



Remote Sensing of Evapotranspiration and Water Stress of Woody Perennial Crops in Water-Limited Regions

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Deadline for manuscript
submissions:

closed (31 August 2023)

Message from the Guest Editors

Timely knowledge of evapotranspiration (ET) rates and plant water stress status can be very useful in irrigation scheduling decisions, but the use of remote sensing (RS) technologies for the accurate estimation of these factors for most woody perennial crops is difficult. We lack a sufficient understanding of such things as the effects of inconsistencies in the spatial, temporal, and spectral resolution of different types of sensors that prove difficult to resolve; how to accurately separate crop canopy from interrow ET, especially for ET models based on coarse-resolution satellite imagery; how to accurately account for differences in cultivars, irrigation methods, and plant management technologies in modeling ET and ET components; the relationship of crop canopy ET to stress conditions; and the effects of the formation and evolution of atmospheric boundary layers—especially at the edges of large irrigated crop production areas—on diurnal ET rates and biophysical processes. This Special Issue will address these and other scientific challenges for the use of RS technologies in ET estimation for agricultural water management.





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