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Czech J. Genet. Plant Breed.

Non-hypersensitive leaf rust resistance of bread wheat cultivar PBW65 conditioned by genes different from *Lr34*

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: The bread wheat (*Triticum aestivum* L.) cultivar PBW65 has shown high levels of resistance to the most frequent and highly virulent Indian race 77-5 of leaf rust (*Puccinia triticina*). The infection type and disease severity indicated a non-hypersensitive type of resistance against the race 77-5 in PBW65. The cultivar PBW65 was crossed with the leaf rust susceptible cultivar WL711 to determine the mode of inheritance of the resistance. The segregation for resistant and susceptible plants in the F_2 and F_3 generations revealed, that two genes, each showing additive effects, were likely

to confer resistance to leaf rust in PBW65. Intercrossing of PBW65 with Cook (*Lr34*), RL6058 (*Lr34*) and HD2009, possessing a similar resistance level like PBW65, revealed that the genes for leaf rust resistance in PBW65 were non-allelic to Cook (*Lr34*), RL6058 (*Lr34*) as well as to the gene(s) in HD2009. It is concluded that the cultivar PBW65 is a novel source of non-hypersensitive leaf rust resistance.

Keywords:

Puccinia triticina; allelic test; durable resistance; *Triticum aestivum* L.

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