



REVIEW

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 Crop production, scientific specialty Crop production.

Author of the dissertation: Yordan Rangelov Yordanov PhD student (part-time) at the Department of Crop Science at the Agricultural University, Plovdiv

Topic of the dissertation: STUDY ON THE MAIN SEGMENTS OF THE TECHNOLOGY OF TRITICUM MONOCOCCUM L., TRITICUM DICOCCUM Sch. AND TRITICUM SPELTA L. IN THE CONDITIONS OF ORGANIC AGRICULTURE

Reviewer: Prof. Dr Hristofor Kirchev Kirchev, 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-16-149 / 28.02.2022 by the Rector of AU.

1. Brief presentation of the applicant.

Yordan Rangelov Yordanov was born on August 2, 1972, in the town of Pazardzhik. During the period 2010-2012, he studied at the Agricultural University of Plovdiv and obtained a master's degree in Agribusiness, where he received professional skills in the following areas: Fundamentals of Agrarian Law, Fundamentals of Commercial Law, Marketing of Agricultural Production, Management of Agribusiness Organizations. Since 2010 he has been working at the Agricultural University of Plovdiv as an agronomist in organizing the activities of the Agri-Environmental Center and the educational work of UOVV. In 2018, after successfully winning a competition, he was enrolled as a part-time PhD student in the Department of Crop Science at the Faculty of Agronomy of the Agricultural University of Plovdiv. During his doctoral studies, in addition to the mandatory activities described in the curriculum and methodological plans, he participated in several seminars. He speaks German, Czech and English.

2. Relevance of the problem.

Organic food production is a new stage in the development of agriculture in the world. Along with the problem of population growth on the planet and the need for more food, there is also the problem of producing quality food. One of the directions for organic food production is grain production. Ancient wheat (einkorn and spelt) are very suitable for organic production due to their resistance to diseases and their low reaction to mineral fertilizers. Therefore, the current study, which aims to determine the development and productivity of *Triticum dicoccum* Sch, *Triticum spelta* L. and *Triticum*

monococcum L. at different sowing rates and different fertilization options suitable for organic production in the Central South Bulgaria region is relevant. for modern science and the production of biological products.

3. Purpose, tasks, hypotheses and research methods.

The present study was conducted to optimize the main elements of the technology - sowing density and fertilization - in three ancient types of wheat - *Triticum monococcum* L., *Triticum dicoccum* Sch. and *Triticum spelta* L., under organic farming conditions.

To fulfil the set goal, seven tasks are set as follows:

1. To make a comparative characteristic of the phenological development of the three types of wheat in the conditions of the vegetation years. To trace the dependencies between the duration of the interphase periods and the vegetation period with the tested factors.
2. To monitor the dynamics of growth, tillering and the formed productive stems and to establish the influence on them of different densities of sowing and fertilizing.
3. To characterize the photosynthetic activity of the three types of wheat and to analyze its dependence on the tested factors.
4. To determine the influence of sowing density and fertilization on the productivity of *Triticum monococcum* L., *Triticum dicoccum* Sch. and *Triticum spelta* L. To establish correlations between yield and spike components.
5. To establish the elements of productivity and their relative influence on yield under the tested factors - year, species, sowing density and fertilization.
6. To study the physical qualities of the grain in the tested factors of the study.
7. To study the biochemical composition and the content of some macro- and microelements in the grain of the three species of wheat.

To achieve the goal and objectives of the study, two experimental productions are set - field and vessel experiments.

The field experiment was conducted at the Agro-ecological Center - Demonstration Center for Organic Agriculture at the Agricultural University - Plovdiv, in the period 2018 - 2021.

The Agro-Ecological Center has been a member of the International Federation of Organic Agriculture (IFOAM) since 1993. Since 1994 it has also functioned as a Demonstration Center for Organic Agriculture, whose production base provides training for students, teachers, farmers and agronomists in the field of production of organic plant production. The obtained production is certified by "Balkan Biosert" Ltd.

The experiment is three-factor, based on the method of split plots with the size of the reporting plot 15 m², in four replications. The following factors and their levels were studied:

Factor A - Wheat species:

A1 – *Triticum dicoccum* Sch.;

A2 – *Triticum spelta* L.;

A3 – *Triticum monococcum* L.;

Factor B - Sowing density

