
The Influence of the Number of Irrigations on Productivity and Water Use Efficiency for Some Crops. /Statistical Case Study in Al-Rastan Area/¹

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Abstract

This research aims to study of the number of irrigations for some crops at Al-Rastan area, because they are considered an important component for any irrigation system proposed and an actual topic subdued to various changes at the study area. The research deals with this matter by the results of a statistical questionnaire that covered /100/ agricultural samples of /263/ ha by which all the necessary research components have been obtained, namely planted areas, irrigation water volumes, irrigations numbers and the productivity of the crops (potatos, sugar beets, wheat, onion, anise and chickpea). The research has provided clear types of the cases of the irrigation process variation for each crop and was connected to three assessment components which are: productivity, the volumes of the complementary irrigation water and the efficiency of using the water in the irrigation. Consequently it was noticed that there are clear types regarding the relationship between the numbers of the irrigations and the previous components for some crops and the same was not noticed for the other crops. This is due to the frequency of irrigation and its compatibility with the critical stages of growth for each crop. It has been dealt with in accordance with the current agricultural case and the arbitrary irrigation at Al-Rastan area. The study pointed out that result by the questionnaire data which amounted to 130 questions on the two main points: 1- Description of the agricultural and irrigation case. 2- The agricultural education and awareness . The results of the research have recommended the number of irrigations for each crop within the conditions of the complementary irrigation to have the best productivity and recommended favorable irrigations numbers to attain a high usage efficiency of the irrigation water in spite of other affecting factors that exist.

¹ For the paper in Arabic see pages (59-71).

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