

Climatic changes and tendency of drought in South Backa region

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The Vojvodina Province is the most productive agricultural region in Serbia with approximately 1.500.000 ha arable land. Vojvodina Province is characterized of a continental climate with pronounced annual variability of air temperatures, as well as the others climatic elements on which depends the soil water regime. This paper presents the research of precipitation, air temperature, sunshine hours, relative air humidity, wind speed and evapotranspiration during growing and annual period from 1966. to 2004. for the region of southern Backa in Vojvodina Province. The data is separately analyzed in four periods, 1966-2004 as the first standard meteorological data, than 1966-1990 as the second, 1980-2004 as the third and 1990-2004 as the fourth standard meteorological data. The analysis is based on climatic data obtained from Meteorological station Rimski Sancevi. The Penman-Monteith Method calculated the reference crop evapotranspiration for the each month during analysed period. Calculation is carried out by appropriate computer program CRIWAR 2.0 (by Institute for Land Reclamation and Irrigation, Wageningen, the Netherlands). The droughts that have occurred in recent years were of dimensions of an elemental catastrophe in respect of agricultural production. In order to determine dry years, following criteria have been used: hydrotermic coefficient by Seljaninov, index of aridity by De Martone, rain factor by Lang and coefficient and ratio between precipitation and evapotranspiration for the growing period and for whole year. Analysis of basic climatic data obtained from Meteorological station Rimski Sancevi revealed that the dry years were more common for the period after 1981. The period after 1994 had the significant occurrence of moderate and wet years.