

**CONSERVATION THE GENE POOL OF OAK AND ROCK IN  
GENETIC RESERVES WESTERN REGION OF UKRAINE.**

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*There are several reasons for advisability of conservation the gene pool of oak. The first threat to genetic resources of oak is a significant decrease of area of oak forest in the recent past. It was accompanied by a process of fragmentation of oaks populations and forming disjunctive structure of its present areal in Ukraine. A significant periodicity of fruiting oak is one of the limiting factors for successful natural regeneration of oak and significant factor for transfers of reproductive material for reforestation and afforestation. A large area of forest plantations was established with oak acorns non-native origin. Global climate change may cause the acceleration of succession oak species: pedunculate oak as a pioneer species may be replaced by the following succession species - sessile oak that better tolerates drought and poor soils. It is the most probable scenario for a western region of Ukraine, where the habitats of these species overlap. Sanitary felling and thinning for finding and cutting best biotypes (like search cuttings) substantially reduces the genetic potential oak. Periodic drying, which are caused by complex reasons of abiotic and biotic nature, argues a decrease of vitality oak populations and the need for urgent implementation of measures of conservation its genetic variability.*

*The purpose of study - to assess the current state of forest genetic reserves (FGR) pedunculate and sessile oak in Western Ukraine and to develop proposals for improving their structural and spatial organization and carrying out measures for improve their functionality.*

*In total 35 FGR of pedunculate oak and 2 FGR of sessile oak were researched. Genetic reserves of oak are distributed relatively evenly in Lviv and Ternopil region at altitudes 230-403 m. In Chernivtsi region there are greatest number of FGR, but they are concentrated in two forest enterprises (Chernivtsi*

*and Khotyn) at altitudes 237-405 m. In Ivano-Frankivsk only one FGR of oak was selected (in Nadvirna), which is located at altitude 516 m close to the upper limit of the growth of this species.*

*Fresh and moist hornbeam-oaks are most represented in FGR (20,0 % and 22,9% of total numbers of reserves). Among the rarest types of forest in genetic reserves is wet beech sudibrova (2,9%).*

*Complex researches genetic reserve of pedunculate oak and sessile oak in Western Ukraine were carried out. Their multifactorial functionality indexes were determined. Recommendations on improve the structural and spatial organization and management options for oak genetic reserve have been made. Forest types for selection of new oak genetic reserve were determined.*

***Keywords: gene pool, forest genetic reserve, pedunculate oak, sessile oak, multifactorial functionality index***