

## **Abstract**

Climatic changes, characterized by extreme weather conditions, particularly influences plant growth and development. Extreme meteorological conditions acting on both biological cycle and their productive potential. In recent years global warming has produced many disturbances in ecosystems vine, vine varieties being forced to change their conduct annual cycle of vegetation, with consequences often negative for the quality and quantity, including the grape wines production results. The research aimed at the effect of the meteorological conditions of 2011, on physiological processes represented the intensity of photosynthesis, transpiration rate and water use efficiency in red wine cultivars, *Coarnă neagră*, *Gelu*, *Moldova* and *Purpuriu*, grown in the vineyards of Copou, Iasi.

**Key words:** climatic changes, grapevine , physiological processes