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Effects of different priming treatments and priming durations on germination percentage of parsley (*Petroselinum crispum* L.) seeds

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ABSTRACT

The effects of different priming treatments and priming durations on germination percentage at different temperatures in parsley seeds were studied. The seeds were treated for 2, 4, 6 and 8 days with the PEG 6000 (– 0.5 MPa, – 1.0 MPa and – 1.5 MPa), KNO₃ (0.30 mol/L and 0.35 mol/L), Mannitol (0.50 mol/L and 0.60 mol/L) and hydropriming (12h, 24h, 36h and 48h) and unprimed (control). Germination studies were made at 5, 10, 15, 20 and 25° C. Percentage of germination at different temperatures was significantly affected by priming treatments. Hydropriming (12h, 24h and 36 h) and mannitol 0.60 mol/L at 2 day generally had the highest germination percentages. In general, the highest germination percentage with priming was determined at 10° C. It may be said that seed priming treatments increased seed germination percentage at both low and high temperatures. The highest germination percentages were observed in both hydropriming and mannitol treatments as compared with PEG and KNO₃ treatments. The PEG and KNO₃ (2 and 4 days) treatments were better than unprimed treatment in all of the temperatures.

KEYWORDS

Parsley; Germination Percentage; Seed Priming; PEG; KNO₃; Hydropriming

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