

Creation of a hybrid material of spring barley and its use for testing DNA markers for the Run genes that control infection with *Ustilago nuda* (Jens) Kell. Et Sw.

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At present, more and more attention is being paid to the genetic protection of barley varieties from the pathogen *Ustilago nuda*. One of the effective methods for analyzing stable structures is the widespread use of classical techniques based on hybridization of gene donors, the stability with recipient methods of analysis, and the creation of selection methods using molecular markers. In the work for hybridization a were chosen he varieties Bioma, Tanai, Zeus and sensitive to the pathogen variety Grace. Varieties with identified genes Run 3+ Run 6 (Jet, Bonanza) and Run 8 (Effendi, Vestnik, Elf and Raushan) are used as donor stability. As a result of crossings, 9 hybrid combinations were obtained. Using PCR performed on the DNA of the selected samples, allelic polymorphism was detected in the tested markers. Subsequent testing of the resistance of hybrids to the dusty brain and their genotyping using polymorphic DNA markers makes it possible to evaluate the diagnostic efficiency of the use of markers.

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