

ارزیابی عملکرد و اجزای عملکرد ژنوتیپ‌های برتر کلزای پاییزه در کشت‌های به هنگام و دیر هنگام

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Evaluation of Yield and its Components of Superior Winter Oilseed Rape Genotypes under Normal and Late Planting Dates

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Abstract

Oilseed rape plants having 6-8 leaves, 8 millimeter of rosette diameter and 1.5 gram of plant dry weight, show better tolerance against winter cold. The effects of planting date on winter survival and seed and oil yield of oilseed rape, are very important. The purposes of this study were to determine suitable plant phenotype for better cold tolerance at winter and evaluate oil and seed yield and its components in superior winter oilseed rape genotypes. The experiment was conducted as factorial based on randomized complete block design with three replications. Factors were 1) planting date including normal (6 sept) and late (26 sept) planting dates and 2) genotype including six superior winter oilseed rape genotypes. The experiment was carried out in Agricultural Research and Natural Resources Center of East Azarbaijan (46°E and 2"E, 37° and 58" N) during 2003-4. The results indicated that the genotypes at the planting date of 26 sept had lesser leaves, rosette diameter and dry weight as compared with the planting date of 6 sept, when the mean air temperature reached below oilseed rape base temperature (5°C). The value of these characters at late planting were 3.8, 3.7mm and 0.58g, respectively, and at normal planting were 7, 5.9 mm and 2.4g, respectively. As the genotypes at late planting date did not have suitable rosette form during winter, indicated the frost damage was 19.7% compared with the normal planting date having the frost mortality of 8.4%. Grain and oil yield of genotypes in the late planting date (3775.5 and 1733.2 kg/ha seed and oil yield, respectively) were less than that of the normal planting date (4432.2 and 2058.3 kg/ha seed and oil yield, respectively) due to more cold stress condition. It seems that the genotypes under investigation, specially SLM046 and Okapi are suitable for winter planting in the studied area. Leaf number, rosette diameter and dry weight of oilseed rape plants, measured when the mean air temperature reaches below the base temperature, can be used to select for cold tolerant oilseed rape genotypes and determine suitable planting date.

Keywords : Cold stress, Oilseed rape, Planting date

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(*Brassica napus*)

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