RESEARCH ON THE ECO - PHYSIOLOGICAL REACTION OF SOME VINE VARIETIES DURING THE 2011 GROWING SEASON IN THE COPOU, IASI AREA

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Abstract
Extreme weather events adversely affect the normal growth cycle of crops and productivity of agricultural systems. Recent research shows that the vine production efficiency could be reduced by abiotic stress represented by the drought, freezing temperatures and soil salinity. Various modern research projects aim to test models of abiotic stress resistance genes expression in order to discover the mechanisms of tolerance to stress and to stimulate understanding the genetic basis of this reaction, with implications for wine quality (Cramer, et al., 2005, Burzo I. şi colab., 1999, Jităreanu Carmen Doina şi colab., 2004). In this context, due to genotype - phenotype interrelations, phenotypic manifestations research (morpho-anatomical, physiological, biochemical and behavioral) related to resistance to stress abiotic vine from global warming is an urgent topicality.
Water scarcity is one of the most important abiotic stress factors and is generally accompanied by heat stress. It inhibits photosynthesis by disrupting biochemical processes of synthesis of pigments from the reaction center (Bertamini et al., 2007, Guan et al, 2004) and the photobreathing protects the photosynthetic apparatus against photodegradation in drought conditions (Guan et al., 2004). In this paper we intended to study issues regarding the eco - physiological response to climatic conditions of 2011 of the following vine varieties: Gelu, Coarna Neagra, Moldova and Purpuriu. For this purpose, investigations regarding some indicators of the photosynthesis process were carried out: leaf morphogenesis – the leaf being the main organ of photosynthesis - and photosynthetic pigment content during growth and ripening processes of grains.

Key words: vineyard, eco-physiology, photosynthetic pigments

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