

Growth, condition and sustainability of white poplar plants in the floodplains of the steppe Pridonje rivers

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High edificatory white poplar role in flood plains of the steppe Pridonye indicates that the growth characteristics and the state of this breed allows to shape sustainable plantations. In the article biological sustainability degree is assessed by the following criteria: growth and natural thinning, sanitary conditions, the characteristics of the forest environment

It was stated that the biological stability of the white poplar plantations decreases with age, which is a natural process associated with the completion of the plants life cycle. The majority of the surveyed stands – more than 72 % of the area – belongs to 1 class of biological stability, which indicates a high adaptive capacity of the main part floodplain white poplars to disturbing factors. Sanitary conditions worsening is negative impact on the growing stock accumulation in the white poplar stands. White poplars with low productivity are less stable.

Current mortality degree – one of the most important parameters in the diagnosis of biological sustainability. White poplars become more sensitive to the presence of the current mortality with age, which also indicates a decrease in their resistance as they old. Selective sanitary fellings will improve the condition of the weakened plantings.

Forest pest condition in white poplars is safe. Rare cases of pests and diseases presence are result of natural plants attenuation and more often occur in low-density mature stands. The optimal mode of formation, as well as group selection and shelterwood alternate strip felling of mature stands should be the basis for improving and maintaining the stability of the floodplain white poplars.

Keywords: *White poplars, biological sustainability, growth progress, natural thinning intensity, sanitary condition, attenuation degree, current mortality, mortality*