

## **Somatic embryogenesis in sugarcane cv. RB966928**

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Drought is one of the most important abiotic stress limiting plant growth and productivity. The drought stress triggers an array of physiological and biochemical responses, such as stomatal closure, decreasing photosynthesis and transpiration. Therefore, studies focusing on the development of drought tolerant genotypes should be intensified. Plant genetic transformation with genes related to drought tolerance is an important tool to generate more adapted plants. In sugarcane, genetic transformation is a genotype dependent, therefore, protocols should be developed for each cultivar studied. Based on previous studies, the objective of this study was to evaluate the effect of two selected concentrations of 2,4-D (9 and 16  $\mu\text{M}$ ) in explants of sugarcane cv. RB966928. Immature leaf tips (8 mm in diameter) were hand cut into thin sections of 3-4 mm in length and used as source of plant material. Explants were kept in MSC2 medium supplemented with 9  $\mu\text{M}$  of 2,4-D for 30 days in the dark ( $25\pm 2$  °C). The first evaluation for embryogenic tissue formation was conducted and 37% of the explants showed embryogenic tissue formation. The explants were transferred to MSC2 supplemented with either 9  $\mu\text{M}$  or 16  $\mu\text{M}$  of 2,4-D. After 10 days, a second evaluation was conducted and the percentage of embryogenic tissue increased to 40% and 60% in the 9 and 16  $\mu\text{M}$  2,4-D treatment, respectively. The results indicate that this protocol with high frequency of embryogenic tissue formation could be useful for further studies on sugarcane micropropagation and genetic transformation.

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