

## **The dates of harvest cereal from the Czech Republic in the period 1517-2008**

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The complete long time series of phenological observations are becoming increasingly important for research on climate impacts. The reconstruction of historical phenological observations is very time-consuming. We present results of reconstruction for the dates of harvest cereal in the Czech Republic during 1517 - 2008. We transferred the historical data on the harvest of various cereals to winter wheat grown for altitude 250 m. We are created from all available dates' one representative synthetic series of the winter wheat harvest dates in the Czech Republic. The earliest ever the harvest in the last 492 years has been recorded in the last 50 years. However, in historical records we find a similar period, although shorter segment with a similar early harvest. A typical example is the period 1517-1542, which is very similar to the period 1983-2008. The air temperature increases were associated with an earlier onset of the cereals phenological phases; not just the beginning of the growing season but also the interval between successive phenological phases was shorter.

Finally, we tried to reconstruct the seasonal temperatures in the past 492 years using historical dates on the harvest of cereals.