**Current Situation of Food Contamination, Regulations and Risk Assessment for Mycotoxins**

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**Summary**

Mycotoxins currently considered the most significant are aflatoxins (AF), ochratoxin A (OTA), patulin, fumonisins (FM), zearalenone (ZEN) and some trichothecenes including deoxynivalenol (DON) and T-2/HT-2 toxins. Recent information on the worldwide occurrence of these mycotoxins in food, published by international organizations (JECFA, IARC), EC and Japan, are overviewed. The risk assessment of mycotoxins (FM, OTA, DON, T-2/HT-2 and AFM₁) was carried out at the 56th JECFA meeting in 2001 and provisional tolerable daily intake (PTDI) values were proposed for the four toxins. In addition, the evaluation of AFM₁ by JECFA indicated that, with worst case assumptions, the projected risks for liver cancer attributable to use of the proposed levels of AFM₁ of 0.05 μg/kg milk and 0.5 μg/kg milk are very small, and that there is no significant health benefit if a 0.5 μg/kg limit were to be reduced to 0.05 μg/kg.

Exposure assessment is another main ingredient of the risk assessment. The extensive activities of EC-SCOOP projects resulted in several reports on exposure assessment of OTA and several *Fusarium* mycotoxins, trichothecenes, FM and ZEN. While the dietary intakes of *Fusarium* toxins are often less than the TDI's for the entire population and adults, they are close or even exceed in some cases the TDI's for risk groups like infants and children.

The recent situation of worldwide mycotoxin regulations as of December 2003 is updated in the FAO Food and Nutrition Paper 64. On a worldwide basis, at least 99 countries had mycotoxin regulations, including guidelines, for food and/or feed in 2003, an increase of approximately 30% compared to 1995. The total population in these countries represents approximately 87% of the world's inhabitants. Several regulations have been harmonized between countries belonging to economic communities (EU, MERCOSUR).