



IBSC

International Bioscience Conference and the
8th International PSU – UNS Bioscience Conference

Towards the SDG Challenges

ONLINE

25–26 November 2021, Novi Sad, Serbia

BOOK OF ABSTRACTS



IBCS2021 is organized jointly by:



University Prince of Songkla,
Thailand



University of Novi Sad,
Faculty of Sciences, Serbia



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ABSTRACTS
PLENARY LECTURES

T2-P-16 Correlation analysis of yield components in winter wheat grown on less productive soil

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KEYWORDS: wheat, yield components, soil, correlations

INTRODUCTION:

The less productive soils present one of the major problems in wheat production over the world. Considering the importance of wheat production, it is necessary to better utilize the less productive soils and to select wheat varieties that can be successfully grown on such soils. Since that the grain yield of wheat is complex and variable trait that depends on numerous yield components and environmental factors, individual characteristics of the plant, such as the number of grains per spike, grain weight per spike, plant height and harvest index, are important in the formation of grain yield, especially in the stressful conditions of wheat cultivation. The investigation of variability and assessment the interrelationship of yield components could improve cultivar creation, selection and ability of a wheat cultivar to produce high and stable yield over a wide range of environments.

OBJECTIVES:

The objective of this study was to estimate the mean values the yield components (the number of grains per spike, grain weight per spike, plant height and harvest index) of ten winter wheat cultivars growing under stressful conditions of halo-morphic soil, solonetz type, as well as, the correlations between them.

METHOD / DESIGN:

The field trial was carried out at solonetz soil type and consisted of control (solonetz without amelioration) and treatments with two levels of soil amelioration using phosphor gypsum in amounts of 25 and 50 tha^{-1} during two vegetation seasons. The experimental material in the study was comprised of ten Serbian winter wheat varieties (*Triticum aestivum* L.), chosen on the basis of their differences in yield and performance of several morpho-physiological traits. The relationship between grain yield components was determined by calculating the Pearson's correlation coefficient (r) measuring strength of association between traits.

RESULTS:

Unfavorable environmental conditions in this study, type of soil and weather conditions, during wheat development decreased the mean values of the investigated components of wheat yield. Statistically significant and strong positive correlation was established between the grain weight per spike and the number of grains per spike in both seasons within each

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