Abstract

Irrigation management is among the key factors for the sustainability of irrigated agriculture. In Turkey, irrigation management is becoming increasingly important due to the scarcity of water resources and degrading environmental conditions. In this paper, we compiled a large data set that compromise of water supply, crop types, crop water requirement, and irrigated and command areas that are SHW-operated (State Hydraulic Works) and transferred irrigation schemes (the schemes transferred from SHW to non-profit organizations, i.e., water users' associations) for the five years (1996 to 2000). This data set was used to calculate two irrigation performance indicators: Irrigation ratio (IR) and relative water supply (RWS). ANOVA test results indicated that the differences in the IR and RWS among the years were statistically not significant, whereas a statistically significant difference was found between the SHW-operated and transferred irrigation schemes. The average values of the irrigation ratios for the transferred irrigation schemes were always higher than that of the SHW-operated schemes, but the opposite was true for the RWS. This suggest that the transfer of the SHW-operated schemes to the water use associations must be initiated and encouraged, in addition to the set up of legal procedures for participatory irrigation management, in order to cope with the possible operation and maintenance (O&M) problems of irrigation schemes.