Pesticide residues in food — 2013

Joint FAO/WHO Meeting on Pesticide Residues

EVALUATIONS 2013

Part II — **Toxicological**





Pesticide residues in food – 2013

Toxicological evaluations

Sponsored jointly by FAO and WHO

Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Core Assessment Group on Pesticide Residues

Geneva, Switzerland, 17–26 September 2013

The summaries and evaluations contained in this book are, in most cases, based on unpublished proprietary data submitted for the purpose of the JMPR assessment. A registration authority should not grant a registration on the basis of an evaluation unless it has first received authorization for such use from the owner who submitted the data for JMPR review or has received the data on which the summaries are based, either from the owner of the data or from a second party that has obtained permission from the owner of the data for this purpose.





WHO Library Cataloguing-in-Publication Data

Pesticide residues in food - 2013: toxicological evaluations / Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Core Assessment Group on Pesticide Residues, Geneva, Switzerland, 17–26 September 2013.

1.Pesticide residues - toxicity. 2.No-observed-adverse-effect level. 3.Food contamination. I.FAO Panel of Experts on Pesticide Residues in Food and the Environment. II.WHO Core Assessment Group on Pesticide Residues. III.Title: Pesticide residues in food 2013: evaluations. Part 2, Toxicological.

ISBN 978 92 4 166529 2 (NLM classification: WA 240)

© World Health Organization 2014

All rights reserved. Publications of the World Health Organization are available on the WHO website (www.who.int) or can be purchased from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; email: bookorders@who.int).

Requests for permission to reproduce or translate WHO publications – whether for sale or for non-commercial distribution – should be addressed to WHO Press through the WHO website (www.who.int/about/licensing/copyright form/en/index.html).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

This publication contains the collective views of an international group of experts and does not necessarily represent the decisions or the policies of the World Health Organization.

TABLE OF CONTENTS

		Page
List of par	ticipants	iv
Abbreviati	ions used	vii
Introduction	on	xi
Toxicolog	ical monographs and monograph addenda	1
	zovindiflupyr*	
	afen*	
Chlo	orfenapyr	115
Cya	ntraniliprole*	131
Diqu	uat**	177
Dith	iianon	215
Fena	amidone*	219
Flue	ensulfone*	271
Imax	zapic*	317
Imax	zapyr*	355
Isox	aflutole*	393
Tolfenpyrad*		459
Trif	lumizole*	499
Trin	exapac-ethyl*	553
Annex 1.	Reports and other documents resulting from previous Joint Meetings of the FAC Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Core Assessment Group on Pesticide Residues	

^{*} First full evaluation
** Evaluated within the periodic review programme of the Codex Committee on Pesticide Residues

2013 Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Core Assessment Group on Pesticide Residues

Geneva, 17–26 September 2013

List of participants

FAO Panel of Experts on Pesticide Residues in Food and the Environment

- Dr Ursula Banasiak, Advisor to the Federal Institute for Risk Assessment, Max-Dohrn-Strasse 8-10, 10589 Berlin, Germany
- Professor Eloisa Dutra Caldas, Pharmaceutical Sciences Department, College of Health Sciences, University of Brasilia, Campus Universitário Darci Ribeiro, 70910-900 Brasília/DF, Brazil (FAO Rapporteur)
- Mr David Lunn, Senior Programme Manager (Residues–Plants), Export Standards Group, New Zealand Food Safety Authority, PO Box 2835, Wellington, New Zealand
- Dr Dugald MacLachlan, Australian Government Department of Agriculture, Fisheries and Forestry, GPO Box 858, Canberra, ACT 2601, Australia (FAO Chairman)
- Mr Christian Sieke, Unit Residue Assessment of Pesticides and Biocides, Department of Chemicals Safety, Federal Institute for Risk Assessment, Max-Dohrn-Strasse 8-10, 10589 Berlin, Germany
- Dr Yukiko Yamada, Advisor to Vice Minister / Chief Scientific Advisor, Ministry of Agriculture, Forestry and Fisheries, 1-2-1 Kasumigaseki, Chiyoda-ku, Tokyo 100-8950, Japan

WHO Core Assessment Group on Pesticide Residues

- Professor Alan R. Boobis, Centre for Pharmacology & Therapeutics, Division of Experimental Medicine, Department of Medicine, Faculty of Medicine, Imperial College London, Hammersmith Campus, Ducane Road, London W12 0NN, England, United Kingdom (WHO Chairman)
- Dr Douglas B. McGregor, ¹ Toxicity Evaluation Consultants, Aberdour, Scotland, United Kingdom
- Professor Angelo Moretto, Department of Biomedical and Clinical Sciences, University of Milan, International Centre for Pesticides and Health Risk Prevention, Luigi Sacco Hospital, Via GB Grassi 74, 20157 Milan, Italy (WHO Rapporteur)
- Dr Roland Solecki, Department of Chemical Safety, Federal Institute for Risk Assessment, Max-Dohrn Strasse 8-10, D-10589 Berlin, Germany
- Dr Maria Tasheva, Associate Professor Toxicologist, Sofia, Bulgaria

Secretariat

- Dr Sam Adu-Kumi, Environmental Protection Agency, PO Box MB 326, Accra, Ghana (WHO Expert)
- Dr Árpád Ambrus, Hungarian Food Safety Office, 1143 Budapest Tábornok u 2, Hungary (FAO Temporary Adviser)
- Mr Kevin Bodnaruk, 26/12 Phillip Mall, West Pymble, NSW 2073, Australia (FAO Editor)

