

EFFECT OF NON-IRRIGATED WATER STRESS ON PHENOLOGY AND YIELD PERFORMANCE OF WHEAT GENOTYPES (*Triticum aestivum* L.)

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ABSTRACT

To study phenology and yield performance of wheat genotypes under well water and water stress condition the present experiment was conducted in a split-plot design with three replications. Under water stress condition, all the wheat genotypes required more or less short time to attain certain phenological stages compared to well water condition. Water stress leads to a noticeable decrease in different yield components of wheat genotypes. Under well water condition, the highest above ground biological yield and grain yield were found in BAW 1177 (9.43 t ha⁻¹ and 4.20 t ha⁻¹, respectively), whereas the lowest value in that cases were observed in ESWYT 29 (7.81 t ha⁻¹ and 3.20 t ha⁻¹, respectively). Under water stress condition, more reduction in above ground biological yield and grain yield was observed in sensitive genotype ESWYT 29, while less reduction was observed in BAW 1177. Water stress increased the harvest index in BARI Gom 29 but decreased in BARI Gom 28, BAW 1177 and ESWYT 29 compared to well water condition. The order of stress tolerance based on above ground biological yield was BAW 1177 > BARI Gom 28 > BARI Gom 29 > ESWYT 29 and based on grain yield was BAW 1177 > BARI Gom 29 > BARI Gom 28 > ESWYT 29.

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