Geophysical Research Abstracts
Vol. 16, EGU2014-3688, 2014
EGU General Assembly 2014


# Impact of climate change on wheat productivity in Spain

Sara Hernández Barrera (1), Concepción Rodríguez-Puebla (2), and Nube González-Reviriego (3)

(1) University of Salamanca, Salamanca, Spain (sarahb@usal.es), (2) University of Salamanca, Salamanca, Spain (concha@usal.es), (3) University of Salamanca, Salamanca, Spain (nube@usal.es)

Research about the effects of climate on agriculture it is of great interest to manage the risk and potential agriculture adaptation. This study analyses changes of wheat productivity in the 21st century using CMIP5 models. Previous findings on the relationships between climate variables and wheat productivity based on observations (EGU2013-8355) are considered to project the changes. Here we applied new statistical tools as Empirical Mode Decomposition to filter the no linear trend and Partial Least Square regression to extract the dominant climate modes that account for variations of wheat productivity. In particular, we obtained relationships between wheat productivity, aridity and large-scale variables. The derived model is applied to project the changes in future climate.