

عنوان مقاله:

(Evaluating Irrigation and Drainage Sub-Network Management (Case Study: Khodaafarin Network

محل انتشار:

مجله بهره وری مصرف آب، دوره 1، شماره 1 (سال: 1399)

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خلاصه مقاله:

The purpose of this study was to determine the quantitative effect of management of public institutions in promoting optimal water consumption and reducing operating and maintenance costs. For this purpose, two farms with of 48 and 49 (ha) area, which cultivated with an approved cultivation pattern (40% autumn + 60% spring) were selected in two separate canals. The selected farms are irrigated by a rotating sprinkler irrigation system (center pivot). The water requirement of the mentioned systems was estimated using Netwat software and the operation of these machines was done in accordance to the relevant instructions and network design principles. The legal organization (Rural Production Cooperative) in charge of the farm #1 (48 ha) complied with the management and technical rules in relation to the second organization (in charge of the farm #2 with 49 ha) with a regular structure. Necessary calculations of irrigation efficiency were carried out according to the values recorded in the input meters of both devices and the cost of operation, maintenance, repairs and protection. Finally, the irrigation efficiency of the first and second farms were obtained 75% and 55%, respectively. Operating and maintenance costs were also reduced by 30%. The results indicated that the human and structural management have an important role in the irrigation and drainage sub-network planning.

کلمات کلیدی:

Irrigation efficiency, Optimal Water Management, Netwat Software, Water productivity

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<https://civilica.com/doc/1134003>



