

## VARIABILITY OF SOME ECOPHYSIOLOGICAL PARAMETERS IN THE MAIN CROP PLANTS OF CENTRAL MOLDAVIAN PLATEAU AGROECOSYSTEMS

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### Abstract

Ecophysiological studies of species grown in agroecosystems of Central Moldavian Plateau were assessed by analysis of metabolic parameters specific to highlight potential resource recovery biotope on which these plants are grown. Parameters were analyzed at foliar gas exchange: intensity of photosynthesis-A, intensity of transpiration -E and water use efficiency in photosynthetic assimilation, WUE (ratio A/E, indicators of hydric metabolism (relative water content) and of carbohydrate metabolism (mono-, di- and polysaccharides) in the leaves of the studied species. Analyzed species were winter wheat (cult. *Triticum aestivum*), sunflower (*Helianthus annuus*), maize (*Zea mays*) and alfalfa (*Medicago sativa*), investigating the annual and perennial crops in four stations: Șerbesti (Iasi County), and respectively, Căntălărești, Buhăiești and Rebricea (Vaslui County) from the Northeastern Romania. Such studies are continuing those carried in other natural and anthropic ecosystems of Central Moldavian Plateau (forests, plantations, meadows and pastures). This work approached also, the analyzing the coefficient of variation of gas-exchange parameters in crop plants of different biotope conditions from NE Romania. The results were found that analyzed maize hybrids and cultivars of winter wheat, improve in optimal terms of ecophysiological, resources the stations biotope at Central Moldavian Plateau (mainly cambic chernozem and vertic subtype soils on slopes) in the climatic conditions of the year 2013 (with more precipitation in May-June). Water use efficiency showed an increased values during growth stage in *Zea mays* on the haplic chernozem; meanwhile when character vertic showed in soil type as well as haplic vertic chernozem, water use efficiency registered fluctuations.

**Key words:** agroecosystems, coefficient of variation, gas-exchange parameters

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