

# Genetic and agronomic characteristics of donors of valuable wheat traits

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The main factors that reduce yields are the interaction of the variety genotype with growing conditions and disease damage, so it is necessary to identify donors of resistance and high expression of valuable traits that have a different genetic nature. Infection of 49 wheat samples with soft leaf rust population, two monopustular isolates with virulence p9, p24 and in the field was assessed. The experimental data of field observations and the structure of the yield of lines were obtained using the VIR method. Varieties (carrying the Lr24 gene) KWS Bu-ran, KW 340-3-13 and Etyud, which form the yield at the level of the best standard Sibirskaya 17 (417.2-514.1 g/m<sup>2</sup>) can be used in breeding. Variety Omskaya 44 (yield 440.8 g/m<sup>2</sup>) can be used as a donor of resistance gene Lr19 and partially effective Lr26. The breeding value of CS2A/2M (Lr28) and Pavon (Lr47) varieties under the conditions of Western Siberia is low. Varieties Doka (plant height 66.5 cm, yield 589.2 g/m<sup>2</sup>) and Cheshskaya 17 (80.0 cm, 547.7 g/m<sup>2</sup>) can be used in breeding for resistance and short stems, without reducing winter hardiness and yield in conditions of Western Siberia.

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## **The main publications of authors on the subject of the abstract:**

Skolotneva E.S. et al. Effectiveness of leaf rust resistance genes against *Puccinia triticina* populations in Western Siberia during 2008-2017 // *Journal of Plant Diseases and Protection* (2018) 125:549-555.

Piskarev V.V. et al. Sources for the breeding of soft spring wheat in the conditions of Novosibirsk region // *Vavilovskii Zhurnal Genetiki i Seleksii = Vavilov Journal of Genetics and Breeding*. 2018;22(7):784-794. DoI10.18699/VJ18.422 (in Russian).