Clonal Propagation Of Hybrid Sweetgum (*L. Styraciflua* X *L. Formosana*) Via Somatic Embryogenesis

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Cultures were initiated from immature seeds derived from controlled pollinations between two sweetgum species (*Liquidambar styraciflua* and *Liquidambar formosana*) by culturing the seeds on two induction media supplemented with 2,4-D. Repetitive embryogenic cultures where obtained, from which somatic embryos were selected and converted into somatic seedlings. Of the 1020 seeds cultured, representing 9 crosses between *L. styraciflua* and *L. formosana*, 2% produced repetitively embryogenic cultures capable of producing somatic seedlings. Hybrid genotypes of somatic seedlings were confirmed by RAPD analysis and leaf morphology observations. Stomatal analysis performed on leaves from hybrid somatic seedlings and parental species revealed differences in stomate size and number per unit leaf area. A protocol for cryopreservation of the hybrid cultures gave rates of regrowth near 100% for all samples. Cryopreservation will allow the long-term storage of viable embryogenic cultures while hybrid trees are field tested for identification of superior genotypes. Somatic embryogenesis appears to be a feasible approach for mass clonal propagation of hybrid sweetgum.

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