

# CLIMATIC FACTORS INFLUENCE ON EXTREMELY LOW YIELDS OF SELECTED CROPS IN SOUTHERN MORAVIA DURING 1961–2007



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# INTRODUCTION

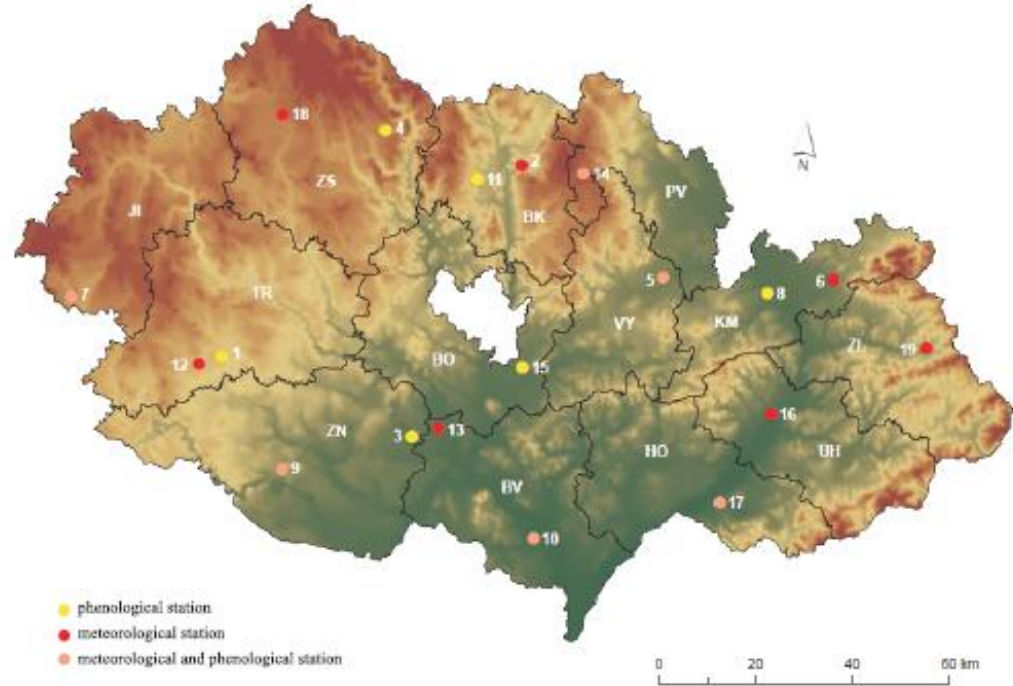
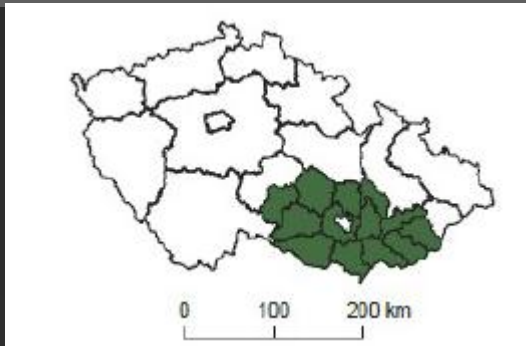


Fig. 1. Spatial distribution of selected meteorological and phenological stations in southern Moravia (1 – Blatnice, 2 – Boskovice, 3 – Branišovice, 4 – Bystřice nad Pernštejnem, 5 – Ivanovice na Hané, 6 – Holešov, 7 – Kostelní Myslová, 8 – Kroměříž, 9 – Kuchařovice, 10 – Lednice, 11 – Lysice, 12 – Moravské Budějovice, 13 – Pohofelice, 14 – Protivanov, 15 – Sokolnice, 16 – Staré Město, 17 – Strážnice, 18 – Vatin, 19 – Vizovice); white letters represent abbreviations of districts (BK – Blansko, BO – Brno-venkov, BV – Břeclav, HO – Hodonín, JI – Jihlava, KM – Kroměříž, PV – Prostějov, TR – Třebíč, UH – Uherské Hradiště, VY – Vyškov, ZL – Zlín, ZN – Znojmo, ZS – Žďár nad Sázavou)

