Pesticide residues in food 2006

Joint FAO/WHO Meeting on Pesticide Residues

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187

Report of the 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
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WORLD HEALTH ORGANIZATION
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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CONTENTS

T, toxicological evaluation; R, residue and analytical aspects; D, dietary risk assessment
* New compound
** Evaluated within the periodic review programme of the Code Committee on Pesticide Residues

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2006 JOINT FAO/WHO MEETING ON PESTICIDE RESIDUES
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ABBREVIATIONS

ADI	acceptable daily intake
ai	active ingredient
ALP	alkaline phosphatase
ALT	alanine aminotransferase
ARfD	acute reference dose
AST	aspartate aminotransferase
AUC	area under the curve for concentration–time
$BMDL_{10}$	benchmark-dose lower 95% confidence level
bw	body weight
CAS	Chemical Abstracts Service
CC	carbohydrate
CCFAC	Codex Committee on Food Additives and Contaminants
CCN	Codex classification number (for compounds or commodities)
CCPR	Codex Committee on Pesticide Residues
C_{max}	maximum concentration
EC_{50}	the concentration of agonist that elicits a response that is 50% of the possible maximum
F_1	first filial generation
F_2	second filial generation
FAO	Food and Agricultural Organization of the United Nations
GAP	good agricultural practice
GC	gas chromatography
GGT	gamma-glutamyltransferase
GEMS/Food	Global Environment Monitoring System–Food Contamination Monitoring and Assessment Programme
HR	highest residue in the edible portion of a commodity found in trials used to estimate a maximum residue level in the commodity
HR-P	highest residue in a processed commodity calculated by multiplying the HR of the raw commodity by the corresponding processing factor
IC_{50}	concentration required to inhibit activity by 50%
IEDI	international estimated daily intake
IESTI	international estimate of short-term dietary intake
IFN Code	International Feed Number Code
ISO	International Organization for Standardization

IUPAC	International Union of Pure and Applied Chemistry
JECFA	Joint Expert Committee on Food Additives
JMPR	Joint Meeting on Pesticide Residues
JMPS	Joint FAO/WHO Meeting on Pesticide Specifications
LC	liquid chromatography
LC_{50}	median lethal concentration
LD_{50}	median lethal dose
LOAEL	lowest-observed-adverse-effect level
LOAEC	lowest-observed-adverse-effect concentration
LOD	limit of detection
LOQ	limit of quantification
MCH	mean corpuscular haemoglobin
MCV	mean corpuscular volume
MRL	maximum residue limit
MS	mass spectrometry
MS/MS	tandem mass spectrometry
NOAEL	no-observed-adverse-effect level
OECD	Organization for Economic Co-operation and Development
PC	protein
PPARα	peroxisome proliferator-induced receptor alpha
PHI	pre-harvest interval
ppm	parts per million
R	roughage
STMR	supervised trials median residue
STMR-P	supervised trials median residue in a processed commodity calculated by multiplying the STMR of the raw commodity by the corresponding processing factor
TRR	total radiolabelled residue
TSH	thyroid stimulating hormone
TMDI	theoretical maximum daily intake
WHO	World Health Organization

USE OF JMPR REPORTS AND EVALUATIONS BY REGISTRATION AUTHORITIES

Most of the summaries and evaluations contained in this report are based on unpublished proprietary data submitted for use by JMPR in making its assessments. 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 of the data submitted for the 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.

PESTICIDE RESIDUES IN FOOD

REPORT OF THE 2006 JOINT FAO/WHO MEETING OF EXPERTS

1. INTRODUCTION

A Joint FAO/WHO Meeting on Pesticide Residues (JMPR) was held at Food and Agriculture Organization of the United Nations (FAO) headquarters, Rome, Italy, from 3 to 12 October 2006. The Meeting brought together the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the World Health Organization (WHO) Core Assessment Group.

The Meeting was opened by Mr Shivaji Pandey, Director, Plant Production and Protection Division, FAO. On behalf of the Director-General of FAO and the Acting Director-General of WHO, Mr Pandey welcomed the participants and thanked them for providing their valuable time and expertise.

Mr Pandey emphasized that the output of JMPR constitutes the essential basis for the decisions of the Codex Alimentarius Commission when it adopts maximum residue limits (MRLs) for food and agricultural commodities circulating in international trade. At its Thirty-eighth session[1], the Codex Committee on Pesticide Residues (CCPR) had confirmed the JMPR as the scientific body supporting the work of the CCPR, and focused on how to accelerate and improve the development of Codex MRLs. CCPR had agreed that the current procedure did not require any modification, provided that JMPR reports were published within a time-frame that allowed governments to review the data before the corresponding CCPR meeting. Mr Pandey stated that FAO and WHO were committed to this small but essential contribution towards a smoother and speedier process.

Mr Pandey mentioned that the Codex Alimentarius Commission had recently accepted an offer from China to host the CCPR in the future. He expressed the sincere gratitude of FAO and WHO to the Government of the Netherlands for the support it had provided for more than 40 years to the work, not only of the CCPR but also the JMPR, and hoped that this support would continue despite the resignation of the Netherlands from the CCPR secretariat.

