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PERENNIAL LOLIUM SPECIES AS A GERMOPASM RESOURCE AND BIODIVERSITY

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The purpose of this paper is to conduct a pathological study to identify and collect ecotypes of *Lolium perenne* as a function of germplasm in the process of improvement "in situ" and "ex situ" in the Danube Meadow, Protected Areas of Mehedinți County and the Western Plain of Timiș County. A study is performed on areas (altitudes, types of meadows) where the species *Lolium perenne* is present with accompanying vegetation and biogeomorphological characterization.

Productive characteristics of *Lolium perenne* as a cultivated species and productive / breeding potential for use as feed, seed production, quality of green hay mass, net lactation energy and evolution of crude protein content.

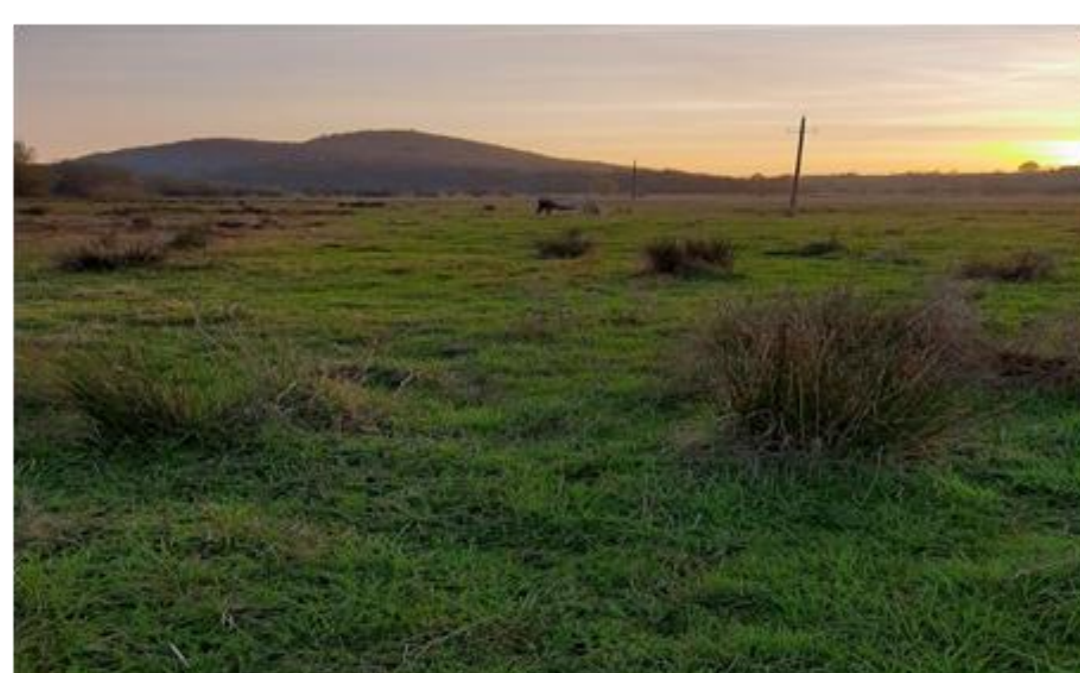
The delimitation of the area with the help of satellite maps and the description of the area studied through the administrative and geographical description but also from the point of view of the meadows that make it up. Description of the plant associations from which the biological material of *Lolium perenne* was taken

Meadows cover 70% of the world's agricultural area and support crop and animal husbandry systems that contribute to the livelihoods of more than 800 million people worldwide

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The genetic structure and morphological diversity of forage species may result from restricted gene flow. Direct methods of estimating gene flow are problematic and can provide estimates only for a relatively restricted area and over a short period of time. For the past 30 years, isozyme markers have been widely used in the study of genetic structure in plant populations, and forage species, which dominate many temperate agricultural and semi-natural areas, have been no exception. Most studies on the genetic variation in the population of forage species have analyzed those species that are important for agriculture that are widely sown as fodder, and perennial ryegrass is probably the most important species of forage grass and has experienced massive amounts of gene flow. by sowing selected varieties

The study of plant associations is performed by delimiting the area with the help of satellite maps and collecting the biological material of *Lolium perenne*, but also the description of plant associations. The ecotypes come from two regions of Romania: Oltenia Region, southwestern area, Mehedinți County and Banat Region, Timiș County, located in the west.



The pratological study of the *Lolium perenne* ecotype is completed by collecting the seeds from the collection field to be multiplied. Discussions are taking place on the results obtained both on seed collection and on the data obtained from the analysis of the soil in the collected areas

The germplasm of the natural population of *Lolium perenne* is important for reproduction due to its adaptation to a wide range of climates. Climate-adaptive genes can be detected by associations between genotype, phenotype and climate (Blanco-Pastor J. L. et al., 2020). There are opportunities to increase the rate of genetic gain for perennial ryegrass through molecular reproduction approaches, such as genomic prediction and hybrid reproduction. (SI) in feed specie

The motivation for this work is to discover productive varieties from a forage point of view that are resistant to biotic and abiotic stressors.

The scientific conclusions drawn from the practical studies carried out, allow us to recommend the maintenance of the studied meadows, in order to be valuable from a fodder point of view

Learning skills to preserve and maintain meadows
functional is an ecological and economic principle.