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Evaluating of potential resistance of woody plant species to drought and water deficit

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Analyzed the status of woody plant species that growing in the ecological conditions of Kyiv. Determined that, currently, green plantations premature die from stressful influence of high temperatures and water deficit, industrial pollution of harmful chemicals, diseases and pests etc. Selection of highly resistant to drought woody plant species and keeping them in proper condition is a prerequisite proviso for environmental well-being and architectural and artistic expression of the big city.

For creation of green plantations in the city Kiev should be used drought-resistant woody plant species with high adaptive potential. Proposed an integral scale of ranging resistance by modified of us scale of Lapin and determined woody plant species with high adaptive properties of to drought and water deficit.

Group I includes 3 woody species that are representatives of the forest zone of moderate climate, with a wide areal prevalence that confirms considerable range of ecological potential. High adaptive capabilities of these woody plant species provide grounds to recommend them for growing in the droughty environment of industrial cities.

Group II operates the largest number of woody plant species − 6. Overall, the indicators of stability of woody plant species group II showed that the biological potential of adaptive responses of them is quite high and subsequent their growing in conditions of park areas and gardens of industrial cities are perspective, but possibilities of their growth under the conditions of street planting are limited.

To the III group we attributed 2 woody plant species, which greatly damaged by pests and diseases. Adaptation possibilities to drought of these woody plant species are developed weakly, so they attributed us to these group.