

EFFECT OF GENOTYPE, PRE COLD TREATMENT AND MEDIA ON ANDROGENESIS OF RICE (*ORYZA SATIVA L.*)

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ABSTRACT

In vitro production of double haploid plants through anther culture technique is an important tool for rapid production of new rice varieties. 8F1, 1F2 and 1 F3 genotypes of rice were studied for the effect of genotype, media and cold pre treatment on androgenesis. The panicles were pre cold treated at 9°C and later anthers were inoculated in N6 basal medium containing 1mg/L 2,4-Dichlorophenoxy acetic acid, 1mg/L Naphthalene acetic acid(P2) and 1mg/L 2,4-Dichlorophenoxy acetic acid, 1mg/L Naphthalene acetic acid and 0.5mg/L kinetin(P9). The callus developed was transferred to MS medium with 2.0 mg/L Kinetin+0.5mg/L Naphthalene acetic acid for regeneration. Genotype NPF1-407 showed maximum callus frequency in P9 medium and in 10 days cold treatment. Highest plant frequency of 100% was observed in NPF1-403 genotype and in 11 Days cold treatment. Thus showing that 11 Days cold pre treatment in P9 medium showed maximum plant frequency, based on total number of plants produced for total anthers inoculated showed better response in P9 medium 10 days cold treatment.

KEYWORDS: Androgenesis, Anther Culture, Callus, Double Haploid, Flow Cytometry, Pre Cold Treatment

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