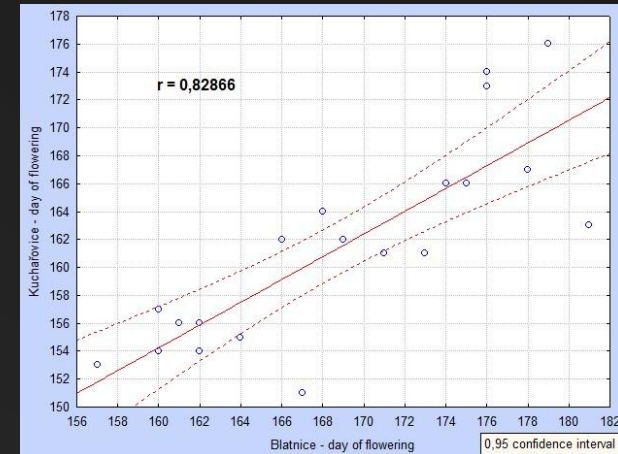
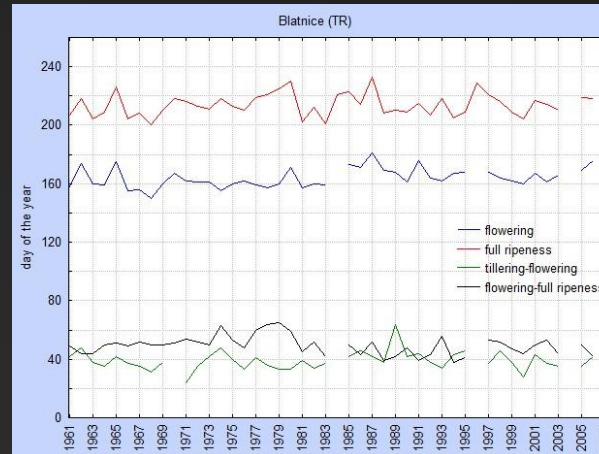
## KEY QUESTIONS:

- 1, How significant was the influence of climatic factors onto yields of selected crops?
- 2, Which annual yields during the 1961–2007 period were affected the most?
- 3, Which factors did play the key role in lowering the yields level?
- 4, How was the spatial variability of crop yields in the region?

# DATA AND METHODS

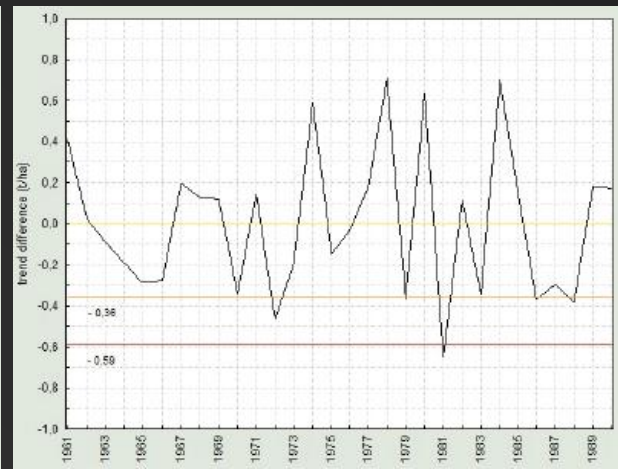
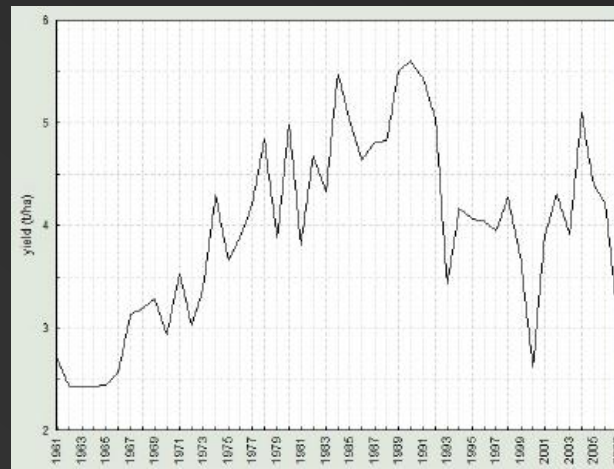
## DATA:

- agricultural yields for districts
- phenological data from available station net
- meteorological data (sun radiation, air temperatures, amount of precipitation, etc.)



