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CONSEQUENCES OF «BIOLOGICAL FIRE» OF BIRCH STANDS IN STATE ENTERPRISE «EMILCHINSKE FORESTRY»

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Birch forest is important both in the structure of forest stands and in the structure of the forestry complex (as a source of woodworking, chemical, fuel, food and pharmaceutical industries). In recent years there has been a steady deterioration in the sanitary state of birch stands throughout Ukraine, and this problem is particularly acute in the forests of state enterprise «Emilchinske forestry». The index of sanitary condition of the studied stands varies in the range from I, 16 to II, 97 points. Currently, there is a dynamic increase of pathology that has an epiphytotic nature with a dieback area of 976,4 hectares. Due to the lack of rainfall in the region under study and the increased temperature during the growing season, weakened stands have become an enabling environment for the successful development of bacteriosis. Lack of awareness, invisibility of phytopathogenic bacteria during surveys led to a «biological fire» in plant biocenosis, namely, the progression of bacterial dropsy – the causative agent *Enterobacter nimipressuralis* [1;2;5].

In addition to certain patterns of the propagation of the bacterial dropsy, its significant phenotypic and modification variability, one of the determining factors that creates an epiphytotium and panfitotium situation and forms hearth, is the ecological and trophic association of the pathogen with populations of insect phytophages in a complex with meteorological conditions. Considering the forestry, ecological and economic value of birch stands and taking into account the intense deterioration of their phytosanitary condition, a comprehensive study of these factors in the pathology of *B. pendula* is particularly relevant. The vascular parenchymatous bacteriosis of birch, which is associated with saturation of the moisture of its tissues, has acquired several names in the scientific literature: bacterial dropsy, bacterial wet cancer, brown slime, watermark disease, «weetwood», «slime flux», «alcoholic flux» [3;4].

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Symptoms of bacterial dropsy are directly related to the moisture content of the tissues of the trunk and shoots of birch, the formation of a wet pathological nucleus in the wood, cracks and ulcers in the trunks, necrotic wet stains in the places of the external penetration of the infection, copious flow of exudate. Chronic pathogenesis is accompanied by drying of the upper part of the plant, and eventually – and its complete extinction.

The spread of bacterial pathology of tree plants in scientific works is associated with insects, emphasizing the fact that among pathogenic bacteria unknown species, not related to insect vectors, carrying out exogenous and endogenous transfer of bacteria. As a rule, insects-xylophagous are powerful secondary factors in the spread of infection [4;5]. It was found that in the studied region, *Tremex fuscicornis* predominates from the total number of insects.

The above is a testimony that in conditions favorable for phytopathogenic microorganisms in the system of «trees-bacteria-environment» they can very quickly fill the ecological niche to the threshold concentration [1], thus causing even epiphytotics, that to a certain extent we can observe in modern phytosanitary condition *B. pendula*.

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