The speaker announced that the FAO/WHO Framework for the Provision of Scientific Advice on Food Safety and Nutrition was due to be published before the end of 2006. This framework document would describe the principles, practices and procedures currently applied by FAO and WHO for the provision of scientific advice through specialized bodies such as JMPR, the Joint FAO/WHO Expert Committee on Food Additives (JECFA), the Joint FAO/WHO Meeting on Pesticide Specifications (JMPS) and ad hoc expert consultations and meetings. The document had been prepared to enhance the transparency of the procedures used by FAO and WHO for delivering scientific advice regarding food safety and nutrition, and would hopefully strengthen the use and acceptance of the advice developed by these Committees.

Mr Pandey also addressed the issue of international harmonization, concerning which OECD had made significant progress and continued to develop testing guidelines relevant to the generation of residue data on pesticides. As the data generated according to these guidelines would in future be submitted to the JMPR, he encouraged the JMPR participants to provide comments in order to ensure that the OECD guidelines fulfilled the international requirements. FAO would continue to play an active role in this activity.

The speaker summarized the challenging tasks before the 2006 JMPR: the evaluation of 30 different pesticides (five of which were new compounds) as well as the consideration of several

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[1] Codex Alimentarius Commission. *Report of the Thirty-eighth Session of the Codex Committee on Pesticide Residues, 3–8 April 2006, Fortaleza, Brazil* (ALINORM 06/29/24).

important general issues relating to the advancement and further improvement of current risk assessment procedures.

Mr Pandey reminded the participants that they had been invited in their personal capacities as international experts, and not as representatives of governments, institutes, or any other organization, and he stressed that the discussions held during the meeting were confidential until publication was authorized.

The Meeting was held in pursuance of recommendations made by previous Meetings and accepted by the governing bodies of FAO and WHO that studies should be undertaken jointly by experts to evaluate possible hazards to humans arising from the occurrence of residues of pesticides in foods. The reports of previous Meetings (see Annex 5) contain information on acceptable daily intakes (ADIs), acute reference doses (ARfDs), MRLs, and the general principles that have been used for evaluating pesticides. The supporting documents (residue and toxicological evaluations) contain detailed monographs on these pesticides and include evaluations of analytical methods.

During the Meeting, the FAO Panel of Experts was responsible for reviewing residue and analytical aspects of the pesticides under consideration, including data on their metabolism, fate in the environment, and use patterns, and for estimating the maximum levels of residues that might occur as a result of use of the pesticides according to good agricultural practice. The estimation of MRLs and supervised trials median residues (STMR) values for commodities of animal origin was elaborated. The WHO Core Assessment Group was responsible for reviewing toxicological and related data in order to establish ADIs, and ARfDs, where necessary and possible.

The Meeting evaluated 30 pesticides, including five new compounds and five compounds that were re-evaluated within the periodic review programme of the CCPR for toxicity or residues, or both. The original schedule of compounds to be evaluated was amended for cypermethrins and triadimefon/triadimenol. For cypermethrins, only a toxicological evaluation was carried out as no residue data were received. The evaluation of triadimefon/triadimenol was postponed to 2007 as the peer review process could not be completed in time.

The Meeting allocated ADIs and ARfDs, estimated MRLs and recommended them for use by the CCPR, and estimated STMR and highest residue (HR) levels as a basis for estimating dietary intakes.

The Meeting also estimated the dietary intakes (both short-term and long-term) of the pesticides reviewed and, on this basis, performed a dietary risk assessment in relation to their ADIs or ARfDs. Cases in which ADIs or ARfDs may be exceeded were clearly indicated in order to facilitate the decision-making process by the CCPR. The rationale for methodologies for long-term and short-term dietary risk assessment are described in detail in the reports of the 1997 JMPR (Annex 5, reference 80, section 2.3) and 1999 JMPR (Annex 5, reference 86, section 2.2). Additional considerations are described in the report of the 2000 JMPR (Annex 5, reference 89, sections 2.1–2.3).

The Meeting considered also a number of general issues addressing current issues related to the risk assessment of chemicals, the evaluation of pesticide residues and the procedures used to recommend maximum residue levels.

1.1 DECLARATION OF INTEREST

The Secretariat informed the Committee that all experts participating in the 2006 JMPR had completed declaration-of-interest forms, and that no significant conflicts had been identified. The Meeting was informed of the following declared interests: Dr McGregor was consulting for the pesticide industry on the toxicity of two pesticides, neither of which was on the agenda of the present meeting; the department of Professor Moretto had received funding from the pesticide industry for a course on neurotoxicity; Professor Ray’s research group had received funding from the pesticide industry for mechanistic studies on the toxicity of pyrethroids.

2. GENERAL CONSIDERATIONS

2.1 COMPLETENESS OF DATA SUBMISSIONS

The Meeting noted that CCPR relies upon the scientific advice provided by the JMPR when recommending international food standards for pesticide residues. To ensure maximum transparency and acceptability, it is essential that the Meeting provides state-of-the-knowledge evaluations. This requires independent assessment of all the available data.

