

GROWTH, FODDER, GRAIN YIELD AND CHEMICAL COMPONENTS OF SOME SORGHUM MUTANT LINES AS AFFECTED BY IRRIGATION INTERVALS

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ABSTRACT

Two field experiments were carried out at Maryout Agricultural Experimental Farm of the Desert Research Center, during 1991 and 1992 growing seasons to study the effect of three irrigation intervals, i.e. 10, 20 and 30 days on growth characters, forage yield of two cuts, grain yield and chemical components of some sorghum mutant lines which induced by gamma rays and Ethylamin. The results obtained revealed that extending irrigation intervals from 10 to 30 days caused significant depression in all characters studied except the leaves/stems ratio. In addition, extending irrigation interval from 10 to 30 day, significantly decreased the mean values of protein, total carbohydrates, fibers and ash percentages in leaves and fibres and ash percentages of stem in the first and second cuts. However, the reverse was true for protein and total carbohydrates in stem and proline percentages in leaves in the first and second cuts. Mutant lines No. 32 and 26 were considered the best lines to be cultivated under low stress soil moisture, while mutant lines No. 15 was the best mutant line under soil moisture stress for forage yield under Maryout conditions, i.e. that characterized by calcareous soil.