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
of

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**Desiccation Using Saturated Salt Solutions and Improvement Germination
Rate of Walnut (*Juglans regia* L.) Somatic Embryos**

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Abstract: Desiccation of somatic embryos under different air humidities conditioned by saturated salt solutions for different durations; relationships between desiccation and germination or root formation in the dark; and effects of desiccation and gibberellic acid on germinating of 'Su-2' walnut somatic embryonic embryo line were investigated. Survival of embryos was low (about 10%) or zero when loss of fresh weight was about 90% and dry matter was about 70%. The highest germinating percentages (13.3-23.3%) were obtained with about 40.4-77.3% of loss of fresh weight and 9.1-34.6% of dry matter of desiccated embryos in covered plates over saturated $MgCl_2 \cdot 6H_2O$ for 4 days, $Mg(NO_3)_2 \cdot 6H_2O$ for 5 days or $NaCl$ for 5-6 days, and with uncovered plates over $ZnSO_4 \cdot 7H_2O$ for 6-7 days or NH_3SO_4 for 6-8 days. The highest rooting percentage (80.9%) in the dark were obtained with 56.2% of loss of fresh weight and 16.8% of dry matter of desiccated embryos in covered plates over saturated $MgCl_2 \cdot 6H_2O$ for 4 days. To improve germination, both desiccation and GA 3 treatments were more effective than only desiccation or GA 3 treatments on germination. Germinating was best (46.0%) with desiccation followed by incubation in the dark for 15 days prior to being transferred to a medium containing 9 mg/l GA 3 in the light.

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