

codex alimentarius commission

FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD HEALTH
ORGANIZATION

JOINT OFFICE: Viale delle Terme di Caracalla 00100 ROME Tel.: +39(06)57051 Telex: 625825-625853 FAO I E-mail: Codex@fao.org Facsimile: +39(06)5705.4593

Agenda Item 5(b)

CX/PR 99/5
February 1999

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON PESTICIDE RESIDUES

Thirty First Session

The Hague Netherlands, 12-17 April 1999

CONSIDERATION OF INTAKE OF PESTICIDE RESIDUES: REPORT OF PESTICIDE RESIDUE INTAKE STUDIES AT INTERNATIONAL AND NATIONAL LEVEL BASED ON REVISED GUIDELINES FOR PREDICTING DIETARY INTAKE OF PESTICIDE RESIDUES

PROCESSING STUDIES FOR IMPROVING ESTIMATES OF DIETARY INTAKE OF PESTICIDE RESIDUES¹

1. The revised Guidelines for Predicting Dietary Intake of Pesticide Residues² highlighted the usefulness of processing studies to more accurately estimate pesticide residues in food as consumed. Although some commodities are directly consumed fresh, most commodities will undergo some processing, either commercial or in the home. For some commodities, such as cereals and oilseeds, commercial processing is mainly carried on a large industrial scale. It is recognized that processing will alter the nature and levels of pesticide residues in processed food compared to the raw agricultural commodity. In most cases, in particular washing, the levels of residues of toxicological are expected to be reduced in the processed product. However, the formation of potentially toxic breakdown products from parent residue during commodity processing has been known to occur. In addition, it is also recognized that the particular method of processing may strongly influence the fate of residues during processing. For example, solvent extraction of oilseeds may lead to a different composition of residues than cold pressing.

2. In order to promote the development of appropriate processing studies which are more representative of the predominant processes used by industry and consumers and to assist in the interpretation of processing studies submitted to the JMPR, more detailed information on food processing practices in different countries would be desirable. To facilitate the effective incorporation of processing factors into dietary exposure assessment at the international level, further information might include:

- (a) identification of common methods of commodity processing;
- (b) identification of common methods of by-product processing for products destined for animal feeding; and,
- (c) characterization of processing steps and operating parameters for the predominant industrial / household processing and preparation methods identified in a) and b) above.

¹ Prepared by GEMS/Food, WHO.

² Guideline for predicting dietary intake of pesticide residues, WHO/FSF/FOS/97.7, WHO, Geneva (1997)

3. To obtain this information, GEMS/Food has prepared a questionnaire on food processing as a part of its work on the development of revised Regional Diets. The questionnaire was distributed in cooperation of the International Union of Food Science and Technology (IUFoST) to its member institutions. Copies of this questionnaire are available as a Conference Room Document.

4. A preliminary evaluation of the responses received from IUFoST adhering bodies to date indicate that the collection and collation of such processing information will be useful in providing guidance on the international application of processing factors in assessing dietary intake. For example, the initial results indicate that boiling potatoes in water was the most common form of cooking used in countries that fall under the GEMS/Food European Regional Diet. Consequently, appropriate processing studies under these conditions may be useful in assessing the fate of residues and estimating the levels of residues in food as consumed. However, further information from countries is needed to confirm that this method of cooking is representative for this region.

5. Therefore, GEMS/Food would request that Governments and other parties in possession of such information complete the processing questionnaire and submit it to GEMS/Food. Person wishing to obtain copies of the questionnaire may contact the GEMS/Food Coordinator, Food Safety Programme, Department of Protection of the Human Environment, World Health Organization, CH-1211 Geneva Switzerland, tel. 41 22 791 3698; fax. 41 22 791 4807; email. moyg@who.ch.