

P 18 Transgenic Watermelon Stock Resistant to CGMMV Infection

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Objectives

Previously we obtained several transgenic watermelon stocks (gongdae) that contained a cDNA

encoding the coat protein of CGMMV (cucumber green mottle mosaic virus). Recently we

have tested levels of resistance of those watermelon stocks against CGMMV infection.

Materials and Methods

1. Materials: One month old plants (T1)
2. Methods: Infection was conducted by inoculating the CGMMV on the leaf surface with brush; 10 days after the first inoculation, the leaves were exposed to the second inoculation.

Results and Discussion

A total of 30 plants (T1) were exposed to the CGMMV infection. After the Elisa test at twice, we found that six plants were completely resistant to virus infection. This is the first report that by genetic engineering a cucurbitaceae crop resistant to CGMMV infection is ever developed. Watermelon stock, popularly using for grafting the commercially important watermelon varieties, is the best candidate to soften the controversial issues of GM crop because the stock is the GMO but the harvesting watermelon is not.

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Resistant



Susceptible