

empiricism. The Stephen-Stewart method, while convenient, requires calibration for different climates. Crop coefficients, based on the Penman ET_p estimates, were presented for citrus, turfgrass, bahiagrass, and corn for Florida conditions.

The importance of ET as a concept in irrigation management was discussed. Irrigation management practices that reduce ET below ET_p for a well-watered crop will reduce dry matter growth in an amount directly proportional to the reduction in ET . More importantly, grain yields of crops are reduced in proportion to the reduction in ET caused by periodic droughts and insufficient irrigation. The dependence of grain and pod yields of corn, soybean, and peanuts on seasonal ET were presented to illustrate the importance of optimal irrigation practices. Research in other states indicates that grain yield of crops is more sensitive to shortages of water during certain stages of growth than in others. More research is needed to quantify such relationships for Florida climate and soils.

A technique was presented for estimating monthly irrigation requirements based on monthly ET_p , water-holding capacity of soil, and monthly effective rainfall. This technique is recommended for use in estimating monthly irrigation requirements on a large area basis for planning purposes. It is not recommended for use in day-to-day crop irrigation management decisions. An example was discussed to illustrate the application of water management principles in humid regions.