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FEATURES OF NATURAL REPRODUCTION AND REGENERATION PROCESSES IN THE IMPLEMENTATION OF *HEDYSARUM DAGHESTANICUM* POPULATIONS

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The results of field, laboratory and biotechnological methods of analysis, seed and vegetative propagation of Hedysarum daghestanicum Rupr. ex Boiss. – narrow local endemic Red data books of Russia and Dagestan. For populations of characteristic differences in seed germination in the field (using the UNA «System experimental bases located along an altitudinal gradient» Garbs, Dagestan scientific center, Russian Academy of Sciences) and the laboratory of regenerative activity of explants of different structures, the optimal possibilities of micropropagation using nodal explants in vitro.

Keywords: *Hedysarum daghestanicum, seed reproduction, regeneration activity, explants in vitro, morphogenesis, seeds, microreproduction.*

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BIOTECHNOLOGICAL PROPERTIES OF NEW STRAIN OF YEAST *SACCHAROMYCES CEREVISIAE Y-3980*

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The biotechnological properties, activity of enzymes of carbohydrate and nitrogenous metabolism, mineral composition of new strain S. cerevisiae Y-3980 for the production of sparkling wines are researched. Found that the optimal content of macro- and microelements, determining resistance to stressful influences of external factors in the secondary fermentation, and higher activity of β-fructofuranozidase, proteinase, pyruvate decarboxylase, alcohol dehydrogenase influenced by physiological and fermenting activity of yeast. Champagne produced using a strain of S. cerevisiae Y-3980, different the long game, aroma and taste.

Keywords: *yeast, biotechnological properties, mineral composition, enzymatic activity, sparkling wine.*

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CHANGE OF STRUCTURE OF PHYTOMASS OF MOUNTAIN VEGETATION OF TUVA DUE TO THE FEATURES OF THE RELIEF

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Investigations were carried out in July-August 2002-2013 on sixteen grounds located in a mountain belt of seven large mountain systems of Tuva. The accounting of aboveground phytomass was carried out by method of hay crops from a platform of 0.25 sq.m in size, in

five - and tenfold frequency. For studying of underground phytomass the method of monoliths was used. As a result of analysis, the author first points out that the total reserves of phytomass gradually increase from the tops of the mountains and from the western slopes (3000 g/m^2) to the north (5500 g/m^2 and higher). The largest reserves of shrubs, sedges and mortmass are formed just on the eastern slopes, which is apparently due to a more favorable hydrothermal conditions. The largest reserves were found in the terraneous phytomass. According to the reserves distribution of subterraneus phytomass of plant communities it is apparent that a significant amount of subterraneus plant organs is characteristic of the northern slopes (from 3800 to 4500 g/m^2), on the other hand, the smallest - western slopes and tops of the mountains (up to 2400 g/m^2). It is determined that there is 25-30° steep increase in the mass of shrubs (2000 g/m^2) and sedges (40 g/m^2) in terranean biomass, at the same time, the reduction in mass of low shrubs ($r = -0.1$, $p = 0.0$) and lichens ($r = -0.2$, $p = 0.0$). Sources of subterranean organs of plants grow up to 5000-6000 g/m^2 with a slope 15°.

Keywords: *structure of phytomass, plant communities, highlands, slope exposure, degree of the slopes, Tuva, Russia.*

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