

Effects of treated wastewater and foliar application of complete fertilizer on forage quantity and quality of millet (*Setaria ittica*)

Abstract:

In order to study effects of treated wastewater and foliar application of complete fertilizer on forage quantitative and qualitative characteristic of millet (*Setaria ittica*) A split plot experiment based on randomized complete block design (R.C.B design) with three replication was conducted at the Agriculture Institute of Zabol University in year 2009. Treatments included three irrigation levels: tap water for all growing stages (Control), wastewater and tapwater alternately, wastewater for all growing stages, as main plot and three levels of foliar application with complete fertilizer (NATBA-LIB): no foliar application (control), foliar application with 600 gram in each hectar, foliar application with 1200 gram in each hectar, as sub plot. Results showed that the irrigation with wastewater and foliar application with complete fertilizer lead to increase yield and yield component and forage quality. Furthermore, According to Duncan test ($p \leq 0.05$) for comparing means, Result showed that irrigation with wastewater and foliar application with complete fertilizer lead to significant increase ($p \leq 0.05$) in forage quality properties such as: WSC, CP, EE, OM, DM, ASH and decrease significant NDF, ADF, ADL and CF. Treatment of treated wastewater for all growing stages had a positive and significant influence on all quality and quantity characteristics (unlike EE) in comparison with Control and wastewater and tapwater alternately. The treats of irrigation with wastewater and tapwater alternately had maximum of EE. In this study, result showed that does irrigate millet with wastewater for all growing stages and foliar application with 1200 gram of hectar with complete fertilizer cause significance increase of the forage quantitative and qualitative characteristic of millet.

Key words: Foliar application, Forage quantity, Forage quality, Millet (*Setaria ittica*), Treated wastewater.



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