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Vladimir D. Kobylansky, Olga V. Solodukhina

**BREEDING AND SEED PRODUCTION TECHNOLOGY FOR
THE RYE OF UNIVERSAL USE WITH LOW CONTENT OF
WATER-SOLUBLE PENTOSANS IN GRAIN**

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Authors:

Vladimir D. Kobylansky, Dr. Biol. Sci.;

Olga V. Solodukhina, Dr. Biol. Sci.

N.I. Vavilov All-Russian Institute of Plant Genetic Resources (VIR)

Reviewers:

Eduard B. Khatefov, Dr. Biol. Sci., (VIR);

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Scientific editor: **Igor G. Loskutov**, Dr. Biol. Sci., (VIR)

Kobylansky, Vladimir D.

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The developed technology is the result of scientific research conducted by the staff of the N.I. Vavilov All-Russian Institute of Plant Genetic Resources (VIR) in the period from 2004 to 2021. Using the results of theoretical and applied research, methods have been developed for differentiating the source material on the basis of low content of water-soluble pentosans (arabinoxylans) in grain, and a strategy and technology have been formulated for breeding and seed production of low-pentosan rye of universal use in baking, mixed fodder and processing industries. The application of the technology makes it possible for the first time to develop rye cultivars with low content of water-soluble pentosans in grain at low financial costs. This is confirmed by six new population rye cultivars developed for various regions of Russia, which have no analogues in the world. They have been included in the State Register for Protected Breeding Achievements of the Russian Federation.

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