

# THE ANALYSIS OF INHERITANCE MORFOLOGY TRAITS LEAF OF *LOLIUM PERENNE* AND *L. MULTIFLORUM*

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*Lolium perenne* (L.) and *Lolium multiflorum* (Lam.) are used pasture, meadow and lawn grasses as well as sports surfaces. The ryegrasses have become the subject of the number of studies because of their economic and ecological importance. Their genetic similarity (0,96) proves that they are not biological species but should rather be classified as populations of the same species. Despite a number of approved studies, *L. perenne* and *L. multiflorum* still have not been genetically defined and their genetic and physical map of has not been constructed so far.

The aim of the study was to analyse the quantitative traits such as the length of basal leaf, its width and surface as well as to look for molecular markers dependent on these traits.

The subject of the survey were plants of  $F_2$  generation belonging of three cross combinations: (1) between of *L. multiflorum*- Bartolini cultivar and *L. perenne* ecotype from New Zeland (BR3xNZ15), (2) between of *L. perenne*- Hungarian ecotype and *L. multiflorum*- Bartisimmo cultivar (HU x BR) also (3) between of *L. perenne*- Kyosato cultivar and *L. perenne*- Barball ecotype (KYx BB).

The study concerned biometrical analysis of basal leaves of all cross combinations. The morphological traits are mainly controlled by additive gene action. The cross combinations have also been analysed by means of isoenzymes (BR3xNZ15- 22 loci, HUxBR- 10 loci, KYxBB-11 loci). One cross combination – BR3xNZ15 has been analysed by means of ISJ markers (23 loci), gene sequence kat G (27 loci) and insertion sequences –IS (5 loci). None of molecular markers used has shown connection with the studied traits.