

**Osmotic stress and specific ion toxicity effects on seed germination and early seedling growth of eggplant (*Solanum melongena* L. cv. MTe 2) incurred by various salts**

**ABSTRACT**

Eggplant is an important crop but no study has been done regarding salt tolerance of eggplant (*Solanum melongena* L. cv MTe 2). Thus, the present work aimed to compare the effects of types and concentrations of salt solutions on seed germination and early seedling growth of MTe 2 eggplant. Ten sterilized MTe 2 eggplant seeds were treated with different concentrations (10, 25, 50, 100, 150, 200 mM) of NaCl, KCl, MgCl<sub>2</sub> and MgSO<sub>4</sub> in Petri dish with deionized water as control. The germination and seedling growth were significantly reduced as concentration of salt increased in NaCl and KCl. The germination performance and seedling growth were enhanced in 25 mM KCl. The seeds were unable to germinate even at the lowest concentration of MgCl<sub>2</sub> and MgSO<sub>4</sub>. Recovery test revealed that while NaCl and KCl imposed an osmotic stress and induced seed dormancy, MgCl<sub>2</sub> and MgSO<sub>4</sub> imposed a specific ion toxicity.

**Keyword:** Eggplant; Seed germination; Different salts; Osmotic stress; Specific ion toxicity