



Understanding the interactions between agricultural production and climate variability

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The potential impact of climate change on agriculture and the links between seasonal climate predictions and crop yields are issues of great interest in Agrometeorology. Performing these studies requires not only analysing historical crop and climate data but also translating climate information into production variations. In this study, we propose a method for obtaining the links between climate variables and crop yields. Its main steps are: first, to derive the principal components of the large-scale and regional-scale atmospheric fields by applying Empirical Orthogonal Function; then, to select the climate components which show the best association with crop production; and, finally, to propose an approach that could describe and explain the effects of climate variations on the yields. The influence of the teleconnection patterns on production is also considered. Results for some Spanish crop yields will be presented.