

**The 6th Lecture on Food Risk Assessment “Risk Assessment of Mycotoxines” .**  
**Risk Assessment of Mycotoxin - Simulation of Exposure to Deoxynivalenol from**  
**Wheat Consumption in Japan**

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**< Summary >**

In order to ensure safety with consumption of foods contaminated with mycotoxins, risk assessment is essential and after that an appropriate risk management should be implemented. We evaluated the current regulation value for Deoxynivalenol (DON) in foods by simulating the exposure of DON from wheat consumption using a probabilistic computer simulation method based on two data sets for consumption of wheat-based products and contamination of DON in wheat with three scenarios for the limit value; 1) 1.1 ppm, 2) 2 ppm, 3) no limit. Consumption data on 108 wheat-based products by age category from the national survey on food consumption carried out in 2002. As the distributions of consumption have two peaks in each age, we assumed two log-normal distributions for each age category in order to obtain the better fitted distribution models. Contamination data in 285 wheat samples was obtained from two surveys conducted in 2002-2004. The results of exposure simulation showed that the children 1-6 years old have the highest wheat intake. However, the 95th percentile simulated exposure values for DON were all below the provisional maximum TDI of 1 µg/kg body weight in each age category in any scenarios. As fitness of model could influence the result in Monte-Carlo simulation, we should take it into consideration for the interpretation of results.