

Role of Phenylalanine and Glycine in Plant Signaling to Improve Drought Tolerance Potential in Wheat

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Abstract : The priming of seeds was carried out by two amino acids (phenylalanine and glycine) to improve the drought tolerance potential of two wheat varieties. As wheat is a staple food of more than half of the population of the world, including Pakistan. However, its productivity is mainly adversely affected by abiotic stresses. The current research plan was to investigate the effect of hydropriming and priming by amino acids on wheat varieties under drought stress (50% field capacity). Therefore morphological, biochemical, physiological, and yield attributes were recorded. It was revealed that drought stress significantly decreased the biochemical, morpho-physiological, and growth attributes of the wheat crop. However, the priming treatments have shown a positive correlation with all the studied attributes. It was concluded that priming might involve plant signaling to produce the drought tolerance metabolites under stress conditions which, as a consequence, enhanced the drought tolerance potential of crops.

Keywords : plant biomass, biochemical parameters, chlorophyll contents, yield

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