MASTER COPY # 157

Jensen, Marvin E. and James L. Wright. June 1969.

Comparison of Estimated and Measured Daily Evapotranspiration from Irrigated Crops in Southern Idaho. Agr. Met. Soc. Bulletin.

Irrigation scheduling using climate-crop-soil data requires accurate estimates of daily evapotranspiration. Extensive application of this method of irrigation scheduling also requires the use of standard or readily available meteorological data. Experience in southern Idaho indicates that daily net radiation can be estimated within 10% using observed solar radiation, maximum and minimum air temperatures, and a single observation of dew point temperature. Observed versus cloudless day solar radiation for the area is used to adjust the net longwave radiation for cloud cover effects. Estimates of daily evapotranspiration with adequate soil moisture and nonlimiting leaf area generally also are within 10% when using a combination energy balance-aerodynamic equation. Several equations for estimating potential evapotranspiration will be compared with measured values.