

VI_EUCARPIA CONFERENCE

Scientific Conference on Breeding to meet environmental and societal challenges

Abstract e-Book

26-28 May 2025
Coimbra Portugal



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by

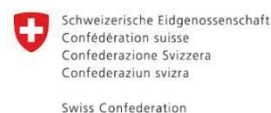
EUCARPIA- Section Organic and Low-Input Agriculture in cooperation with LiveSeeding, the Polytechnic University of Coimbra, and supporting organisations and projects

Coimbra, Portugal

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COLLECTING CROP WILD RELATIVES OF FORAGE SPECIES TO INCREASE THE AGROBIODIVERSITY

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Abstract Text:

Genetic resources of cultivated plants are the irreplaceable wealth of our planet, created by nature and later by the purposeful creative work of man. Crop wild relatives (CWR) are one of the plant genetic resources components, and an essential item in the attempt to introduce greater diversity into cropping systems (Halewood et al., 2018). Collecting and evaluation of CWR has a long tradition in Serbia and Czech Republic, but common activities started in 2011. Researchers from the Institute for Forage Crops in Kruševac and the Agricultural Research in Troubsko collaborated to collect wild relatives of fodder crops in both of their countries (Petrović et al., 2024). In this contribution we present the results of collecting plant genetic resources from the territory of Southern Serbia during the period 9. 8. – 12. 8. 2021. This region is environmentally significantly different from the rest of the country. These differences are caused by the effect of the Mediterranean climate. The vegetation cover is characterized by Sub-mediterranean plant communities in the lower altitudes, which are thermophilous and xerophilous, containing many annual plant species. The vegetation at higher elevations is more mesophilous, containing mostly species typical of the Central European floristic zone. We gathered 45 seed samples throughout a more than 1000-meter elevation gradient, beginning at 450 meters and ending at 1600 meters above sea level. The database containing passport data for each collected sample was created. Gathered samples belong to the Fabaceae family: 13 species of genus *Trifolium* (*T. aureum* Pollich., *T. repens* L., *T. medium* L., *T. pratense* L., *T. alpestre* L., *T. pannonicum* Jacq., *T. hybridum* L., *T. angustifolium* L., *T. lappaceum* L., *T. campestre* Schreb., *T. striatum* L., *T. retusum* L., *T. vesiculosum* Savi), *Lathyrus sylvestris* L., *Anthyllis vulneraria* L., *Vicia cracca* L., *Coronilla scorpioides* (L.) W. D. J. Koch, *Medicago minima* L., *Dorycnium germanicum* (Gremli) Rikli and two Poaceae species – *Dasypyrum villosum* (L.) Borbás and *Aegilops ovata* L. Samples are stored in active collections in both institutes in Kruševac and Troubsko. As soon as the sufficient amount of seed has been multiplied, the samples will be stored in the gene banks of both countries. Collected seed samples of fodder wild relatives are a very valuable source of genetic variation that is a key element in any breeding process (Vymyslický et al., 2023).

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