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We tested for the presence of double-stranded RNA (dsRNA) mycovirus in 827 *Fusarium graminearum* isolated from diseased barley and maize. dsRNA mycoviruses with various sizes were isolated. Of them, it was previously reported that dsRNA from DK21 isolate had pronounced morphological changes, including reduction in mycelial growth, increased to red pigmentation, reduced virulence and sporulation. (Chu et al., Appl. Environ. Microbiol. 2002). For better understanding of this hypovirulence associated with DK21 dsRNA virus, we determined the complete nucleotide sequence of dsRNA genome and named *Fusarium hypovirus* DK21 strain (Fhv-DK21). Genomic RNA of Fhv-DK21 was determined to be 6625 nucleotides in length excluding the poly (A) tail and contained three putative open reading frame. RNA-dependent RNA polymerase (RdRp) and helicase domain were expected in ORF A, 54 to 4709 nucleotide position. ORF B, 4752 to 5216 nucleotide position, and ORF C, 5475 to 6578 nucleotide position, were predicted to encode 16.7kDa and 41.3kDa protein respectively each. We could not detect any conserved domains from these two proteins. Phylogenetic analysis showed Fhv-DK21 was related to *Cryphonectria hypovirus* 3. Ten additional isolates were found that were infected with dsRNA mycoviruses. These mycoviruses contain 2 to 4 different segments of dsRNAs with the size range of approximately 1.7 to 10-kbp in length. The presence of dsRNAs isolates did not affect colony morphology and were transmissible through conidia and ascospore with incidence of 30~100%. These results indicate that there is genomic diversity of dsRNA mycoviruses that infect *F. graminearum* isolates and that impact of virus infection on host's morphology and virulence is determined by the interaction between dsRNAs and the fungal host, not by the mere presence of the dsRNAs

3-15. Factors affecting the occurrence of wilt of strawberry caused by *Fusarium oxysporum* f. sp. *fragariae* in Korea.

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The occurrence of *Fusarium* wilt in strawberry fields in Korea was assessed from 2001 to 2003. *Fusarium* wilt was found from June to August in nursery beds, from September to October after planting in production beds, and from January to March during harvest. The symptoms seen were root rots, discolored vascular tissue in the crown and deformation and yellowing of central leaflets. The disease occurred in up to 30% of plants in 37 of 214 fields surveyed. *Fusarium oxysporum* Schlecht. ex Fr. f. sp. *fragariae* was frequently isolated from cvs. Dochiodome, Maehyang, Redpearl, Samaberry and Akihime. Factors affecting the occurrence of *Fusarium* wilt were investigated; infested soils had high salt concentrations, low pH, OM, average P2O5 and exchangeable. *Fusarium* wilt was more frequent following conventional basal fertilization than after non-nitrogen basal fertilization and more frequent following the use of NH4-N than after NO3-N.