

## IRRIGATION, THE METHOD FOR PEDOLOGICAL DROUGHT CONTROL IN THE CONTEXT OF THE SUSTAINABLE TECHNOLOGIES IN CROPS FOR GRAINS FROM NORTH-WESTERN ROMANIA, 1976-2012

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**Abstract.** *The researches were carried out during 1976-2012 in the Agricultural and Development Station Oradea on the preluvosoil. Ten to ten days, the soil moisture was determined and the graphs of the soil water reserve dynamics were realized for the depth 0-50 cm in winter wheat and for the depth 0 - 75 cm in maize, sunflower and soybean. The decrease of the soil moisture bellow easily available water content was considered pedological drought and the decrease of the soil moisture bellow wilting point was considered strong pedological drought. Pedological drought was determined every year and strong pedological drought was determined in 30% of the years studied, generally. The irrigation determined the increase of the plants water consumption values, yield gains very significant statistically, the increase of the yields stability and the improve of the water use efficiency.*

**Keywords:** crops for grains, irrigation, pedological drought, sustainable technologies

### 1. Introduction

Drought and desertification are the major problems of the world and United Nations Organization established the day of 27 June like The World Day of Desertification and Drought [1].

In Romania, the areas with desertification are considered Dobrogea and a part of South-Eastern Romania. An important part of Moldova, the Romanian Plain and a smaller area across the border with Hungary are considered the areas with transfer to desertification [2-6].

The drought are the extreme climate phenomena, the most complex and the most known natural hazard. The damages produced include the drought in the

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