P 27 Transformation of Watermelon Stock with *CP* (coat protein) Gene of CGMMV

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Objectives

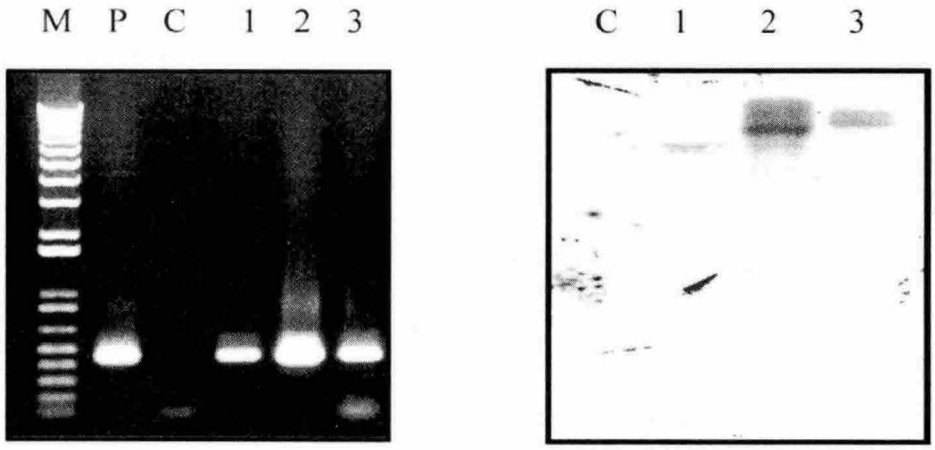
Watermelon stock, popularly using for grafting the commercially important watermelon varieties to avoid the virus infection from soil, is the best candidate to soften the controversial issues regarding GMO as the stock is the one only transformed and the harvesting watermelon is not. Therefore, we have set out a project to develop a CGMMV-resistant watermelon stock and to control the heavy loss of the total yield of watermelon by CGMMV infection.

Materials and Methods

Cotyledons of the watermelon stock (Twinser, called gongdae) were inoculated with *Agrobacterium* strain LBA4404 harboring CGMMV *CP* gene and cultured with kanamycin selection (500 mg/L). MS medium was supplemented with BA (2.0 mg/L) and acetosyringon (50 μM) for the shooting medium.

Results and Discussion

We have obtained transformed watermelon gongdae with 0.03% transformation efficiency and this is the first report of the successful transformation of the watermelon stock with a viral gene.



PCR analysis　　Genomic Southern analysis (EcoR1)

M: marker; P: pCGMMV-CP; C: non-transformed; 1, 2, 3: transformed.
The band size for each lane 1, 2 and 3 are 4 kb, 6 kb and 8 kb, respectively.

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