



*Third National Congress of Recycling and Reuse of Renewable
Organic Resources in Agriculture*

Islamic Azad University, Khorasan Branch (Isfahan)
Agricultural Faculty, Waste and Wastewater Research Center
13-15 May 2008



**Agriculture department of Razavi research and technology
institute of Astan Quds**

H. Feyzi¹ and P. Rezvani Moghaddam²

1. Professor of Agronomy, Faculty of Agriculture, Ferdowsi University of Mashhad

2.

In order to study the effects of irrigation with different levels of urban treated wastewater on grain yield of wheat, barley and triticale, an experiment was conducted at research station of Mazrae – Nemone Astan Quds Razavi, Mashhad, Iran in years 1999-2000. Three crops (wheat, barley and triticale) with three levels of treated wastewater: %0, %50 and %100 were compared in a factorial experiment based on a completely randomized block design with three replications per treatment. Percentage of plant establishment, grain yield, straw yield, grain weight per ear, number of kernel per ear, harvest index and crude protein content of the studied crops were recorded. Results showed that treated wastewater irrigation had significant effect on grain yield and straw yield, yield components. Grain yield increased in 50% and 100% treated wastewater in all three studied crops comparing with 0% treated wastewater, but there was no significant difference between 50% and 100% treated wastewater in terms of grain yield. The highest straw yield was obtained in triticale crop. Crude protein content of the grains decreased by increasing the proportion of the treated wastewater irrigation in all three studied crops. Our results indicated that the 50% treated wastewater irrigation treatment was the best proportion for grain production on three studied crops. At the present study any heavy metals (Pb, and Cd) pollution in the soil was not noticed.

Keywords: Wheat, Barley, Triticale, Treated wastewater, Grain yield

¹ Corresponding author

Email: hasanfeizi@yahoo.com