

Isolation and Characterization of Soil- borne Wheat Mosaic Virus

Hyun Suk Lim, In Young So, Eui Shik Rha and Kui Jae Lee
Department of Agricultural Biology, Chonbuk National University,
Chonju 561-756, Korea

Abstract

This study was to investigate the occurrence of SbWMV in the barley field of the Southern Korea and to examine the host- susceptibility of the SbWMV. SbWMV was detected 6 areas - Suwon, Milyang, Jinju, Yeongkwang, Iksan, Chonju- and was obtained ELISA positive(+) reaction through the serological test. SbWMV was isolated two strains ; Albori strain from Jinju area and Eunpamil strain from Milyang area. SbWMV were collected symptom leaves, which is showing obviously mosaic, yellowing and necrosis stripes. SbWMV was inoculated mechanically on 1~1.5 ages young leaves with leaf-rubbing to identify a pathogenesis onto distributed barley cultivar from Honam Agriculture Experiment Station. SbWMV is transmitted by soil fungus *Polymyxa graminis* which is maintained many years in the soil. Inoculated leaves was showing symptoms from 4 weeks to 6 weeks. Albori strain infected Baegdong and Tapgolbori , Eunpamil strain infected Samdohori that is appeared a very higher susceptibility than others. *Chenopodium amaranticola* shows ring spots and *C. quinoa* shows chlorotic spots. Virus particle were observed rod- shaped 142nm and 281nm with electron microscopy on infected leaves. Using of total RNA extraction 1 μ l, RT-PCR was carrying out and were observed 0.6 kb DNA amplication.