

Evaluation of Resistance to Pepper Mild Mottle Virus (PMMoV) in Pepper Germplasm

Kingsley Ochar¹, Ho-Cheol Ko², Hee-Jong Woo², Hae-Ryun Kwak³ and On-Sook Hur^{2*}

¹Researcher, CSIR-Plant Genetic Resources Research Institute

²Researcher, National Agrobiodiversity Center, NAS, RDA

³ Researcher, Crop Protection Division, NAS, RDA

The pepper mild mottle virus (PMMoV), belonging to the tobamovirus genus, is currently one of the most destructive pathogens in pepper production. Tobamoviruses have been classified in terms of increased pathogenicity as pathotypes P₀, P₁, P_{1,2}, P_{1,2,3} and P_{1,2,3,4}, based on their ability to infect systemically *Capsicum* L⁰, L¹, L², L³ and L⁴ resistant plants, respectively. Two hundred eighty pepper germplasms and 5 reference accessions known as resistant L alleles, were analyzed to select the resistance cultivars against PMMoV- P_{1,2,3} (CV130614-2) using bioassay and genetic markers. The susceptible accessions showed systemic symptom when inoculated with PMMoV- P_{1,2,3}. However, accessions including IT223737, were resistant as they developed necrotic local lesions only on inoculated leaves, whereas no symptoms were observed on the upper leaves. Moreover, RT-PCR results for detecting the presence of virus were also negative. Thus, those accessions will be used as a novel source to facilitate introduction the resistant gene into commercial cultivars of pepper.

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*(Corresponding author) oshur09@korea.kr, Tel: +82-63-238-4942