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THE RELATIONSHIP BETWEEN ENHANCED CHILLING RESISTANCE IN MAIZE PRE-TREATED WITH SOLUBLE SEAWEED EXTRACT POWDER AND OXIDATIVE STRESS

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The effects of seaweed extract application on plant development, metabolism and physiology are quite diverse, as is the range of potential compounds known to be present in seaweed extract formulations. Three week old maize pre-treated with soluble seaweed extract powder (SSEP) demonstrated enhanced chilling resistance as compared with untreated controls as measured by chlorophyll fluorescence (F_v/F_m). Declines in photochemical efficiency (F_v/F_m) have been associated with increased production of active oxygen species (AOS) through the process of photo-oxidation. The results of SSEP application on AOS production, antioxidant capacity and oxidative damage (malondialdehyde) will be presented.