For several compounds on the agenda for the present meeting, the Meeting became aware at a late stage (during preparation for the present meeting or during the meeting itself) that additional data were available that had not been submitted to the JMPR. Such information could be critical to the completion of the evaluation. At the present meeting, the evaluation of two substances was significantly affected by incomplete data submissions. As a consequence, the toxicological evaluation of one compound had to be deferred to a future meeting, while for the residue evaluation of another compound only a limited number of maximum residue levels could be recommended.

The Meeting emphasized that JMPR is not a regulatory authority that evaluates and registers specific commercial products; JMPR establishes health-based guidance values for pesticides (i.e. ADIs and ARfDs) and recommends maximum residue levels. For toxicological evaluations, the Meeting applies an overall weight-of-evidence approach hence it is critical that all available information be presented for a complete assessment. For residue evaluations, the Meeting considers all aspects of the use and the fate of a pesticide and its residues, which implies that all studies that provide such information are necessary. It is solely for the JMPR to decide which data are relevant and which are not.

2.2 RESPONSE TO CCPR REGARDING CONCERNS RAISED ABOUT THE TOXICOLOGICAL ASSESSMENT OF DELTAMETHRIN AND INDOXACARB

At its Thirty-eighth Session, the CCPR discussed means to speed up the process by which Codex standards for pesticide residues in foods are developed.[2] The Committee confirmed that JMPR is the scientific body supporting the work of CCPR, while noting that the conclusions and recommendations of JMPR may be discussed at CCPR. The Committee agreed that it should recognize the position taken by JMPR as the best available scientific decision (applicable at the international level) until and if a different position is indicated. The Committee stated that should one of its Members have science-based concerns regarding the conclusions and recommendations made by JMPR, these concerns should be substantiated by scientific information, so that they could be considered by JMPR. Guidance for the process by which such concerns should be raised and considered was developed.[2] JMPR would consider these science-based issues as appropriate.

Such concerns relating to the toxicological evaluation of deltamethrin and of indoxacarb were received by the JMPR Secretariat from the EU and were considered at the 2006 JMPR.

2.2.1 Deltamethrin

At the Thirty-eighth session of the CCPR, the EU delegation raised concerns regarding the ARfD for deltamethrin established by the JMPR in 2000. The EU questioned the scientific validity of the pivotal

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[2] Codex Alimentarius Commission. *Report of the Thirty-eighth Session of the Codex Committee on Pesticide Residues, 3–8 April 2006, Fortaleza, Brazil* (ALINORM 06/29/24).

study used for setting the ARfD and asked the JMPR to review the basis for the ARfD established.

Evaluation of deltamethrin by the JMPR

In 2000, the Joint Meeting set an ARfD for deltamethrin of 0.05 mg/kg bw on the basis of the NOAEL of 5 mg/kg bw in a study of acute neurotoxicity in rats[3] and with the application of a 100-fold safety factor. Effects noted at the LOAEL of 15 mg/kg bw were salivation, reduced mobility in an open-field test, and soiled fur. The JMPR concluded that microscopic examination of perfused tissues (including sciatic, tibial and peroneal nerves) from animals at 50 mg/kg bw revealed no treatment-related neuropathological lesions.

The EU evaluation of deltamethrin

In August 2002, the EU rapporteur reviewed the study of acute neurotoxicity and concluded that it was not acceptable.[4] The reasons for unacceptability were absence of data on food consumption and primarily no investigations of nervous tissue from the groups at the intermediate and lowest dose. The EU rapporteur considered that there was an increased incidence of digestion chambers in peripheral nerves with or without axonal degeneration in two out of ten animals receiving deltamethrin at a dose of 50 mg/kg bw compared with none in the control group. In October 2002 the EU confirmed an ARfD of 0.01 mg/kg bw.[5, 6]

Comments made by the JMPR

The 2006 JMPR considered a working paper containing details of the findings of the study of acute neurotoxicity, historical control data on lesions in studies of neurotoxicity [2,7] and information on other studies of potential relevance to the derivation of the ARfD. The Meeting also noted recently published findings[8] of an ED_{30} of 2.5 mg/kg bw and a threshold dose of 1 mg/kg bw for reduced motor activity in rats exposed to deltamethrin by gavage. The latter would be a C_{max} effect and a compound-specific assessment factor of 25 would be appropriate. This would give an ARfD of 0.04 mg/kg bw, thus confirming the ARfD set in 2000.

The 2006 JMPR concluded that the absence of data on food consumption and lack of neuropathological investigation for the animals at the intermediate and lowest doses in the study of acute neurotoxicity did not compromise the interpretation of the study. Peripheral nerve oedema was considered to be a phenomenon that occurred only at a high dose, and that other end-points evaluated

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[3] Nemec, M.D. (1998a) An acute neurotoxicity study of deltamethrin in rats. Unpublished report No. A74318 (AgrEvo document C006785), dated 18 March 1998, from WIL Research Laboratories, Inc., Ashland, Ohio, USA. Submitted to WHO by Hoechst Schering AgrEvo, Frankfurt-am-Main, Germany.

[4] The Codex Committee on Pesticide Residues (2006) Concern regarding deltamethrin, from the European Union, as submitted to the JMPR on 27 June 2006.

[5] European Commission (2002) Review report for the active substance deltamethrin (6504/VI/99 final, 17 October 2002).

