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EVALUATION OF SOME BARELY MUTANT LINES IN KUWAIT

Mutant barley genotypes that have evolved under stress conditions using the improved genetic resources have the desired morphological, physiological and agronomic traits. The Kuwait Institute for Scientific Research (KISR) initiated this study in collaboration with the International Atomic Energy Agency (IAEA) to test the growth performance of barley mutant varieties by adopting suitable agronomic practices. The response of the mutant barley variety (Golden Promise) along with five barley genotypes of Kuwait (Kuwait 1, 2, 3, 4 and 5) under Kuwait's environmental conditions was investigated. The experiment was carried out in completely randomized block design (CRBD) with three replications. All the recommended cultural practices were adopted. Plants were harvested in different stages, after two months of plantation and at maturity. Data was collected on parameters including germination percentage, number of days to heading and to maturity, number of spikes/m², kernels/spike, plant height, 1000 kernel weight, and grain yield (t/ha). Data was statistically analysed using statistical software. The results showed significant differences among cultivars for all the targeted characters. The cultivar Kuwait 2 recorded the highest plant height (111.2 cm). Regarding the number of tillers per plant, Kuwait 6 recorded the highest value (29.79) ari-e156 recorded the lowest number of tillers. It was also shown that Kuwait 4 was the earliest genotype in heading while, ari-e 1 was the earliest genotype to get to maturity. The cultivar Kuwait 3 recorded the highest biological yield per plant (91.52) while, Kuwait 6 recorded the highest grain yield (29.54) The heaviest grain was obtained from Kuwait 2 (5.37g). The Maythorpe variety obtained the highest harvest index (41.05%). The findings showed potentiality to grow mutant barley genotypes for good yield production under Kuwait harsh condition.

Country or International Organization

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