

Pre-soaking in 24-epibrassinolide or salicylic acid improves seed germination, seedling growth, and anti-oxidant capacity in *Phaseolus*



was recorded at 625 nm using a Bausch and Lomb-2000 Spectronic Spectrophotometer (Thermo Spectronic, Mercers Row, Cambridge, UK).

*Determination of the extent of lipid peroxidation, and ascorbic acid and glutathione concentrations*

Lipid peroxidation was measured in terms of malondialdehyde (MDA) concentrations according to Hodges



oxidant molecules such as GSH, proline, AsA, and tocopherols (Schutzendubel and Polle, 2002).

In the present study, exposure of bean seedlings to 100 mM NaCl elevated the activities of all three anti-oxidant enzymes as well as the concentrations of AsA, GSH, and osmoprotectants such as proline and sugars. However, pre-soaking seeds in EBL or SA and growing the seedlings in the absence or presence of NaCl also enhanced the activities of all three anti-oxidant enzymes, and the concentrations of non-enzymatic anti-oxidants



