

INDUCING TWO NEW GENOTYPES OF SESAME BY USING NUCLEAR TECHNIQUE

By

Khudhiar Mohammed Wohyaib

Ministry of Science and Technology , Agricultural research office plant breeding center . p.o.box
765Baghdad – Iraq

ABSTRACT

Because of large demand to produce new varieties of sesame and increasing of consumption in nutrition and other uses . Inducing of new genotypes was been started by exposing seeds to Gamma rays (Co^{60}) with 400 gray . Number of variants were selected from M_2 plants irradiated by 400 gray of Gamma rays Co^{60} . Selection and screening for morphological and economical traits were continued to M_8 generation . The traits that were studied : earliness , yield and yield components . Seven mutant were planted in a field trial for comparison with the control and the local variety Sumer. Randomized complete block design (RCBD) in three replications were used. The results showed the tow genotype increased significantly in yield compared with the control and Sumer variety. The yield of the tow genotypes was 448 and 404 kg/ donem, while the yield of the control and Summer variety was 255 and 378 kg / donem, respectively.

Key words: Sesame Genotypes, Gamma Rye, Nuclear Techniques.