

Overview of the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and its role in establishing international standards and guidelines on contaminants in foods and feed

Introduction:

In 1956, FAO and WHO established the Joint FAO/WHO Expert Committee on Food Additives (JECFA). JECFA is an international expert scientific committee with the aim to evaluate food additives, contaminants, naturally occurring toxicants and residues of veterinary drugs in food.

JECFA normally meets twice a year with individual agendas covering either:

- a. Food additives, contaminants and naturally occurring toxicants in food, or
- b. Residues of veterinary drugs in food.

Purpose of JECFA:

JECFA serves as a scientific advisory body to [FAO](#) [www] and [WHO](#) [www] member governments, and to the [Codex Alimentarius Commission \(CAC\)](#) [www]. Advice to the CAC on food additives, contaminants and naturally-occurring toxicants is normally provided via the Codex Committee on Food Additives and Contaminants (CCFAC) (*see: 'Overview of the work of Codex Committee on Food Additives and Contaminants (CCFAC)' [.pdf], found in the Support Documentation area of this Section*). In this way, CCFAC develops standards on chemicals in foods based on JECFA evaluations.

All countries need to have access to reliable risk assessment of chemicals in food, but relatively few have the expertise and funds available to carry out their own risk assessments on large numbers of chemicals. JECFA performs a vital function in providing a reliable source of expert advice which can be used by all countries in formulating their own food safety measures.

Membership of JECFA:

FAO and WHO have established rosters of experts from which individuals would be selected to serve at expert meetings. In order to establish the rosters, FAO and WHO issue calls for applications. Selection of members is made after careful consideration of scientific credentials and other expertise and experience that was specified in the call for applications.

Accomplishments of JECFA:

As of May 2004, JECFA has evaluated more than 1300 food additives, approximately 25 contaminants and naturally occurring toxicants, and residues of approximately 80 veterinary drugs. The Committee has also developed principles for the safety assessment of chemicals in food that are consistent with



current thinking on risk assessment and takes account of recent developments in toxicology and other relevant sciences.

JECFA and the evaluation of Food Chemicals:

JECFA receives requests for the evaluation of selected contaminants from CCFAC. Data calls precede each JECFA session allowing countries the opportunity to have their national data included among the other available data sets considered during the deliberations of JECFA.

In its evaluation of food additives, JECFA establishes 'acceptable daily intakes' (ADIs) of these substances. Unlike additives, contaminants have no useful function in foods and their addition to foods is unintentional and undesirable. Their presence is not considered 'acceptable' at any level. JECFA, however, does define 'tolerable' limits based on the toxicological evaluations that they carry out, assigning provisional tolerable weekly intakes (PTWI) or provisional maximum tolerable daily intakes (PMTDI) as appropriate. The latter value is used in cases where the contaminant is not known to accumulate in the body, such as is the case with patulin. As with additives, the levels are based on the determination of No-observed-effect-level (NOEL) and the application of safety factors.

In the case of contaminants where there is no dose level below which no significant adverse effect occurs, such as genotoxic carcinogens, no 'tolerable' levels are given. In these cases JECFA recommends that the level of the contaminant in the food should be as low as reasonably achievable (ALARA). It should be emphasised that the absence of a 'tolerable' level does not mean that maximum limits cannot be established.

In cases where JECFA has performed a safety assessment and CCFAC or CAC determines that additional scientific guidance is necessary for a risk management decision then CCFAC or CAC may request additional specific scientific guidance (*see: 'Statements of principle concerning the role of science in the Codex decision-making process' [.pdf], found in the Support Documentation area of this Section*).

Such cases have been seen in the case of JECFA risk assessments of aflatoxins and ochratoxins. In both cases, CCFAC requested JECFA to advise on the difference in level of public health protection provided by two hypothetical maximum levels of the toxins in specified foods (*see: 'JECFA and CCFAC at work: the case of maximum levels for ochratoxin A (OTA) in cereals' [.pdf], found in the Support Documentation area of this Section*).

JECFA Evaluations of OTA:

JECFA has evaluated OTA on three occasions. These evaluations are contained in the following reports:

- Thirty-seventh report of the Joint FAO/WHO Expert Committee on Food Additives). WHO Technical Report Series, No. 806, 1991, and corrigenda;



- *Evaluation of certain food additives and contaminants* (Forty-fourth report of the Joint FAO/WHO Expert Committee on Food Additives). WHO Technical Report Series, No. 859, 1995;
- *Evaluation of certain mycotoxins* (Fifty-sixth report of the Joint FAO/WHO Expert Committee on Food Additives). WHO Technical Report Series, No. 906, 2002.

These reports are available from the JECFA publications section of the [WHO website](#) [www].

