

EVALUATION OF SOME SORGHUM MUTANT LINES UNDER CALCAREOUS SOIL CONDITION

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ABSTRACT

Forty eight sorghum mutant lines were obtained from the third radiation generation (M₃) after gamma irradiation treatment and ethylamine on Sorghum bicolor cultivar Giza-1. These mutant lines were evaluated as well as the parental cultivar Giza-1 (in M₄) generate (1990) to choose the best mutant lines for dry forage and grain yield. The results obtained revealed that considerable variation existed among genotypes for all the studied traits. The mutant lines No. 2, 15, 17, 21, 26, 28, 32 and 43 considered the best mutant for the fodder and grain yield.

INTRODUCTION

In Egypt, there is acute deficit in forage production during the summer season. Sorghum forage crops find acceptance to meet animals feeding needs during the summer season. Therefore, increasing the yield per unit area and improving the feeding value for this crop is of great importance. This aim can be achieved by proper choice of high yield mutant line. Forage crop breeders were almost looking for distinct variability in their genetic stocks in order to improve forage yield and related variables in the new released mutant lines.

The purpose of the present work was to study the performance of some new mutant types of sorghum, as regard to the forage and grain yield of their active constituents in comparison as well as the local cultivar under calcareous soil.