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The Use of Phophomannose-isomerase as a Selectable Marker to Recover Transgenic Cabbage (*Brassica oleracea var. capitata*)

Min Jung Song, Nam Mi Park, Jong Seub Shin, Yang Do Choi[1] and Byung Whan Min*

Biotechnology Center, Nong Woo Bio Co., Ltd. Yeoju-kun Kyonggi-do 469-885, Korea
[1]Crop Functional Genomics Center

Objectives

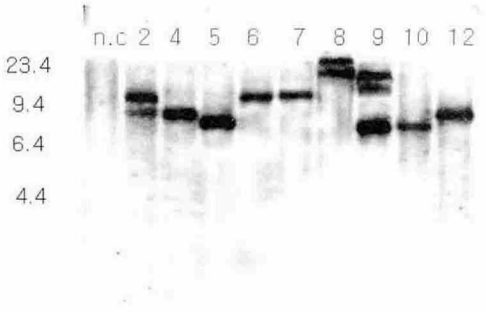
We report the development of a new selection system for the transformation of Cabbage plants by mannose. Phosphomannose isomerase (PMI) can convert mannose to fructose. Transgenic Cabbage plants were obtained by selecting *Agrobacterium*-mediated transformed hypocotyls on mannose (6 g/L) containing medium.

Material and Methods

Hypocotyls of the Cabbage inbred lines were inoculated with *Agrobacterium* strain LBA4404 harboring JMT (Jasmonic Acid carboxyl Methyltransferase) gene and cultured with mannose selection (6 g/L).

Results and Discussion

1. We have obtained over 40 transformed Cabbage plants with 1.5% transformation efficiency.
2. PCR and DNA gel blot analyses showed that the JMT gene was stably integrated into the Cabbage genome.
3. This is the first report of the successful transformation of the Cabbage using mannose selection system.



Southern blot

* Corresponding author. TEL: 031-883-7055 E-mail: minbw@nongwooseeds.co.kr