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# Improving the Forecasting and Control of the Development of Invasions of Dendrotopathogenic Fungi in Belarus

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## ABSTRACT

Climate change and increasing anthropogenic influence, including the mass introduction of cultivated and ornamental plants and the expansion of the network of trade and transport links between remote regions, lead to an increasing threat of the spread of invasive species. For example, on average, 3-4 new pathogens of woody plants are recorded annually in Belarus. There is a tendency for some types of pathogens to increase their harmfulness, which were previously encountered singly and did not cause significant economic harm. Thus, an important task for crop production and forestry is the forecast and control of biological invasions of phytopathogenic organisms. The paper presents data from long-term monitoring of invasive phytopathogens in forests and parkland in Belarus. Over the past two decades, 53 new types of pathogens of woody plants have been identified in the country. The environmental and economic damage caused by them is discussed, examples of the development and application of measures to protect natural phytocenoses from dangerous invasions are given. Algorithms for predicting the spread of new types of phytopathogenic fungi using computer modeling in the Maxent environment are proposed. They allow one to assess the suitability of the territory for the development of dendropathogens at present and in the future, under various climate change scenarios.

**Keywords:** climate change, invasive phytopathogenic fungi, damage, predicting, control

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