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Comparison of yield of Triticale genotypes in South Khorasan of Iran

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In this experiment, seven promising lines of the order include ET-85-4, ET-85-14, ET-85-15, ET-85-17, ET-84-17, ET-82-15 and ET-83-18. Which had shown their superiority during different experiments of previous research, compared to the control of Juanillo-92 in a randomized complete block design, with three replications in two regions of South Khorasan province. Traits such as number of days to spike emergence, number of days to physiological maturity, spike length, plant height, 1000-seed weight, peduncle length and grain yield were measured. Analysis of variance was performed using SAS software and mean comparison was performed based on Duncan's multiple range test. The results showed that the effect of genotype was significant on number of days to spike (at 1% level), number of days to physiological maturity and spike length (at 5% level) but had no significant effect on other traits. The two lines ET-82-15 and ET-85-17 had the highest spike length with averages of 12.48 and 12.43 cm, respectively, and ET-85-14 lines had the lowest spike length with an average of 11.30. Although no significant difference of grain yield was observed between the studied lines, but nevertheless, ET-83-18 line with an average yield of 6.29 tons/ha had the highest yield of 6.04%. The yield of Juanillo-92 cultivar was higher with an average yield of 5.91 tons/ha. The lowest grain yield with an average of 5.76 tons/ha was related to the ET-85-15 line. Therefore, ET-83-18 line is recommended in Birjand and similar areas and can replace with Juanillo-92 cultivar in these areas.

Keywords: Triticale, Farmers condition, Promising line, Yield.

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