[6] European Commission (2003) Directive 2003/5/EC, amending Directive 91/414/EEC. Official Journal L8, 14 January 2003.

[7] Nemec, M.D. (1998b) A subchronic (13-week) neurotoxicity study of deltamethrin in rats. Unpublished report No. A74317 (AgrEvo document C0067850), dated 19 March 1998, from WIL Research Laboratories, Inc., Ashland, Ohio, USA. Submitted to WHO by Hoechst Schering AgrEvo, Frankfurt-am-Main, Germany.

[8] Wolansky, M.J., Gennings, C. & Crofton, K.M. (2006) Relative potencies for acute effects of pyrethroids on motor function in rats. *Toxicological Sciences* 89, 271–277.

in the study were judged adequate to identify a NOAEL. The Meeting confirmed that the ARfD of 0.05 mg/kg bw established by the JMPR in 2000 was appropriate for deltamethrin.

2.2.2 Indoxacarb

At the Thirty-eighth Session of the CCPR,[2] the EU delegation raised concerns regarding the ADI for indoxacarb established by the 2005 JMPR. The EU sought clarification as to why the JMPR considered the studies in rats unsuitable to support the ADI.

Evaluation of indoxacarb by the JMPR

The 2005 JMPR considered the establishment of an ADI and ARfD for indoxacarb. The Joint Meeting concluded that the mild haemolysis observed in studies in rats and dogs given repeated doses was characterized by a reduced erythrocyte count, erythrocyte volume fraction, haemoglobin concentration, and a secondary physiological response involving increased haemopoiesis and deposition of haemosiderin in the spleen and liver. While the reductions in erythrocyte numbers through oxidative damage of haemoglobin occurred with a rather shallow dose–response curve, they achieved statistical significance relative to concurrent controls. However, the JMPR considered that these small changes in circulating erythrocyte mass in the absence of a concomitant increase in haematopoeisis were of no toxicological importance. As a consequence, the ADI of 0–0.01 mg/kg bw per day was based on a NOAEL of 1.1 mg/kg bw per day for erythrocyte damage, Heinz body formation and the secondary increase in haematopoeisis in the spleen and liver in a 1-year dietary study in dogs and using a 100-fold safety factor. This NOAEL was supported by a similar value (1.3 mg/kg bw per day) in a two-generation study of reproduction in rats in which reduced body-weight gain and food consumption in dams was observed. At higher doses, the pups had reduced body-weight gain during lactation.

The EU evaluation of indoxacarb

In its consideration of a toxicological database that was similar to that considered by the 2005 JMPR (although it did not contain the new information on the insecticidally inactive enantiomer of indoxacarb that was available to the JMPR), the EU concluded that the dose-related reduction in haematological effects observed in a 2-year study in rats were treatment-related. In the 2-year study, rats were given diets containing indoxacarb at a concentration of 0, 10 (females only) 20, 40, 60, 125 or 250 (males only) ppm. The EU noted that the haematological effects, suggestive of anaemia, were present at the lowest dose tested (10 ppm) in females and therefore no NOAEL could be established. However, because the haematological effects observed in female rats at 10 ppm (0.55 mg/kg bw per day) were marginal, it was considered to be a NOAEL. The ADI of 0–0.006 mg/kg bw per day was based on the NOAEL of 0.55 mg/kg bw per day and a 100-fold safety factor.

Comment made by the JMPR

The 2006 JMPR re-considered the 2-year study in rats and noted that the minor haematological effects observed in females at 10 ppm after 1 year of treatment, which were considered by the EU to be a ‘marginal-adverse’ effect, were only slightly different from the effects observed at the next higher dose of 20 ppm. The dose-response curve for haematological effects in female rats was so shallow that the difference at 10 and 20 ppm (0.55 and 1.04 mg/kg bw per day respectively) was very small (i.e. no significant difference in erythrocyte volume fraction or erythrocytes, and concentration of haemoglobin was reduced by approximately 1%). After 2 years of treatment, mean values for erythrocytes, haemoglobin and erythrocyte volume fraction in males and females at all doses were comparable with or higher than control values.

The 2006 JMPR confirmed that the appearance of Heinz bodies and the secondary increase in haematopoiesis in the spleen and liver as the marker of an adverse effect on erythrocytes was a more robust end-point for the toxicological effects of indoxacarb. Dogs were the most appropriate species

for these effects. The 2006 JMPR confirmed that the ADI for indoxacarb of 0–0.01 mg/kg bw per day, established by the 2005 JMPR, was appropriate.

2.3 APPLICATION OF ALTERNATIVE GOOD AGRICULTURAL PRACTICES (GAP)

The CCPR, at its 37th Session in 2005 drew attention to acute intake concerns arising from proposals for disulfoton, fenamiphos and aldicarb. The 2005 JMPR proposed a *retrospective* approach to deal with requests from CCPR and a *prospective* approach to deal with cases occurring during evaluations of new and periodic review compounds. The aim being to find a GAP, supported by sufficient residue data where short-term dietary intake is not of concern.

The CCPR agreed that both approaches should be applied. The retrospective approach used, in the main, for existing compounds on an as need basis, while the prospective approach would become the routine approach (Thirty-eight ession of CCPR, ALINORM 06/29/24, 2006, paragraph 29).

