

Effect Of Magnetic Field On Seed Germination And Transplant Growth Of Tomato

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ABSTRACT: Tomato (*Lycopersicon esculentum* Mill) cv. Castrock seeds were exposed to different magnetic strengths (0.1, 0.15 and 0.2 Tesla) for periods of 1, 5, 10 and 15 minutes and the treated seeds were germinated under distilled water or in saline concentration levels of 2500, 5000 and 7500 ppm. The results indicated that the magnetic field treatments led to a significant increase in the germination percentage, reduced the time needed for germination and improved seed germination under saline conditions. The best results were found by magnetic seed treatment with 0.1 Tesla for 15 min. On the contrary, high salinity concentrations decreased the germination of seeds, as for the saline concentration of the 2500 ppm activated the seed germination. In the nursery experiment, applying the optimal magnetic seed treatment (0.1 T for 15 min) and/or irrigation with magnetized water gave significant increases in transplant stem length, stem diameter, leaf area and fresh and dry weight than those in the control treatment which grew by untreated seeds and irrigated by ordinary (untreated water) water.

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