ORIGINAL ARTICLE

PROLINE AS INDICATOR TO THE SALINITY STRESS ON WHEAT CROP PLANTED UNDER DIFFERENT TYPES OF IRRIGATION WATER

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Abstract: The wheat crop's importance as the first constituent in the food basket has drawn the attention of scholars over time. Increasing grain output by utilising all available resources, including water type, was the goal of this experiment, which was carried out in Thi-Qar, southern Iraq, to examine the reaction of wheat cultivars to three different types of irrigation water. Three tolerant certified wheat cultivars (Aba 99, Buhuth 22, and Tammuz) were treated in an RCBD factorial experiment using three types of irrigation water (Tigris River water, Euphrates River water, and Drainage River water). When compared to other cultivars, the Aba 99 cultivar was the most vulnerable to salinity, with the highest proline concentration (1.657 g g-1 dry weight) and the lowest grain yield (0.229 kg per m2). The drainage water had the highest proline concentration (1.849 g g-1 dry weight) and yielded the least grain.

*Key Words***:** Water, Proline, Wheat, Cultivars, .

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