In the retrospective approach, relevant GAPs are examined sequentially with available supervised residue trials data. The main interest is in the highest residues that occur with each GAP.

The Meeting noted that the number of available trials would be important to ensure that a good estimate of the highest residues was obtained, i.e., the highest residue resulting from a specified GAP or use pattern (label instructions such as application rate, growth-stage timing, pre-harvest interval, etc). If only three or four trials are available, the results could be misleading, e.g., in US trials residues of disulfoton on lettuce (see example below) did not exceed LOQ in four of the eight reported trials. It therefore could be possible, with only three or four trials, to conclude that residues would be less than LOQ.

If the highest residues for a pesticide-commodity combination are in a borderline area for acceptability of short-term intake, probably at least seven or eight relevant trials would be needed for the assessment. In this situation even for a minor crop, at least seven or eight trials would be needed for a good estimate of likely highest residues.

Supporting information for old compounds would include targeted selected monitoring for residues where the use pattern including timing and pre-harvest interval are known.

Example of assessment summary – disulfoton residues in lettuce

Commodity	GAP	Residue data relevant to national GAP	No of trials	Highest residue mg/kg	IESTI Gen pop'n[§] %ARfD	IESTI children %ARfD
Lettuce	Canada, 1.1-2.2 kg ai/ha, soil treatment at seeding	US trials: < 0.03, 0.10, 0.56	3	0.56	180%	280%
Lettuce	US, 2.2 kg ai/ha, PHI 60 days, soil treatment (equiv to Canadian GAP)	US trials: < 0.03, 0.10, 0.56	3	0.56	180%	280%
Lettuce	Mexico, 1.0 kg ai/ha, soil treatment at seeding	US trials: < 0.03, < 0.05, 0.05, < 0.05, 0.22, 0.58, 0.64, 1.1	8	1.1	380%	570%

[§] General population

In this example, none of the residue data, relating to available alternative GAP, suggests a lower maximum residue level to replace the current proposal of 1 mg/kg for disulfoton on head and leaf lettuce.

Example of assessment summary – fenamiphos residues in peppers

Commodity	GAP	Residue data relevant to national GAP	No of trials	Highest residue mg/kg	IESTI Gen pop'n %ARfD	IESTI children %ARfD
Peppers, sweet	Argentina, CS, 3.2-4.0 kg ai/ha, 1 soil application, PHI 90 days	-	0			
Peppers, sweet	Italy, CS, 10 kg ai/ha, 1 application, PHI 60 days, in irrigation water from transplanting to about 10 days later	France, Greece, Italy, Portugal, Spain: < 0.02 (7), 0.02 (2), 0.07, 0.08, 0.11 mg/kg	12	0.11	30%	30%
Peppers, sweet	Spain, CS, 4.8-9.6 kg ai/ha, 1 application[1], PHI 60 days, soil treatment before start of flowering	France, Greece, Italy, Portugal, Spain: < 0.02 (7), 0.02 (2), 0.07, 0.08, 0.11 mg/kg	12	0.11	30%	30%
Peppers, sweet	Iraq, EC, 8 kg ai/ha, 1 soil application	-	0			
Peppers, sweet	Spain, EC, 4.8-10 kg ai/ha, 1 soil application[2], PHI 60 days, before start of flowering	Spain: 0.06, 0.08, 0.26 mg/kg	3	0.26	70%	80%
Peppers, sweet	El Salvador, GR, 1.0 kg ai/ha, 0.6-1.2 kg ai/ha, 1 soil application, PHI 60 days	-	0			
Peppers, sweet	Guatemala, GR, 1.0 kg ai/ha, 0.6-1.2 kg ai/ha, 1 soil application, PHI 60 days	-	0			
Peppers, sweet	Spain, GR, 5-10 ka ai/ha, 1 soil application, PHI 60 days, pre-planting or pre-sowing	Spain: < 0.05, 0.06, 0.35 mg/kg	3	0.35	100%	110%

[1] First application, just before transplanting or sowing or immediately afterwards; and second application, during the rooting period before the start of flowering.

[2] Up to two applications per season can be given, by dividing the dose in half if the duration of the crop makes it possible to observe the safety period. The first application should be before sowing or transplanting or immediately afterwards and the second during the rooting period of the crop before the start of flowering.

For fenamiphos a maximum residue level recommendation, based on Spanish or Italian GAP, for the use of the CS formulation may proceed and appears acceptable because the IESTI does not exceed the ARfD. However, the residue levels arising from the use of three different formulations (CS, EC and GR) were not significantly different and the Meeting decided to use results from all three formulations to estimate a maximum residue level and HR. The highest residue (0.35 mg/kg) was associated with an IESTI that exceeded the ARfD.

In this example, none of the residue data, relating to available alternative GAP, suggests a lower maximum residue level to replace the current proposal of 0.5 mg/kg for fenamiphos in peppers.

