

# IDENTIFICATION OF *LR34* AND *YR17* RUST RESISTANCE GENES OF WHEAT USING MOLECULAR MARKERS

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In Hungary, leaf and yellow rusts are important foliar diseases. As new virulent races can appear, it is important for breeders to know of the genetic background of the resistances in their cultivars. In this study, 69 Hungarian wheat cultivars, registered from 2005 to 2022, were investigated using molecular markers to determine the frequency of an important leaf (*Lr34*) and yellow (*Yr17*) rust resistance genes. All cultivars, except 2, derived from two main Hungarian breeding programs – Szeged and Martonvásár, 28 and 39 cultivars, respectively. In all cultivars investigated the leaf rust resistance gene *Lr34* was found in 7 cultivars (10.1%), and the yellow rust resistant one *Yr17* was in 22 cultivars (31.8%). The two main Hungarian breeding programs differed in the exploitation of these two genes. Among the Szeged cultivars, *Lr34* was present at low frequency (7.1%) and in Martonvásár cultivars it occurred at a higher frequency (12.8%). However, the difference in the use of *Yr17* gene was much pronounced in Martonvásár cultivars (46.1%) than in Szeged ones (14.3%). Data may help breeders to incorporate effective rust resistance genes into new cultivars.