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Drought mitigation in Periam locality, Timis County, Romania

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Water demands in agriculture are strongly linked with the climate in general and with precipitations and temperatures in special. Water scarcity as well as water excess phenomenon often occurred in western part of Romania. If in the case of water excess phenomenon there are unanimously agreed definitions we can't affirm the same thing for water scarcity. Drought, aridity, dryness, water scarcity, water shortage, desertification are only a part of the terms which created very interesting debated among the experts. The lack of single agreed definitions conducted to confusions and to wrong interpretations and approaches in this field.
In Romania, the problem of drought was confirmed from many years. More than 2.8 million hectares of agricultural fields presents a tendency of desertification. At the same time, drought affects almost the entire Romanian agricultural fund. Timis County, situated in the western part of Romania, know a transition period, from humidity excess to humidity deficit because of a long period with intensive drainage. The lack of humidity in soils is more obvious in the north-western part of this county.
Drought represents the effects of water demands unmet by the available resources. It is hardly to define drought as being a phenomenon due to the nonexistence of a start time and an end time. This type of event affected several times during the last decade and the western part of Romania. Involving, sometimes, a wrong approach of drought, were created different types of strategies for its management for more or less success.
For this paper the authors focused on an area located in north-western part of Timis County which covers Periam locality, due to its fertile soils and where the effects of water scarcity phenomenon need to be prevented or struggled. In order to achieve a study on drought, the authors had processed climate data from Periam area (the nearest station being Sannicolau Mare weather station). In this paper we will present our studies on drought analysis using a series of indicators: Hellman, N. Topor, De Martonner, Selianinov, Lang, Palfai, Available moisture indicator etc. At the end of the paper the authors propose a series of measures necessary to mitigate the effects of drought and to rebuild the irrigation infrastructure in the analyzed area.