

CONSTRUCTION OF EXPRESSION VECTORS CARRYING WILD- AND MODIFIED-*cryIAa* GENES CONFERRING RESISTANCE TO SOYBEAN POD BORER *Etiella zinkenella*

Nguyen Huu Kien, Nguyen Thi Hoa, Le Thi Mai Huong,
Nguyen Trung Anh, Nguyen Tuan Minh, Dinh Thi Mai Thu,
Tong Thi Huong, Dinh Thi Thu Ngan, Nguyen Nhat Linh,
Nguyen Anh Vu, Le Thi Thu Hien, Nguyen Van Dong

Summary

Soybean (*Glycine max* L.) is one of the most economically important oil and protein sources. Soybean cultivation areas have highly affected by insect pests and pathogens. Several transgenic approaches have been developed to improve soybean resistance to insect pests. The target genes encoding Cry toxin, proteinase inhibitors, and toxic peptide are widely used for developing insect-resistant soybean transgenic plants. This study was undertaken with the objective of modification, cloning, sequence analysis, and construction of expression vectors carrying native- and modified-*cryIAa* genes from the isolated *Bacillus thuringiensis* strain TH19 in Vietnam. The result of this study provides materials for introducing native- and modified-*cryIAa* genes into soybean cultivars for enhancing resistance against the pod borer *Etiella zinkenella* Treitschke.

Keywords: *Bacillus thuringiensis*, cloning, *cryIAa*, *Etiella zinkenella*, pZY101-Asc vector, soybean.