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The effect of cryopreservation on germination of dandelion seeds

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Germination experiments frequently use seeds that had been stored frozen. We investigated whether short, 5 day freezing changes percentage and rate of germination of seeds of dandelion (*Taraxacum officinale* agg.). Seeds (i) collected at dispersal, (ii) dried at +50°C for 5 days, (iii) frozen at -20°C for 5 days, (iv) dried for 5 days and subsequently frozen for 5 days, and (v) frozen and subsequently dried, were then germinated at +10°C and a long-day photoperiod. None of the temperature pre-treatments affected the proportion of germinating seeds. By contrast, the time to germinate 50% of the seed (germination time) was shortened slightly (0.7 days) but significantly following the freezing treatment, regardless of whether it was applied without, before or after drying of the seed. Cryopreservation is therefore a convenient method of seed storage for comparative studies of seed germination because it causes no change in germination percentage and only a small and systematic change in germination rate.

Keywords:dandelion; *Taraxacum officinale*; weed; seed; freezing; drying; germination; storage[download PDF](#)

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