



UNIVERSITY OF AGRONOMIC SCIENCES
AND VETERINARY MEDICINE OF BUCHAREST

FACULTY OF AGRICULTURE



International Conference
"Agriculture for Life, Life for Agriculture"

BOOK OF ABSTRACTS

SECTION 1

AGRONOMY



2024
BUCHAREST

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INHERITANCE IN F1 AND TRANSGRESSIVE VARIABILITY IN F2 POPULATIONS OF MAIN SPIKE LENGTH SOFT WINTER WHEAT

**Halyna USTYNOVA, Mykola LOZINSKYI, Mykola GRABOVSKYI,
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Abstract

The character of inheritance of the main spike length in F1 and transgressive variability in F2 populations was studied by hybridization of the maternal form of early maturing winter wheat varieties with medium early, medium early and medium late varieties. It was found that in most combinations of crosses, the inheritance of the length of the main spike was positive dominant. In 2018-2019, with the exception of the Kolchuga/Chornyava combination (2018), positive hypothetical heterosis for the length of the main spike was determined and 35 out of 40 hybrids had positive true heterosis. The significant influence of hybridization components and year conditions on the main spike length, degree of phenotypic dominance and heterosis was established. The majority of F₂ populations significantly exceeded the parental forms in terms of the extreme maximum length of the main spike, indicating a significant formation process and the possibility of conducting selections for the studied trait. In 2019-2020, 26 out of 40 F₂ populations showed a positive degree and frequency of transgressions in spike length.

Key words: *heterosis, hybrid, main spike length, F2 populations, varieties.*