

Abstract:

In recent decades, the use of exotic water in agricultural areas, is considered as one of the best models of management. One of the exotic water, is saline and brackish water. Currently, several methods are considered for the use of saline water in irrigation. Conjunction both saline and non-saline water means constant using of salty and fresh water, that it causes a reduction of salt density in irrigation water. A lot of researches presented, the best way in using conjunctional of saltwater and non-saline, mixing saltwater and freshwater before watering or periodical usage of saltwater and non-saline. The present study aimed to compare existing approaches and propose a new approach on how to conjunct saline and non-saline water. Forage sorghum plants were grown in field conditions. Treatments consisted of; control treatment (100% sweet), treated with two-thirds of salty, treated with one-second of salty, the alternate time, the mixed and one hundred percent saline treatment. Finally, the biological parameters of the plant and salinity changes in the soil profile, were analyzed. The results showed; one-third treatment revealed the best performance in terms of agronomy measures and abandonment of salt in the soil profile. Also, one-half and two-third treatments showed an acceptable performance. It seems this kind of salt and fresh water conjunction, in any way, has a high efficosrey in decrease of salt stress on plant and abandonment of salt in soil profile.

Keywords: Salinity - Conjunction Irrigation - Management of Saline Water -Sorghum Yield



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