Detection of *Rice stripe virus* on rice and its insect vector small brown planthopper. Bong Choon Lee, Dong Bum Shin, Yeon Kyu Hong, Do Yeon Kwak, Sang Jong Lim and Dong Chang Lee. Plant Protection Division, National Yeongnam Agricultural Experiment Station, 1085, Milyang 627-803, Korea.

Rice stripe virus (RSV), which causes severe damage to rice in Korea, Japan, and China, is a type member of the tenuivirus group and is transmitted by the small brown planthopper, Laodelphax striatellus, in a persistant manner (Gingery, R.E. 1988, Toriyama, S. 1986). Until now, occurrence of RSV is limitted in southern part of Korea. However recently the occurrence of RSV is increasing and spreading in central part of Korea including chungcheongdo and kyonggido province. It is very difficult to distinguish RSV symptoms on virus symptom from physiological damage of rice. The symptoms induced of infected plants includes general leaf striping, yellowing, a distinct white coloring of the leaf stripes. We detected RSV viral RNA using reverse transcription(RT)-PCR. Gene expression of RNA is termed ambisense, therefore we used specific primer correspond to sense (RNA polymerase) and antisense (coat protein). Primer for specific amplification of nucleic acid sequence from each of the RNA polymerase (GenBank Accession No. D31879) and coat protein (GenBank Accession No. X53563) gene were designed as follows. Primers RNApol5 5'atg acg aca cca cct ctc gtt at 3', 5'ctt aat cct tga tac cct taa tgg t 3' (upstream) and RNApol3 5'act aag ttt ctg gga aca taa ct 3' (downstream) correspond to nucleotide 58-1080, 476-1080, respectively of the RSV RNA polymerase gene and amplify a fragment of 1,023bp and 605bp. Antisense ORF2 Primers RNAcp5 5'atg ggt acc aac aag cca gcc act c 3', 5'aca ccc tga tac aag gtg tta tat a 3' (upstream) and RNAcp3 5'cta gtc atc tgc acc ttc tgc ctc a 3' (downstream) correspond to nucleotide 2,414-1,444, 2,412-1,913, respectively of the RSV RNA coat protein gene and amplify a fragment of 968bp and 499bp. Total RNA was extracted from infected rice plants using RNAgent Total RNA Isolation System (Promega). Total RNA of infected insect was extracted from using TRIzol Reagent (Gioboco BRL). The result of RT-PCR, we observed specfic band including RSV-polymerase (1,023, 605 bp) and CP (968, 499 bp) in both host of rice and insect vector. And we are processing cloning and partial sequencing of RSV-polymerase and CP gene.