Drought 2003 and potential moisture balance

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A b s t r a c t: The problem of drought in our countryside is not from the climatological point of view an extraordinary phenomenon, however the extent of the occurrence of drought in individual years or seasons of the year, mainly during vegetation, is significant. The course of the weather, especially in years 2000 and 2003 was significant just exactly by the occurrence of drought. For biometeorological evaluations it has been shown, that we do not have elaborated methods of topical evaluation of drought occurrence, including possibilities of its forecast. The operative evaluation of drought during vegetation period is most often made according to precipitation sums and their frequency of occurrence, according to soil moisture in comparison with soil hydrolimits, in this view mainly with the wilting point. Generally though these procedures are not quite satisfactory, because the occurrence of precipitation is very variable and especially in these cases big local differences occur, while the soil moisture is dependent also on its physical properties. The deviation of the average temperature from the long-term average of 1961–1990 on the territory of CR is a positive value of 2°C. Measurement of soil moisture is still difficult and moreover is made on a small number of localities. Most of the territory of the Czech Republic registered less than 500 mm of precipitation, which represents less than 80% of the average value, and a great part of the territory registered less than 60% of the long term average precipitation sum. To express moisture in our countryside, we have used the potential moisture balance, which is the difference between precipitation and potential evapotranspiration of a grass stand. The value of the potential moisture balance reached in the driest regions towards the end of 2003 a value of over minus 200 mm.

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