

**ECOLOGICAL AND BIOLOGICAL PREREQUISITES AND FORECAST OF
INTRODUCTION SUCCESS OF HERBACEOUS PERENNIALS IN UKRAINE
STEPPE**

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The analysis of 463 species of herbaceous perennials of the world flora was performed and ecological and biological determinants of their introduction success in the Ukraine steppe were defined. High adaptation to the climatic conditions of the Ukrainian

steppe is characteristic for the following species: with life-forms of rosetteless hemicryptophytes and rosette geophytes; those with rhizomatous and bulbous roots; for xerophytic, subxerophytic and submesophytic by hydrotype species; for steppe and petrophyte by their coenotype species, and according to phenorhythm type for spring green ephemerooids with summer-autumn-winter dormancy, long growing autumn-winter-spring green plants with summer dormancy and long growing spring-summer-autumn green plants with winter dormancy. It is revealed that Caucasian-West Asian, West Asian, European, European-Mediterranean, North American and Eurasian grassy perennial species are most adapted to the conditions of Ukrainian steppe.

Successful introduction of herbaceous perennials depends on their ecological amplitude relative to climatic factors: thermoregime, ombroregime, kontrastoregime and cryoregime. A high degree of adaptation is characteristic of the species whose range covers the areas of the globe with an average value of thermal regime making $46 \text{ kcal} \cdot \text{cm}^{-2} \cdot \text{yr}^{-1}$, contrast regime of 142 %, ombroregime of -533 mm precipitation, crioregime of $-8,3^{\circ}\text{C}$. Introduction success of the species turned out to be increasing with amplitude of the climatic factors.

We prognosticated introduction success of herbaceous perennials in the steppe zone of Ukraine. Regions – donors for their introduction are North Cascade Mountains (Washington), some areas of the Great Lakes (Ohio, Pennsylvania), the Carpathians, the Pannonian Plain and the Lower Danube, west of the Greater Caucasus, Western Transcaucasia, Ciscaucasia, Korean Peninsula, north of the Honshu island.

Keywords: amplitude of ecological tolerance, adaptation, regions-donors successfully introduced plant species.

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