

TAXONOMIC RELATIONSHIPS AND GENETIC VARIABILITY OF WILD *SECALE* L. SPECIES AS A SOURCE FOR VALUED TRAITS IN RYE, WHEAT AND TRITICALE BREEDING

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Rye (Secale L.) is a member of family Poaceae (tribe Triticeae) and includes perennial or annual, self-incompatible or self-compatible, and cultivated, weedy or wild species. Classification of the genus Secale is inconsistent, and comprises 3-4 to 8 species from the phylogenetic studies in the last ten years. Progress in rye breeding has been significantly reduced due to involving a small number of cultivars and landraces in crosses. The wild rye species and subspecies possess many valuable breeding traits for research aimed at expanding the variability in Secale cereale subsp. cereale. They are, due to their genetic diversity and high breeding trait expression, useful sources of genes for tetraploid and hexaploid wheat, and triticale improvement, too. One of the species, S. vavilovii, is attractive for rye breeding due to its high self-fertility, resistance to fusarium ear blight, septoria leaf blotch, high protein content, sprouting and sterilising cytoplasm, and genetic similarity with S. cereale subsp. dighoricum. Chromosomes of S. strictum are sources for resistance to yellow rust, Russian wheat aphid, grain hardness, increased protein and arabinoxylan content.

Key words: genus *Secale*, classification, feral rye, wild rye species, genetic diversity, useful breeding traits.

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Received May 01, 2019
Received May 12, 2019
Accepted January 18, 2020