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Effects of Genotype and Concentration of 2,4-D on Callus Induction and Plant Regeneration from Young inflorescences of Dallisgrass (Paspalum dilatatum Poir)

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Abstract: This study was conducted to determine the effects of genotype and 2,4-D concentrations on the callus induction and plant regeneration from young inflorescences of dallisgrass (Paspalum dilatatumPoir). Segments of young inflorescences from six different ecotypes of dallisgrass were cultured on MS-medium containing different con-centrations of 2,4-D (2, 4, 6, 8 and 10 mg/l). The results of the study showed that the ecotypes were significantly different in cal-lus induction ratio, callus weight per petri dish and plant regeneration from the young inflorescences. With respect to the ecotypes, callus induction ratio varied from 17.5 % to 65 %, callus weight from 75.25 to 365.1 mg/petri dish and number of regenerates per inflorescence segment from 0.775 to 1.612. The callus induction ratio, callus weight and regeneration ratio were also significantly influenced by the 2,4-D concentrations. The segments cultured on the MS medium containing 6 mg/l of 2,4-D gave the high-est values of callus induction ratio (74 %), callus weight (369.3 mg/petri dish) and regeneration ratio (2.094 regenerates per seg-ment).

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