation of the applicant**

Hristina Atanasova Nedeva was born on May 12. 1977. During yhe period 1996-2001, she studied at the Agricultural University of Plovdiv and obtained a master's degree in Agronomy. Since 2007 till 2021 she worked and gained experience as a research assistant and as an organizer of crop production. In 2022, she was enrolled as a PhD student of independent training in the Department of Crop Science at the Agricultural University- Plovdiv. In short period, she completed her studies and was dismissed with the right to defence in same year.

2. **Relevance of the problem**

Biofuels of plant origin have long been known to people. Obtained mainly from manure as a result of fermentation, but limited use mainly for lighting. In recent years, through modern methods placed on an industrial basis, cheaper and ecologically clean energy is obtained, both from plant residues and from crops specially grown for the purpose. The relevance of triticale for green mass is based on the high productivity, ecological plasticity and quality of the raw material for the production of biofuel. Popularity is essential, as is the minimum

cost of labor and means of production. The dissertation work contributes to a better approach in the production of triticale for green table with the corresponding quality and productivity provoking the obtaining of more energy.

3. Purpose, tasking, hypotheses and research methods

The goal was achieved through the implementation of five tasks related to the influence of nitrogen fertilization and the harvesting phase on; growth and development, physiological indicators, structural elements, the yield of green mass and the quality of the obtained production intended for biofuel.

4. Visualization and presentation of the obtained results

The presented scientific work contains 169 pages, including 47 tables and 6 figures. List of cited literature containing a total of 230 literary sources, of which 79 are in Cyrillic.
The dissertation includes the sections characteristic of scientific developments, through which the overall activity and registration of the processes during the research period is presented.

5. Discussion of results and literature used

As a consequence of the derived experimental activity, the obtained data are reflected and analytically discussed. The effects of climatic factors, the duration of interphase periods, the effect of nitrogen rates, harvesting time, productivity and quality obtained as a result of the exerted influences and the mechanisms of their interaction are described.

6. Phd thesis contributions

The results of the research make it possible to form a total of 10 contributions, divided into five scientific-theoretical and five scientifically applied.
The varietal response to uncharacteristic climatic phenomena, such as strong winds, intense rainfall and extreme drought, has been proven. The Musala variety is recommended for southern Bulgaria as it is more resistant to drought, and the Atila variety is recommended for northern Bulgaria as it is more resistant to lodging. The beneficial influence of nitrogen fertilization is

commented on, except for the highest fertilizer level. The effect of nitrogen fertilization on the quality of the green mass of triticale compared to the influence of the variety is confirmed. The presented abstract objectively reflects the structure and content of the dissertation work.

7. **Question**

1. When were the nitrogen fertilizers applied at the high levels of 20 and 24 kg of nitrogen?
2. How is the negative influence of the highest fertilizer rate explained?
3. In which phase of harvest does nitrogen fertilization have a more pronounced effect?

CONCLUSION

Based on the research methods learned and applied by the Phd student, the experiments carried out, and the summaries and conclusions are drawn, I believe that the presented Phd thesis meets the requirements of the Law and the Regulations of the Agricultural University for its application, which gives me a reason to evaluate in POSITIVE

I would like to suggest to the esteemed Scientific Jury to vote positively and to award Hristina Atanasova Nedeva the educational and scientific degree " Doctor" in the scientific specialty of Crop production.

06.12.2022 Member
Plovdiv