

**P25 Regional climate simulations with WRF/Noah-MP: Validation and the effect of crop and groundwater modules.**

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Regional climate simulations are conducted for three years 2012 (dry), 2013 (normal) and 2014 (wet) using the WRF model coupled to the Noah-MP land surface model. Within Noah-MP, the groundwater and crop model options are activated to simulate the effects of dynamic crop and aquifer interactions with WRFs two-meter soil. Model results are verified against approximately 2000 surface stations (temperature, dewpoint, wind) and CPC gauge-based and Stage IV precipitation analyses.