

P 55 Cultivar Variability in the *Agrobacterium*-Chinese Cabbage Cell Interaction and Plant Regeneration

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Objectives

Here we describe a reliable method for the introduction of foreign gene into three Korean cultivars of Chinese cabbage and compare the *Agrobacterium* susceptibility and regeneration efficiency.

Materials and Methods

1. Plant Materials: Three commercial F₁ hybrid cultivars of Chinese cabbage (*Brassica campestris* L. ssp. *pekinensis*), namely Jangwon, Pupbaechoo and Seoul (Novartis-Korea Seed Co.) were tested.
2. Methods: Transformation was performed with the binary vector pCAMBIA1301 (CAMBIA, <http://www.cambia.org.au>); GUS assay.

Results and Discussion

Three cultivars of Chinese cabbage were tested for plant regeneration from the hypocotyls and cotyledons and examined for their response to *Agrobacterium tumefaciens* LBA4404, carrying a plasmid pTOK233, harboring genes for hygromycin resistance (*hpt*) and glucuronidase (*gus*). Plant regeneration was considerably increased in most of the cultivar Seoul. Expression of GUS was detected in all of the co-cultivated cultivars. Based on GUS expression after co-cultivation with *A. tumefaciens*, Seoul cultivar (2%) was judged highly susceptible to *A. tumefaciens* while Jangwon and Pupbaechoo were weakly susceptible. Plantlets were readily regenerated when the hygromycin-resistant explants were transferred to a regeneration medium. The efficient and reproducible transformation system described may be useful for the transfer agriculturally important genes into Chinese cabbage.

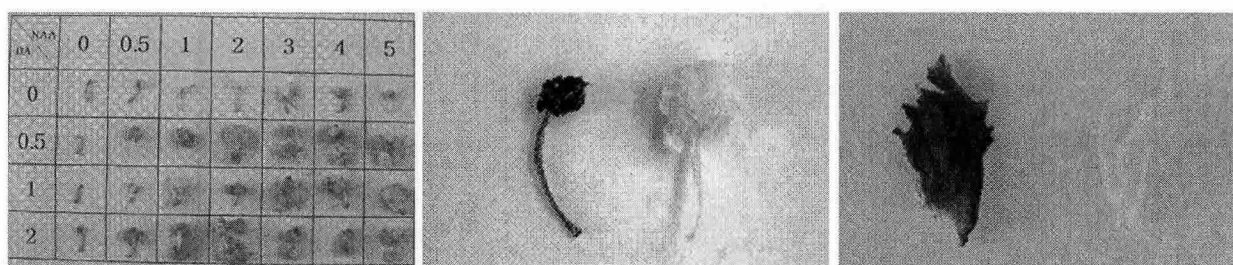


Figure 1. Plant regeneration test and GUS expression assay