

***USING BENCHMARKING PROGRAM (IGRA) IN HUMID AND ARID REGIONS FOR EVALUATING IRRIGATION SYSTEMS PERFORMANCE***

M.A. Aboamera, A.H. Gomaa, W.B. Darwisch,  
Agricultural Engineering, Faculty of Agriculture, Minufiya Univ.,,,

***ABSTRACT:***

Improving the use efficiency of the available water resources for crop production in both humid and arid areas is considered one of the most important factors of irrigation water management. The aim of this study was to apply the Benchmarking IGRA program in both humid and arid areas in order to evaluate the irrigation performance in these areas. The irrigation performance was evaluated in Uelzen- Germany as an example of humid area and the study was carried out through 10 years. Egypt was divided into three zones (Kafer El-Sheikh – El-Giza – Suhag) and was considered as an example of arid region. The maximum output revenue in the humid area per unit irrigated area 2609 \$,-/ha, while the lowest was 1987 \$,-/ha. The highest output revenue per unit irrigated area was in arid region was 740 \$,-/ha observed in Kafer El-Sheikh with traditional irrigation system. While, with the modified surface irrigation system, the highest value was 901 \$,-/ha achieved in El-Giza zone.

***Key words:*** Benchmarking (IGRA) program, irrigation performance evaluation, irrigation water management in humid