

PECULIARITIES OF GARDEN-VARIETY FORMS OF CONIFERS INTRODUCTION IN THE REPUBLIC OF BELARUS

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Introduction

First attempts of garden-variety forms of conifers introduction were made in the beginning of XIX century on the territory of Belarus. During that period parks were actively founded, so that stipulated a need for new and original trees and bushes. For several centuries park construction has stimulated and determined the peculiarities of plants introduction, including their garden-variety forms. However, at that time their taxonomic structure was relatively small. The focus was on coniferous species which were highly decorative and spectacular in single, group and alleys plantings [1, 2]. Research work on garden-variety forms of conifers species introduction was intensified in the late 90s of the last century [3]. The aim of the research was to find a methodical approach to identify perspective garden-variety forms for green building in Belarus.

Material and methods

Objects of research were more than 125 garden-variety forms relating to 35 species of 10 genera of 3 families. Botanical names were taken from [4, 5, 6]. Introduction success was determined by the comprehensive assessment results, including seasonal plants development, shoot growth, degree of resistance to environmental factors, diseases and pests.

Results and discussions

The vast majority of garden-variety forms are characterized by typical individual rhythm of seasonal development. Their vegetation period usually begins

earlier or later than that of the original plant species. Garden-variety forms of one species but with different geographical origin have differences in start and dates of similar phenological stage from 5 to 20 days or more. Garden forms of spruce, pine and yew genera are characterized by a short period of shoot growth with the peak in June-July. The representatives of the Cupressaceous family usually have shoot growth which ends in late August - early September, but due to warm and prolonged autumn it may continue until the end of September and even October. Some species are characterized by secondary shoot growth. Garden-variety forms differ from the main plant species to a small extent by a degree of winter resistance. The most common types of winter damage (5–10%) are freezing of annual shoot growth and needles partial dieback. In Belarus garden-variety forms of conifers are quite resistant to diseases and pests. There was a damage caused by diseases of needles and branches only in certain years with a prolonged cold and wet spring with a prior snowy winter with thaws.

Conclusions

A new methodological approach to identify perspective plants, based on consideration of genotypic characteristics of growth and development of garden-variety forms of species, which are the most stable in the case of Belarus to reduce their initial assessment for 5-6 years, is suggested.

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