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Genetic Basis of Variation in Linseed (Linum usitatissimumL.) Cultivars

Orhan KURT

University of Ondokuz Mayıs, Faculty of Agriculture, Department of Agronomy, Samsun-TURKEY
G. M. EVANS

University of Wales, Department of Agricultural Sciences, Aberystwyth-UK

Abstract: This investigation was conducted at the University of wales in 1991-1994. The work described in this paper concerned with the genetic basis of variation in important characters of linseed (Linum usitatissimum L.) A 8x8 full diallel cross including reciprocals was carried out using the cultivars Linda, Lidgate, Cristal, Antares, Barbara, Blue-Chip, Norman and McGregor and eight characters, namely, days to flowering, plant height, number of basal branches per plant, number of seeds per capsule, 1000-seed weight, seed yield per plant, total plant weight and harvest index investigated. The results were subjected to several standard systems of analysis (1, 2, 3, 4) designed to separate additive, dominance and epistatic effects. The extensive genetic variability detected for most characters was due to additive gene action rather than dominant effects. As a consequence none of the parental cultivars were consistently high in general combining ability for all eight traits. So that, due to lack of several complementary gen action, a high variation in the future generations can not be expected.

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