

The Importance of Ochratoxin A in Foods: Report on the 56th Meeting of JECFA

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SUMMARY

The Joint FAO/WHO Expert Committee on Food Additives (JECFA) met at its 56th meeting in Geneva, Switzerland, in February 2001. This meeting was unique in that only mycotoxins were considered: aflatoxin M₁, fumonisins, some trichothecenes including deoxynivalenol and T-2 toxin, and ochratoxin A. Again unique in JECFA meetings, the work schedule dealt not only with toxicology, but with the whole range of factors influencing the estimation of human intake of these toxins, including the causal fungi and their occurrence, sampling plans, methods of estimation, and the occurrence of the toxins in foods around the world. This report will deal only with ochratoxin A, because of its potential importance in coffee. Information available at this date indicates that three major fungal sources of OTA exist in foods: a single *Penicillium* species, *P. verrucosum*, *Aspergillus ochraceus* and some related species, and *A. carbonarius*, together with the closely related *A. niger*. Information obtained by JECFA showed clearly that Europe is the major region of the world where OTA commonly occurs in foods. Within Europe, the major sources are cereals and cereal products, which accounted for ca 60% of OTA intake, wines (25% of intake), grape juice and coffee (5-7% each) and all other foods, less than 1% of the total intake. The fungal source of OTA in European cereals was considered to be *P. verrucosum*. The sources in the other foods were less clear, but species other than *P. verrucosum* were likely. The Committee concluded that at this time, no cases of acute intoxication in human populations due to intake of OTA have been reported. The Committee agreed that OTA is a kidney toxin in all animals species studied, and in some animals is a carcinogen of the kidneys, and has been observed to cause genetic toxicity. It is embryotoxic and teratogenic in rats and mice. However, the significance of the results of these studies for human toxicity remain unclear. The provisional tolerable weekly intake figure for OTA set by JECFA in 1995 (100 µg/kg body weight per week) was maintained at the current meeting. JECFA concluded that in Europe, consumption of cereals alone may cause heavy consumers to approach that figure for total OTA intake, but evidence was lacking that these levels existed elsewhere in the world. JECFA concluded that reduction in OTA intake was desirable, but that this was best accomplished by improved agricultural practices. Setting of maximum permitted levels of 20 or 5 µg/kg in cereals would have no significant influence on average OTA intakes.