RESEARCH PAPER:

Measurement of AET in soybean and estimation of PET by various methods and its comparison with AET

P.S. KAMBLE, V.G. MANIYAR AND J.D. JADHAV


SUMMARY

A field experiment was conducted at experimental farm, Department of Agricultural Meteorology Marathwada Agricultural University, Parbhani. The experiment was conducted with soybean crop cv. MAUS-71 in a field where two weighing types of lysimeter were installed. The experiment was non-replicated and estimation of reference crop evapotranspiration was measured on daily basis. At the same time, the daily weather data were recorded at near by observatory and were tabulated. The PET were estimated and compared with lysimetric observations. The study revealed that among the methods tested, modified Penman method was found to be suitable for advocating the irrigation scheduling as it matched well throughout the crop season. The Blaney and Criddle and pan evaporation estimation methods under estimated the values when compared with lysimetric data. As these methods are based on only air temperature, pan evaporation and other parameters such as radiation, relative humidity, bright sunshine hours, wind factor were not included which also played a significant role in affecting ET. The results obtained through these methods are not comparable.

Key words :
AET, PET, Crop coefficient