

## VARIABILITY OF SOME ECOPHYSIOLOGICAL PARAMETERS AT WOODY SPECIES IN CERTAIN FOREST PLANTATIONS FROM CENTRAL MOLDAVIAN PLATEAU

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### Abstract

The purpose of this paper is to assess the variability of some ecophysiological parameters of the woody species as a measure of stability of the certain forestry ecosystems from North-eastern Romania. Some analyzed forestry stands from Moldavian Central Plateau were mostly grown in degraded soils by erosion with large slopes. Ecophysiological researches were made in plant species in several representative plantations for Moldovan Central Plateau (plantations with *Robinia pseudoacacia*, *Salix alba*, *Populus alba*, etc). Were analyzed relative variation of photoassimilatory pigments (chlorophylls and carotenoids) and sugars parameters of carbohydrate metabolism (mono-, di-, polysaccharides soluble and insoluble). Foliar gas-exchange parameters as photosynthesis rate, transpiration rate and stomatal conductance were determined *in situ* condition from mid-July. Analyses of coefficient of variation for photosynthesis showed a relatively large fluctuation, especially in young plantations (Ferești-Săratu, Ferești-Velnița), meanwhile a smallest variation obtained at coefficient of variation for transpiration in biotope with constant humidity in riverside coppice(Solești). It could be observed a smaller increasing along age of analyzed coefficients of variation(CV of photosynthesis, and respectively, CV of transpiration), between 15 years old until 30 years old.

**Key words:** photosynthesis, transpiration, forest plantations, Central Moldavian Plateau