

THÈME 02 : Production végétale et phytopathologie.

Titre de la présentation affichée :

Screening drought tolerant and sensitive bread wheat (*Triticum aestivum*) genotypes using stress tolerance index

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Résumé

This study was carried out at the national agronomic research institute of Algeria, research unit of Setif, during the 2022 year with the aim of identifying drought tolerant and sensitive bread wheat genotypes using polyethylene glycol (PEG 6000) at different stress levels (0 and 15 %) at the seedling growth. The total plant fresh biomass (TPFB) of wheat genotypes varied from 101.63 mg in “ G7” to “213.50 mg in “G28” under non stress environment, while mean total plant fresh biomass of genotypes under 15 % PEG 6000 drought stress ranged from 53.50 mg in “G3” to 136.23 mg in breeding line “L21” . the total plant fresh biomass produced in the absence of stress (Y_p) and that in its presence (Y_s) were not correlated to each other , suggesting that the performant genotypes under stress were not necessarily so under non-stressful conditions. Stress tolerance index (STI) based on total plant fresh biomass (TPFB) in normal (Y_p) and drought stress (Y_s) conditions was evaluated , accordingly, the STI classed “G 21”, “G 28” and “G13” as highly tolerant genotypes , and “G1”, “G3” and “G30” as sensitive cultivars . Furthermore, significant positive correlation between the STI and both Y_p and Y_s has been reported, Hence, the measurement of STI parameter may be used as an important scale for selecting drought tolerant wheat genotypes.

Mots-clés : Bread wheat ; Polyéthylène glycol ; stres ; biomass ; seedling growths tolerance index ;