

Response of summer pearl millet (*Pennisetum glauchum* L.) to depth and time of irrigation scheduling

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ABSTRACT

Field experiment was conducted on medium black soil during summer season of 2004, 2005 and 2006 in order to find out the optimum depth and time of irrigation for pearl millet. Irrigation scheduling was done on the basis of open pan evaporation. Results indicated that the application of irrigation at 40 mm depth produced significantly higher grain yield (45.89 qha^{-1}), fodder yield (71.57 qha^{-1}) and water use efficiency ($116.56 \text{ kg ha}^{-1} \text{ cm}$) as compared to 60 mm irrigation depth. Irrigation scheduled at 1.00 IW/CPE ratio produced maximum grain yield (75.76 qha^{-1}) but the water use efficiency was found to be significant at 0.50 IW/CPE ratio ($127.11 \text{ kg ha}^{-1} \text{ cm}$) which was at par with irrigation given at critical growth stages ($123.60 \text{ kg ha}^{-1} \text{ cm}$) For obtaining the higher yield and water use efficiency of Summer pearl millet, the application of 40 mm depth of irrigation water at critical growth stages *i.e.* at 15-20, 25-30, 40-45, 50-55, 60-65, 70-75days after sowing was found better for pearl millet crop.

Key words : Irrigation, Scheduling, IW/CPE

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