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Variation of Certain Characters and Line Selection for Yield, Oil, Oleic and Linoleic Acids in the Turkish Sesame (Sesamum indicum L.) Populations

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Abstract: The goal of this study was to determine the variation of certain characters in the 72 local sesame populations, which were collected from different sites of Turkey, and develope superior lines with high seed yield, high oil, high oleic and high linoleic acid content via pure line selection. A great deal of variation for the characters examined was found among the populations. 8 out of 72 sesame populations were determined as superior for the characters of seed yield, oil, oleic acid and linoleic acid contents in 1993. 800 single plants for the characters mentioned above were sampled within the superior populations in 1994. 160 lines selected from the 800 single plants were grown in 1995. Total of 16 superior lines selected from the 160 lines were planted along with the control variety `Muganly-57' in randomized complate block design with 4 replication in 1996. `TR 3821560' and `TR 3821593' lines which had 16.9% and 15.9% higher seed yield than the control variety were developed as superior for high yield and `TSP 933749' line with 63.25% oil content was developed as superior for high oil content. `TSP 933229' and `TR 3821512' lines which had oleic acid over 45% and `TSP 932410' and `TSP 932403' lines which had linoleic acid over 45% were determined as high oleic and linoleic acid type lines, respectively.

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