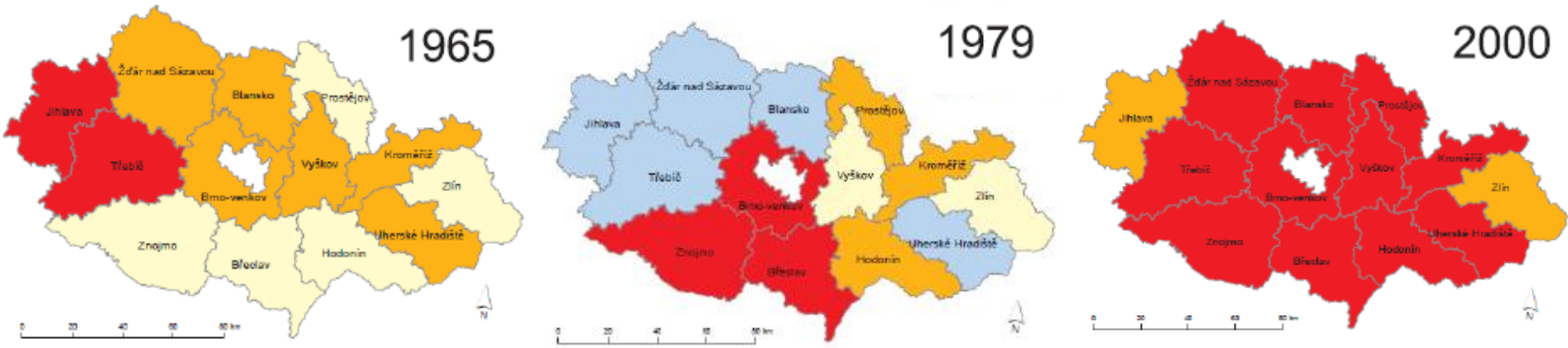
## METHODS:

- removing the trend from time series
- missing phenological data – filling
- cluster analysis



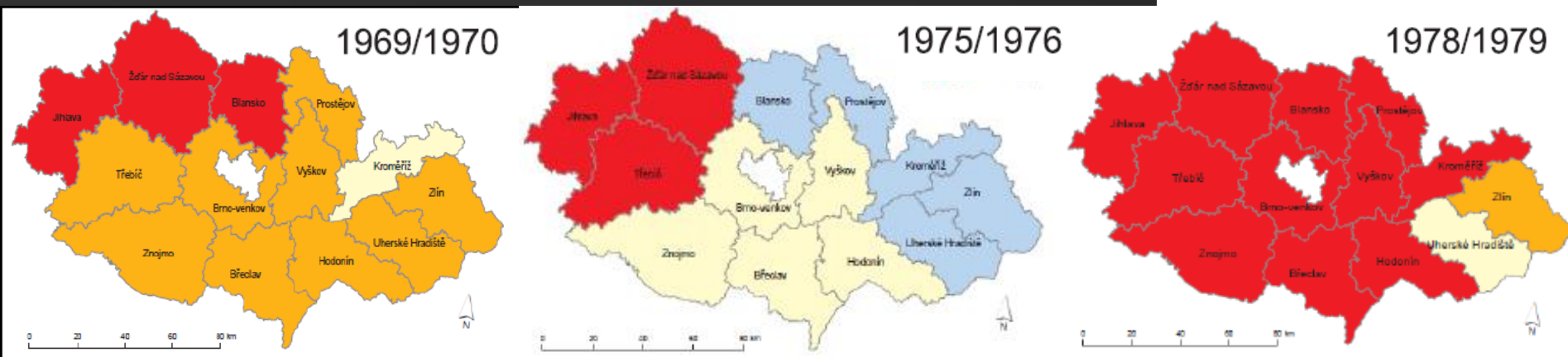
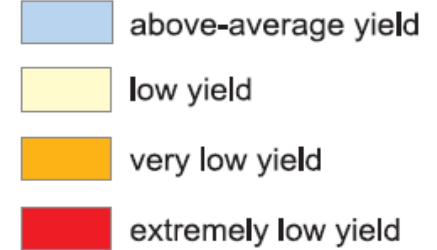
# RESULTS

## EXTREMELY LOW YIELDS OF SPRING BARLEY, WINTER WHEAT



SPRING BARLEY – 6 cases of extremely low yields

WINTER WHEAT – 7 cases of extremely low yields



# ACKNOWLEDGEMENTS

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**THANK YOU FOR YOUR ATTENTION!**