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Climate Data and Analyses for Applications in Agriculture and Natural Resources

**Annual Report – Publications**

October1, 2016 – September 31, 2017

**Kentucky:**

Zhang, C., and W. Ren (2017), Complex climatic and CO2 controls on net primary productivity of temperate dryland ecosystems over central Asia during 1980–2014, Journal of Geophysical Research:Biogeosciences., 122, doi:10.1002/ 2017JG003781.

Zhu, X., Qiu, X., Zeng, Y., Ren, W., Tao, B., Gao, J, Liu, H., Tan, Y. (2017), Effects of complex terrain on net surface longwave radiation in China. Theoretical and Applied Climatology. 1-14, DOI: 10.1007/s007040017-2272-9

Zhu, X., Qiu, X., Zeng, Y., Ren, W., Tao, B., Pan, H., Gao, T. and Gao, J (2017), High-resolution precipitation downscaling in mountainous areas over China: development and application of a statistical mapping approach. International Journal of Climatology, doi: 10.1002/joc.5162

Pan, S., G. Chen, W. Ren, SRS Dangal, K. Banger, J. Yang, B. Tao, and H. Tian (2017), Responses of global terrestrial water use efficiency to climate change and rising atmospheric CO2 concentration in the twenty-first century, International Journal of Digital Earth, 1-25, DOI: 10.1080/17538947.2017.1337818

Zhang, J., P. An, J. Yang, W. Ren, Z. Pan, Z. Dong, G. Han, S. Pan, Y. Pan, H. Tian (2017), Enhancing soil drought induced by climate change and agricultural practices: Observational and experimental evidence from the semiarid area of northern China, Agricultural and Forest Meteorology, 243: 74–83

Ren, W., H.Q. Tian, W. Cai, S.E. Lohrenz, C.S. Hopkinson, W. Huang, J. Yang, B. Tao, S.F. Pan, and R. He (2016), Century-long increasing trend and variability of dissolved organic carbon export from the Mississippi River basin driven by natural and anthropogenic forcing, Global Biogeochemical Cycle, 30(9):1288-1299, DOI: 10.1002/2016GB005395.