

O.45 - Regional distribution of BYDV in Korea and identification of resistant wheat

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Barley Yellow Dwarf Virus (BYDV) has been a major disease causing a severe loss of yield in winter cereals worldwide. It has been recently reported that BYDV occurs frequently in wheat fields and also causes serious yield reduction in Korea. This study was undertaken in order to investigate the regional distributions of BYDV strains in Korea and to identify the r cultivars or lines of wheat resistant to the predominant BYDV strains, providing basic information for the breeding of BYDV-resistant wheat varieties. Using RT-PCR and *EcoRI* digestion methods, the regional distribution of BYDV strains in Korea from 2006 to 2007 showed that PAV strain was mainly detected about 65% (Vic-PAV 52.6%; CN-PAV 47.4%) and MAV strain about 3%. Using ELISA test for the examination of BYDV resistance with 17 cultivars and four lines among Korean wheat, three cultivars, Gurumil, Topdongmil, and Olgurumil, were susceptible to BYDV and the others were resistant. In plant growth and yield component responses to BYDV infection, Gurumil showed significant difference between the uninfected and the infected, suggesting that it is the most susceptible to BYDV among Korean wheat, but Eunpamil and Seohaе118 did not show a difference, an indication that they have the highest resistance.