

The Role of Absciscic Acid in the Response of Two Different Wheat Varieties to Water Deficit

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The changes in plant growth, transpiration rate, photosynthetic activity, plant pigments, electrolyte leakage, H_2O_2 content, lipid peroxidation, catalase activity and endogenous content of abscisic acid (ABA) were followed in the leaves of two wheat varieties (sakha 93 and 94) during drought stress and subsequent rehydration. Drought stress caused several inhibitory changes in the growth of both wheat varieties, particularly in sakha 94. Exogenous ABA treatment improved the growth of sakha 93 plants as indicated by a higher relative water content, transpiration rate and lower electrolyte leakage and also enhanced the growth during the recovery period. Such improvement may be the result of the induction of enzymatic (catalase) and non-enzymatic (carotenoid) systems. ABA treatment did not ameliorate the negative effect of drought on the growth of sakha 94.

Key words: Absciscic Acid, Relative Water Content, Drought Stress