OPERATIONAL ET REMOTE SENSING (RS) PROGRAM FOR IRRIGATION SCHEDULING AND MANAGEMENT: CHALLENGES AND OPPORTUNITIES

Prasanna Gowda[1]

Evapotranspiration (ET) is an essential component of the water balance and a major consumptive use of irrigation water and precipitation on cropland. Any attempt to improve water use efficiency must be based on reliable estimates of ET for irrigation scheduling purposes. In the Texas High Plains, irrigation scheduling is implemented using lysimeter-based crop coefficients and reference ET data from the Texas High Plains ET Network.This presentation will discuss the current state of irrigation management in the Texas High Plains, knowledge gaps, ongoing developments, and the role of remote sensing based regional ET mapping algorithms with respect to irrigated agriculture in the Texas High Plains. Also, ongoing multi-institution research effort to enhance ET and irrigation algorithms in crop and hydrological models will be highlighted.

[1]Prasanna Gowda, Research Leader, USDA Agricultural Research Service, Grazinglands Research Laboratory, El Reno, OK 73036