

Mycotoxicology (I124)

- I-124. *Fusarium graminearum* causes head blight on rice and produces mycotoxins. I. Y. Chang¹, Y. K. Han¹, J. Kim¹, S. Kim¹, Y. Kang¹, T. Shin¹, S. H. Yun², I. Hwang¹, and Y. W. Lee¹. ¹School of Agricultural Biotechnology, Seoul National University, Suwon 441-744, Korea, ²Division of Life Sciences, Soonchunhyang University, Asan 336-745, Korea

Symptoms of *Fusarium* head blight (FHB) on diseased rice seed were shrunken, light weight seeds discolored light tan to dark brown with infrequent pink due to mycelial growth of *Fusarium* spp. To determine the potential for pathogenicity and mycotoxin production, A total of 138 rice samples were collected from the fields during 2001-2002 and investigated occurrence of *F. graminearum* from diseased rice seeds. The rice seeds were heavily infected with *F. graminearum*. The average percentages of infection of rice seeds showing symptoms of FHB were 59% and 69% in 2001 and 2002 samples, respectively, ranging 11-100%. A total of 120 isolates were obtained from the rice seeds and tested for mycotoxin production. Of the isolates, 112 were nivalenol producers and 8 co-produced deoxynivalenol with 3-acetyldeoxynivalenol. When conidial suspension (1×10^6) of the representative isolate was inoculated on rice at flowering stage, the same symptoms as observed in the fields were reproduced. The results confirmed that *F. graminearum* caused FHB and produced trichothecenes. FHB could be an important pathogen of rice grains with other fungal and bacterial pathogens in Korea.