



**RESEARCH ARTICLE :**

# Water use efficiency, consumptive use and soil moisture extraction pattern of wheat as influenced by irrigation schedules and genotypes

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**SUMMARY :** An investigation was carried out to study the effect of irrigation schedules and wheat (*Triticum aestivum* L.) genotypes on yield, consumptive use of water, soil moisture depletion pattern and water use efficiency at the University of Agricultural Sciences, Dharwad (Karnataka) in the year 2001-02. The design of the experiment was split plot with three replications. The wheat crop irrigated six times ( $I_7$  irrigation schedule) recorded significantly highest grain yield ( $2669 \text{ kg ha}^{-1}$ ) compared to other irrigation schedules. Among the wheat genotypes, DWR-1006 (durum wheat) recorded significantly higher yield ( $2390 \text{ kg ha}^{-1}$ ) as compared to DWR-162 (aestivum wheat). The maximum consumptive use ( $485.5 \text{ mm}$ ) was found with frequently irrigated treatment ( $I_7$ ) while the least consumptive use was registered with  $I_1$  irrigation schedule. Similarly, among the different wheat genotypes, DWR-1006 showed higher consumptive use of water ( $335.1 \text{ mm}$ ). The maximum water use efficiency was found with  $I_2$  irrigation schedule and with DWR-162. Wheat is a surface feeder, the maximum amount of moisture was depleted in shallow depth than deeper layer of soil.

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