

## عنوان مقاله:

Determination of optimal and and water allocation under limited water resources using soil water balance in Ordibehesht canal of Doroodzan water district

## محل انتشار:

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## نویسندگان:

Z. Rabie - *Department of Water Engineering, College of Agriculture, Shiraz University, Shiraz, I. R. Iran*

Tooraj Honar - *Department of Water Engineering, College of Agriculture, Shiraz University, Shiraz, I. R. Iran*

M. Mehdi Bateni - *Department of Water Engineering, College of Agriculture, Urmia University, Urmia, I. R. Iran*

## خلاصه مقاله:

ABSTRACT- Inadequate water supply is the major problem for agriculture in arid and semi-arid regions. Thus, effective management should be considered for water resources planning. In this research, a model was provided which is able to estimate optimal land and water allocation in the Doroodzan irrigation network. Optimal water management model was used at farm level to evaluate different deficit irrigation (DI) strategies at various periods of crop growth. Genetic algorithm toolbox by MATLAB (Mathworks, ۲۰۰۹) software was used for benefit optimization considering practical constraints. Results showed that deficit irrigation technique significantly reduced water allocation and increased the crops cultivation area in the region. In addition, increase in water price and the occurrence of drought resulted in cropping pattern change and led to including crops with high economic values. Application of this model ensures the optimal use of available water resources in all conditions, especially under drought condition. The proposed model is capable of defining water management plan with regard to the amount of available water and price of water and .product, for simultaneous optimal land and water allocation

## کلمات کلیدی:

Keywords: Agricultural Water Management, Deficit irrigation, Genetic algorithms, Optimal cropping pattern

## لینک ثابت مقاله در پایگاه سیویلیکا:

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