



## Change in duration of growing season in the period of 1951-2010 in the Czech Republic

Anna Valeriánová, Eva Holtanová, and Lenka Crhová

CHMI, Climatology, Prague, Czech Republic (anna.valeranova@chmi.cz)

The observed climate change affects more or less every part of climate. For the assessment of possible impacts of the climate change it is necessary to evaluate changes in meteorological characteristics relevant to sectors of interest. Duration of the thermal growing season is a useful indicator for assessment of conditions for agriculture as well as for vegetation in natural ecosystem.

In the present contribution, we focus on changes in duration of growing season between periods of 1951-1980 and 1981-2010 in the Czech Republic. In addition, changes in dates of beginning and end of growing season and their extremes are assessed for selected meteorological stations.

Growing season is period, when the plants can be grown, assuming sufficient water, radiation and suitable soil. For large part of Europe including the Czech Republic growing seasons are defined as periods with daily mean air temperature above a certain threshold. In our contribution periods with daily mean air temperature above 5 °C, 10 °C and 15 °C are evaluated.

Different methods for determination characteristics of growing season exist. The results of four selected methods applied on the data of one station are compared in our contribution. The method of the linear interpolation of long-term monthly mean values is selected for determination length of growing season for the whole area of the Czech Republic.

The observed prolongation of growing seasons in the period of 1981-2010 over most of the area is mainly caused by an earlier beginning of growing season. The highest changes are observed in lower and middle altitudes.