Example of assessment summary – pyraclostrobin residues in head lettuce

Commodity	GAP	Residue data relevant to national GAP	No of trials	Highest residue mg/kg	IESTI Gen pop'n %ARfD	IESTI children %ARfD
Head lettuce	USA: 4 applications of 0.117-0.23 kg ai/ha, PHI 0 days	US: 2.0, 3.7, 5.0, 14, 15, 20 mg/kg	6	20	390%	580%
Head lettuce	Greenhouse - Belgium and UK GAP: 2 applications of 0.1 kg ai/ha and PHI 14 days	Greenhouse – Germany, Spain, France, UK, the Netherlands: 0.03, 0.04, 0.13, 0.23, 0.29, 0.33, 0.75, 0.81 mg/kg.	8	0.81	20%	20%

In the prospective assessment for pyraclostrobin residues in head lettuce, residue data relating to US GAP were first examined. When the IESTI calculation from the highest residue exceeded the ARfD, alternative GAP was examined. The next highest residue 0.81 mg/kg of pyraclostrobin in lettuce was associated with Belgian and UK greenhouse GAP from European trials. The IESTI associated with this residue was less than the ARfD. (See report on pyraclostrobin).

Data submissions for alternative GAP evaluation

The Meeting noted that different situations will need different approaches to make the best use of data. Each situation should be considered before a data submission and request is made for an alternative GAP evaluation.

When the MRL in question is set at the limit of quantification (LOQ), unless a new analytical method is developed with lower LOQ and samples are analyzed with this method, the MRL recommendation cannot be lowered regardless of availability of alternative GAP. (In some cases, several methods with different LOQs are used in trials. Regardless of GAP, it may be possible to recommend a maximum residue level on a basis of "lower LOQ" depending on the numbers of trials and feasibility and reliability of the method.)

When the MRL (or rather the supporting HR) in question relates to an IESTI which is just exceeding the ARfD (around 100–200% of ARfD), and there is a viable alternative GAP, i.e., longer PHI or lower rate with a sufficient number of trials, it may be possible to recommend a lower MRL.

When the calculated IESTI is substantially higher than the ARfD, an HR from an alternative GAP should be substantially less than the HR estimated in the previous evaluation, i.e., the alternative GAP should be significantly different. The number of trials matching the alternative GAP must also be sufficient. This may result in a need for new trials matching the alternative GAP.

Information on current GAP is always needed.

2.4 SHORT-TERM DIETARY INTAKE ASSESSMENT: UNCERTAINTIES IN THE INTERNATIONALESTIMATED SHORT-TERM IN TAKE (IESTI) CALCULATION AND ITS INTERPRETATION.

Introduction

The JMPR uses the deterministic method for the International Estimated of Short-Term Intake (IESTI) of a particular pesticide from the consumption of a food commodity. This calculation was

first introduced by a WHO Consultation on exposure assessment in 1997 and further developed by the JMPR in subsequent meetings (Chapter 3; 2005 JMPR Report).

In characterizing the risks associated with the short-term dietary exposure to a pesticide from the consumption of a certain food, the IESTI is compared with the established acute reference dose (ARfD) of the compound, and the intake expressed as a percentage of the ARfD. This value can then be used to make a judgment about the potential risk associated with the consumption of that food commodity.

In a case where an IESTI calculation, for a crop/pesticide combination, results in an intake higher than 100% ARfD, the Meeting will state according to current practice: "The information provided to the JMPR precludes an estimate that the short-term dietary intake would be below the ARfD for the consumption of the commodity". Due to the uncertainties in the assessment, arising from the uncertainties in each of the parameters or assumptions used, an exceedance of the ARfD does not necessarily represent a health risk to the consumers. The establishment of an ARfD which is necessarily conservative and/or a conservative assessment of exposure will lead to an overly conservative estimate of acute dietary risk.

Some governments, regional authorities, the CCPR and the JMPR have discussed the possibilities for improvement in the methodology currently used by the JMPR in assessing the short-term dietary intake of pesticide residues.

International Estimated Short-Term Intake (IESTI)

The equations below show the IESTI calculation used currently by the JMPR for raw agricultural commodities and when post-harvest treatment of the pesticide was used in grains, oil seeds and pulses:

Case 1: U < 25 g $$IESTI = \frac{HR \times LP}{bw}$$

Case 2: U ≥ 25g

Case 2a: LP > U $$IESTI = \frac{HR \times \nu \times U + (LP - U) \times HR}{bw}$$

Case 2b: LP < U $$IESTI = \frac{HR \times \nu \times LP}{bw}$$

Where:

HR = highest residue in composite samples from supervised trials conducted according to GAP, in mg/kg

ν = variability factor, which gives the relationship between the 97.5th percentile of the residues in crop units and the average residue in the sampled lot of the commodity

LP = highest large portion provided (97.5th percentile of eaters), in kg of food per day

U = median unit size unit weight of the crop unit examined, in kg

Bw = mean body weight, of the selected population, in kg.

The information on each of these parameters and the limitations attached to the data provided to the Meeting are described below.

Highest residue

The highest residue (HR) is estimated from supervised trials evaluated by the Meeting that have been conducted according to GAP. The uncertainties in these values are mainly associated with the residue dataset available to the JMPR. For major commodities moving in trade, a minimum of eight residue trials are necessary for recommendations to be made, but for minor or specialty crops, as low as three trials could be acceptable. When only limited residue data is available, and the distribution of the residue population is not known, the resulting MRL recommendation can be substantially higher than the HR.

