

The West African monsoon dynamics : Agricultural impacts in Sahelian area

B. Sultan., C. Baron, M. Dingkuhn and S. Janicot

Ecole Polytechnique, Meteo-France, Laboratoire de la Meteorologie Dynamique
(LMD), Palaiseau, France
sultan@lmd.polytechnique.fr

Precipitation in the Sahel is produced by one rainy season during the northern summer monsoon. The onset of these rains and their intra-seasonal fluctuations are then important for the agricultural community. In collaboration with CIRAD, we have investigated some relationships between rainfall variability at regional scale and crops development at local scale in the Sahel. By using the crop model SARRA-H, several sensitivity experiments on the mil yield in Niamey (Niger) have shown how a good knowledge of the seasonal cycle of rainfall and its onset in West Africa can be useful to improve the yield through a better choice of the sowing date. We have also investigated the local agricultural impact of intra-seasonal dry sequences at large scale and pointed out a different impact relative to the crop dynamics.

Friday I (Talk)