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YIELD, REPRODUCTION RATE AND YIELD OF CONDITIONAL SEEDS OF WINTER TRITICALE DEPENDING ON CHARACTERISTICS OF VARIETY

High yield potential, increased adaptive properties, protein and lysine content in grains and essential nutrients in the green mass promote to the distribution of winter triticale in various soil and climatic zones. Today, agricultural production requires more productive varieties, which ensure the production of high and stable, by years, grain yields (8–10 t/ha) and high-quality seeds.

Taken into account that under conditions of sharp hydrothermal fluctuations associated with global warming, varieties with a low level of adaptability have a wide discrepancy between potential and actual yields, that varies considerably over the years, it is important correctly to select varieties in order to maximize the genetic potential inherent in their creation. The use of the variety as a factor in increasing the yield of winter triticale is especially important in the production of seed products in the zone of risky seed growing in the western Forest-Steppe.

The data of scientific research (2015–2017) are given with the features of the seed productivity formation of winter triticale varieties of different ecological type of originators entered State register of plants, varieties fitting to spreading in Ukraine for the broad introduction of the most of them into agricultural production, which, regardless of the sudden hydrothermal fluctuations associated with climate change, provided a high level of ecologic plasticity, slight discrepancy between the potential and actual yields and formed the seeds of high sowing qualities.

The data of experimental studies confirming a certain reaction of the tested varieties are obtained, in particular: the productivity of the ear was determined by its length, number of spikelets and grains in it, and mass of grain from the ear and depended from genotype of the variety. On productive tillering, phenotypic variability of varieties was in the range of 1,42–1,53 pcs./plant, sowing productivity – 451–491 pcs./ha. High coefficient of productive tillering in varieties Molfar, Obri Myronivsky (482 and 491 pcs./plant) reduced the mass of grain from the ear.

It was studied that depending on the type of variety winter triticale,

the grain productivity of varieties reached 6,48–6,54 t/ha, seed yield – 5,01–5,28 t/ha, difference for ecotype was 0,07–0,17 t/ha. The highest yields of seeds were provided by varieties: Obri Myronivsky, Markiyan (5,28 t/ha), Molfar (5,25 t/ha). A significant variability in yields (0,52–1,16 t/ha) of varieties of different ecotypes was caused with their biological properties, plasticity to growing conditions and weather conditions of the growing season.

It has been established that coefficient of seed multiplication depended from obtained yield and amounted from 20,0 units (Harroza variety) – to 21,1 units (varieties Markiyan, Obri Myronivsky). The yield of conditioned seeds of all varieties was high (76,8–81,0 %), due to the high mass of 1000 seeds. The correlation between yield and yield of conditioned seeds in all varieties was reversed: in the Molfar variety – -0,212 (weak), Harroza – -0,631 (average), in the other varieties – strong (from -0,901 to -0,980).