The HR used in the IESTI calculation refers to the residues of toxicological concern present in the edible portion of the crop, while the MRL refers to a residue definition relevant for enforcement purposes related to the commodity in trade. There is a concern that conducting the assessment using the HR value instead of the MRL might not assure the safety of consumers, mainly when the MRL is much larger than the HR. The incorporation of statistical calculation in the recommendation process in 2006 (General Consideration 2.10), will improve the consistency in the estimations of the MRL made by the JMPR based on the available data.

Variability factor

For crops with unit weight > 25 g (Case 2), a variability factor of 3 applied to the HR value will represent a unit with the highest residue value. The variability factor reflects the variability of residues in individual units and is defined as the 97.5^{th} percentile of residue data within a lot divided by the mean of the lot. The factor of 3 represents the mean of variability factors estimated from a dataset of residue data from over 22000 crop units in single plots from 13 countries representing 13 crops and 25 pesticides (2005 JMPR Report). Further improvement on this estimation may be made based on new data or new approaches.

Large portion, unit weight and body weight

Data on the consumption of large portions (LP), unit weight (U) and body weight used currently by the JMPR were provided by the governments of Australia, France, The Netherlands, Japan, Sweden, South Africa, the UK and the USA and compiled by GEMS/Food. The large portion value from each country represents the 97.5^{th} percentiles of consumers; however, the information provided to GEMS/Food does not include the method used to collect the data neither the size of the dataset which was the base of the estimated LP. Consequently, the uncertainty behind the consumption data is unknown.

In the IESTI calculation, the unit weight value (U) will determine whether a variability factor is to be applied to the HR and whether the LP will be composed by more than one crop unit (Case 2a) or will be a portion of the unit (Case 2b). The Meeting does not know whether the U values provided represent the median of units consumed in a country or a different estimation. Also, it is not clear in all cases whether that value refers to the whole commodity or the edible portion.

The body weight (bw) data provided represent the mean body weight for children and for the general population in each country. However, the correlation between the large portion and body weight of each population should be established.

The IESTI was primarily developed to assess the short-term exposure arising from the consumption of food containing residues at levels found in supervised residue trials conducted according to GAP. Some countries have been applying the IESTI equations to assess the safety of food containing residues at levels found in monitoring and/or enforcement programs. The adequacy of such an approach needs to be discussed further.

The acute reference dose (ARfD)

When setting ARfDs, the WHO panel of the JMPR uses the most appropriate data from the available toxicology database. For some compounds such as those which have specific investigations of acute toxic endpoints the ARfD that is set will have a relatively low level of uncertainty associated with it. For other compounds such as those with ARfDs based on repeat dose studies with large margins between NOAELs and LOAELs the degree of uncertainty will be large and the resulting ARfD will be conservative.

Further uncertainty and potential conservatism can occur in the ARfD if the default safety/uncertainty factor of 100 (10× for interspecies extrapolation, 10× for variability of responses in the human population) is used in the absence of specific data which support the application of chemical specific adjustment factors (CSAFs).

Attention is drawn to the fact that when the ARfD is conservative, because of a lack of appropriate toxicological data, this will be clearly stated in the relevant section of the JMPR report, together with an indication of the types of data needed to refine the estimate. The Meeting notes that since the introduction of the acute reference dose concept at the national and international level in the late 1990s, a number of conservative ARfDs which were set initially have subsequently been amended on the basis of recently generated acute toxicity data and improved guidance on the establishment of ARfDs.

Conclusions

It is recognized that the IESTI and the ARfD values are not absolute numbers but are associated with uncertainty and variability. While it is possible to reduce uncertainty, biological variability[9,10] can only be characterized. Both are set conservatively and the degree of conservatism reflects the level of uncertainty and variability in the data The IESTI calculation should assist the decision making process rather than be the sole determinant of acceptable or unacceptable risk. The calculation takes into account only the parameters presented to it. At present, the decision making process does not take into account important qualitative influences, e.g. the nature of the toxicological endpoint.

In order to improve the estimation process the uncertainty of the individual components of the estimation should be examined and possible ways of improvements be identified.

The Meeting recommended that FAO and WHO address the issues identified in this document, with the participation of all relevant stakeholders. The main objectives would be the improvement of the estimation of the short-term dietary intake of pesticides and of the interpretation of the outcome of the short-term assessment conducted by the JMPR. The discussion should include *inter alia* the following specific issues:

- Uncertainty and variability of the parameters used in the estimation;
- Ways to improve the consumption, unit weight and body weight data provided to the JMPR;
- Identification of additional subgroups of the population for which the assessment should be conducted, e.g., toddlers;

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[9] Uncertainty: Imperfect knowledge concerning the present or future state of an organism, system, or (sub) population under consideration. (IPCS Risk Assessment Terminology, WHO Geneva 2004).

[10] Variability: Heterogeneity of values over time, space, or different members of a population, including stochastic variability and controllable variability. Variability implies real differences among members of that population. National Resource Council, Science and Judgement in Risk Assessment (National Academy Press, Washington, DC, 1994).