¹ Unable to attend

- Ms Gracia Brisco, Food Standards Officer, Joint FAO/WHO Food Standards Programme, Food and Agriculture Organization of the United Nations (FAO), Viale delle Terme di Caracalla, 00153 Rome, Italy (Codex Secretariat)
- Dr Gary Buffinton, ¹ Office of Chemical Safety, Office of Health Protection, Department of Health and Ageing, Canberra, ACT, Australia (WHO Expert)
- Ms Marloes Busschers, Board for the Authorisation of Plant Protection Products and Biocides, Stadsbrink 5, 6707 AA Wageningen, the Netherlands (WHO Expert)
- Dr Ian Dewhurst, Chemicals Regulation Directorate, Mallard House, King's Pool, 3 Peasholme Green, York YO1 7PX, England, United Kingdom (WHO Expert)
- Dr Michael Doherty, Office of Pesticide Programs, Health Effects Division, Risk Assessment Branch II, United States Environmental Protection Agency, MS 7509C, Washington, DC 20460, USA (FAO Temporary Adviser)
- Dr Yi Bing He, Department of Science and Education, Ministry of Agriculture, No. 11 Nong Zhan Guan Nanli, Chaoyang District, Beijing 100125, China (FAO Temporary Adviser)
- Dr Paul Humphrey, Pesticides Program, Australian Pesticides and Veterinary Medicines Authority (APVMA), PO Box 6182, Kingston, ACT 2604, Australia (FAO Temporary Adviser)
- Mr Makoto Irie, Plant Product Safety Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries, 1-2-1 Kasumigaseki, Chiyoda-ku, Tokyo 100-8950, Japan (FAO Temporary Adviser)
- Dr Debabrata Kanungo, Chairman, Scientific Panel on Residues of Pesticides and Antibiotics, Food Safety and Standard Authority of India, Nityakshetra, 294/Sector-21D, Delhi, India (WHO Expert)
- Ms April P. Neal Kluever, ¹ Division of Food Contact Notifications, Center for Food Safety and Applied Nutrition, United States Food and Drug Administration, 4300 River Road, HFS-275, College Park, MD 20740, USA (WHO Expert)
- Dr Mi-Gyung Lee, Department of Food Science and Biotechnology, College of Natural Science, Andong National University, #388 Songcheon-dong, Andong-si, Gyeongbuk, 760-749, Republic of Korea (FAO Temporary Adviser)
- Ms Kimberley Low, TOX-2, HEDII, Health Evaluation Directorate, Pest Management Regulatory Agency, Health Canada, Sir Charles Tupper Building, 2720 Riverside Drive, Address Locator: 6605E, Ottawa, ON, Canada K1A 0K9 (WHO Expert)
- Dr Matthew Joseph O'Mullane, Food Standards Australia New Zealand, PO Box 7186, Canberra BC, ACT 2610, Australia (WHO Expert)
- Dr Rudolf Pfeil, Toxicology of Pesticides and Biocides, Federal Institute for Risk Assessment, Max-Dohrn Strasse 8-10, D-10589 Berlin, Germany (WHO Expert)
- Dr Xiongwu Qiao, Shanxi Academy of Agricultural Sciences, 2 Changfeng Street, Taiyuan, Shanxi 030006, China (Chairman of the Codex Committee on Pesticide Residues)
- Dr Prakashchandra V. Shah, Chief, Inert Ingredient Assessment Branch, Registration Division, Office of Pesticide Programs, United States Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460, USA (WHO Expert)
- Ms Marla Sheffer, 1553 Marcoux Drive, Orleans, ON, Canada K1E 2K5 (WHO Editor)
- Ms Monique Thomas, Pest Management Regulatory Agency, Health Canada, 2720 Riverside Drive, Ottawa, ON, Canada KIA 0K9 (Observer)
- Ms Trijntje van der Velde-Koerts, Centre for Nutrition, Prevention and Health Services, National Institute for Public Health and the Environment (RIVM), Antonie van Leeuwenhoeklaan 9, PO Box 1, 3720 BA Bilthoven, the Netherlands (FAO Temporary Adviser)
- Dr Philippe Verger, Department of Food Safety and Zoonoses, World Health Organization, 1211 Geneva 27, Switzerland (WHO JMPR Secretariat)

¹ Unable to attend.

- Dr Gerrit Wolterink, Centre for Nutrition, Prevention and Health Services, Department of Food Safety, National Institute for Public Health and the Environment (RIVM), Antonie van Leeuwenhoeklaan 9, PO Box 1, 3720 BA Bilthoven, the Netherlands (WHO Expert)
- Ms Yong Zhen Yang, Plant Production and Protection Division, Food and Agriculture Organization of the United Nations (FAO), Viale delle Terme di Caracalla, 00153 Rome, Italy (FAO JMPR Secretariat)
- Dr Guibiao Ye, Director of Pesticide Residue Evaluation, Institute for the Control of Agrochemicals, Ministry of Agriculture, Maizidian 22, Chaoyang District, Beijing 100125, China (Observer)
- Dr Midori Yoshida, Chief of the Second Section, Division of Pathology, Biological Safety Research Center, National Institute of Health Sciences, 1-18-1 Kamiyoga, Setagaya-ku, Tokyo 158-8501, Japan (WHO Expert)
- Dr Jürg Zarn, Swiss Federal Office of Public Health, Nutritional and Toxicological Risks Section, Stauffacherstrasse 101, CH-8004 Zurich, Switzerland (WHO Expert)

预览已结束, 完整报告链接和二维码如下:

https://www.yunbaogao.cn/report/index/report?reportId=5 27793

