DYNAMICS OF INVASIONS OF DENDROPATHOGENIC ORGANISMS ON THE TERRITORY OF BELARUS

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People have been aware of the biological invasions of phytopathogenic organisms since the dawn of crop production, however they are especially acute in recent times, spurred on by climate change and increasing world trade. The aim of the work was to study invasions of various phytopathogenic species dangerous for tree plantations in Belarus as well as neighboring countries.

As a result of this monitoring of invasive species within Belarus, scientists record one new dendropathogenic organism every year on average. Moreover, it has been discovered that there is an increasing trend in the frequency of their detection (Figure).

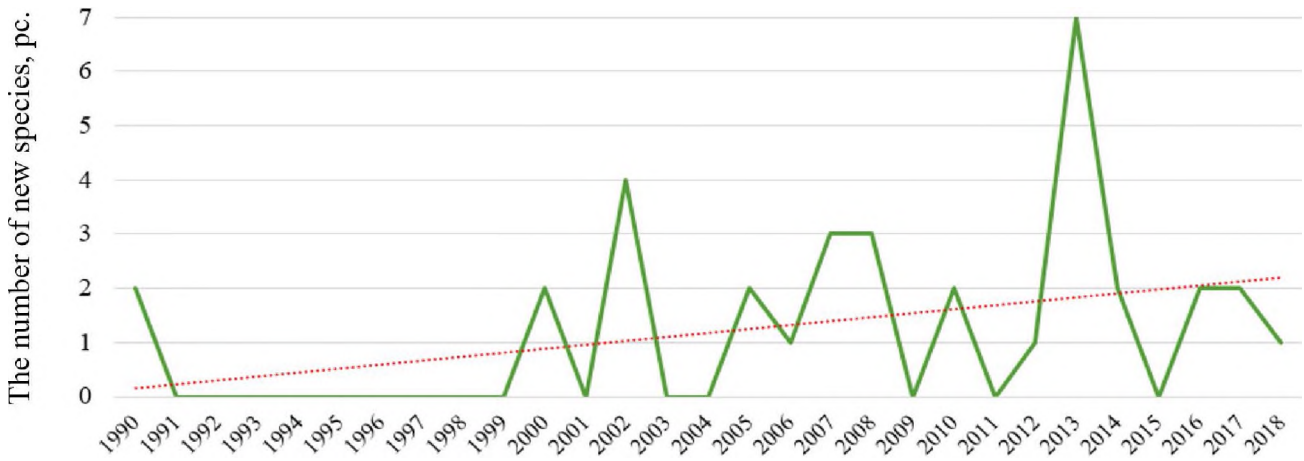

Figure. Dynamics of the number of invasive species of dendropathogens by years of penetration into the territory of Belarus.

The harmfulness of certain pathologies caused by some invaders is staggering. For example, *Hymenoscyphus fraxineus* Baral, Queloz & Hosoya, which first appeared in the Republic less than 2 decades ago, has since caused the death of more than two thirds of all ash forests within Belarus. Clearly, the utmost attention must be paid to the prevention of potentially dangerous invasive species.

From the list of quarantined objects that are somewhat common within the territory of the EAEU, 18 types of pests were identified that pose a potential danger to the forest plantations, nurseries, and arboretums of the country. Of these, 12 species are of American origin, 3 species are East Asian and 3 species are European. These data confirm the fact that invaders are moving along the vectors of the most active trade ties to zones of other continents with similar climatic conditions. It is also possible to trace the expansion of the ranges of southern European species to the north, which is probably related to global warming.

Analysis of phytosanitary risks, monitoring and forecasting of distribution, as well as measures to localize and eliminate foci of quarantine organisms in the forests of the republic are not carried out or do not have a systematic basis, which contradict the requirements of national or international norms.

The monitoring and effective control of recent phenomena is often hampered by the incompleteness of the symptomatology of pathologies in the regions of introduction, the imperfection of the methods used to diagnose adventive pathogen species, the lack of methods for predicting their spread, as well as regulations for the localization and elimination of foci. This poses a significant threat to sustainable forest management, hinders its productivity, and poses a risk towards the biodiversity of forest ecosystems.