

PERFORMANCE OF BARLEY AS INFLUENCED BY IRRIGATION SCHEDULING AND CULTIVARS

M.D. Parihar*, Sushil Kumar Singh, Manoj Kumar Sharma and J.M. Sutaliya

Department of Soil Science, College of Agriculture CCSHAU, Hisar, Haryana

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Abstract: A field experiment was conducted during *rabi* 2020-21 at Research farm, Department of Soil Science, Chaudhary Charan Singh Haryana Agricultural University, Hisar, to assess the impact of irrigation scheduling on yield attributes, yield and water productivity of various barley cultivars. The experiment was consisted two barley cultivar viz., BH 393 and BH 75 with four moisture regimes viz., 60, 80, 100 and 120 mm cumulative pan evaporation (CPE) in split plot design. First irrigation was applied at 36 days after sowing (DAS) irrespective of irrigation schedules then subsequent irrigations were applied based on moisture regimes. The results of the experiment revealed that maximum number of effective tillers per metre row length (69.75), seeds per spike (62.53) and higher test weight (36.35 g) & grain yield (45.13 q/ha) was recorded in BH-393 than BH-75 (61.93, 52.25, 36.01 & 38.90, respectively). Among moisture regimes, CPE-60 mm recorded significantly higher number of seeds per spike (61.50), effective tiller per meter row length (69.30), test weight (36.63 g) and grain yield (43.70 q ha⁻¹) as compared to rest of the treatments. Highest irrigation water productivity (3.48 kg m⁻³) and total water productivity (1.87 kg m⁻³) was recorded when irrigation were applied at 80 mm CPE followed by irrigation at 100, 120 and the least with irrigation at 60 mm CPE. Among the cultivars, BH 393 performed better in term of irrigation water productivity (3.29 kg m⁻³) and total water productivity (1.91 kg m⁻³).

Keywords: Barley, Grain yield, Moisture regimes, Cultivar, Water productivity

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*Corresponding Author