EFFECT OF SALINITY X HYPOXIA ON SOME PHYSIOLOGICAL PARAMETERS OF TWO WHEAT CULTIVARS

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ABSTRACT

Salinity and waterlogging are serious threats to the agriculture of Pakistan. Wheat being an upland crop is affected to a great level by waterlogging particularly when coupled with salinity. A hydroponic culture study was conducted to compare two wheat cultivars (Blue Silver and 7-Cerros) for their physiological characters under saline and hypoxic conditions. CO_2 assimilation rate decreased with the imposition of salinity and hypoxia and their combination. Blue Silver showed more CO_2 assimilation rate than 7-Cerros under stress conditions. Transpiration rate decreased with hypoxia indicating less availability of water but salinity showed no response and cultivars also showed similar response under all treatments. Stomatal conductance decreased with the imposition of either hypoxia or salinity and Blue Silver had higher stomatal conductance than 7-Cerros. Concentration of CO_2 in the sub-stomatal cavity decreased with salinity but hypoxia did not cause any change.