SOMATIC EMBRYOGENESIS FROM BROCCOLI STIGMAS IN TISSUE CULTURE

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Received June 1, 2006; revision accepted September 5, 2006

The factors regulating callus proliferation and bud regeneration from stigma tissues are not sufficiently understood. To study the regenerative capacity of pistil elements, pistil of broccoli was cultured. Under simple culture conditions, stigmas with style from broccoli pistils undergo somatic embryogenesis on Murashige and Skoog basal medium. Callus initiation occurred on basal medium supplemented with BAP 4 mg· l^{-1}, 2,4–D 1.6 mg· l^{-1}, casein hydrolysate 250 mg· l^{-1} and sucrose 30 g· l^{-1}. Proembryo induction was observed after two callus subcultures. Calluses with globular embryos were cultured on basal medium with BAP 2 mg· l^{-1}, IAA 1 mg · l^{-1} and sucrose 40 g· l^{-1} for development, maturation and germination of somatic embryos. A population of somatic embryos was maintained on medium containing BAP 1 mg · l^{-1} and NAA 2 mg · l^{-1} only. Adding NAA to the basal medium containing BAP considerably enhanced root formation. After acclimatization, all plantlets developed well and produced phenotypically normal flowers.

Key words: *Brassica oleracea* L. var. *italica* subvar. Cymosa, plant regeneration, stigma culture, somatic embryogenesis.