- The adequacy of the IESTI equations when residues from monitoring/enforcement data are used or the need of a specific methodology for this application;
- How to improve communication between the JMPR and the risk managers and the public on the output of the risk assessment conducted by the Meeting

2.5 UPDATE OF THE AUTOMATED SPREADSHEET APPLICATIONS FOR THE CALCULATION OF DIETARY INTAKE: INTRODUCTION OF THE 13 GEMS/FOOD CONSUMPTION CLUSTER DIETS.

The 2003 Meeting agreed to adopt automated spreadsheet applications for the calculation of dietary intake in order to harmonize and facilitate the process. The spreadsheet applications were constructed by RIVM[11], of The Netherlands, in cooperation with WHO/GEMS/Food incorporating all available consumption data in Excel spreadsheets and, where possible, linking this consumption data to the Codex Commodities for which MRLs, HR(-P)s and STMR(-P)s are estimated. The spreadsheets are used to calculate the IEDI and IESTI using the formulas as described in Chapter 3 of the 2003 Report. To use the spreadsheets, estimates made by JMPR (ADI, acute RfD, STMR (-P), HR (-P), and when necessary MRL values) are entered according to the manual attached to the templates. Then calculations and generation of a final table are performed automatically.

Until now, the long-term dietary exposure (IEDI) was calculated based on the five GEMS/Food Regional Diets. At the Thirty-eighth Session of the CCPR (April 2006), WHO presented more accurate and representative diets. Using a cluster analysis approach, thirteen GEMS/Food Consumption Cluster Diets were developed based on average FAO Food Balance Sheet data for the period 1997-2001 (CX/PR 06/38/3). In cooperation with The French Food Safety Agency and GEMS/Food, these Consumption Cluster Diets have now been incorporated by RIVM in the JMPR IEDI spreadsheet. The main difficulty in this process was, that FAO Food Balance Sheet data do not match one-to-one with the Codex Classification of Foods and Animal Feeds, which are also used in the Cluster Diets. These two classification systems have some incompatibilities in the definition of the commodity and also in the numbering. The spreadsheets contain a number of footnotes to explain how these discrepancies were dealt with.

The main impact of having thirteen diets instead of five will be, that the consumption of a food important to a certain region will no longer be averaged with regions that do not consume the food so much. For that specific region there will be an increased intake of such a food when compared with the five Regional Diets. Furthermore, because in certain clusters the average total food consumption in grams has substantially increased since the previous diets were developed, the impact on dietary intake of pesticide residues is also expected to increase in a similar fashion. The Meeting noted that despite the increase in total food consumption, the mean body weights used in the IEDI spreadsheet are still 55 kg for the Asian clusters (G and L) and 60 kg for all others. GEMS/Food will update these numbers in a future project.

The Meeting noted that in the spreadsheet, the main entry for a commodity would take into account major processed commodities, e.g., in ‘FP 0226 Apple’, apple juice is included. If an STMR-P is available for apple juice, the consumption of the juice has to be subtracted from the total apple consumption to yield the consumption of apple as raw agricultural commodity, and the two items can be calculated separately. Therefore, in such cases the consumption figures in the final tables in Annex 3 will be somewhat modified when compared to the figures in the spreadsheet itself.

The Consumption Cluster diets are available on the following address: (http://www.who.int/foodsafety/chem/gems/en/index1.html). The spreadsheet applications will be

[11] Dutch National Institute for Public Health and the Environment (RIVM)

available on http://www.who.int/foodsafety/chem/ClusterDietsAug06.xls and will be updated when necessary.

2.6 A TIERED TOXICITY-TESTING STRATEGY FOR PESTICIDES

The Meeting received a brief presentation outlining the results of the ILSI Health and Environmental Sciences Institute (HESI) ACSA (Agrochemical Safety Assessment) project, the results of which have been published in a series of four manuscripts.[12] ACSA involves participants from academia, industry and regulatory/government agencies from a range of countries. The objective of the ACSA project was to review and revise, as appropriate, the data requirements for evaluating the safety of pesticides. The outcome was a proposal for an integrated, tiered testing strategy, with emphasis on the incorporation of information on metabolism and kinetics at all stages, adequate characterization of sensitivity at all life stages, and the provision of information that better suited the needs of risk assessment with respect to duration and pattern of exposure. Other elements were the improved incorporation of physicochemical data into the testing strategy, maximizing the information obtained from a study, the reduction, refinement and replacement of animal use where possible, flexibility and the use of 'trigger' effects to signal the need for higher-tier testing, in a similar manner to that currently used for neurotoxicity testing.

The Meeting welcomed the initiative to undertake a science-based review of the data requirements and to develop an up-to-date testing strategy. The Meeting endorsed the basic approach and encouraged agencies and other stakeholders to continue efforts to validate ACSA proposals and to implement those that were scientficially justified, with due consideration of other issues such animal reduction, refinement and replacement. The Meeting would welcome the opportunity to review progress in this area at a future date.

This proposal receives international attention from various regulatory authorities and organizations. For example, the ILSI-HESI tiered-testing proposal on ACSA is consistent with the US Office of Pesticide Program's vision of a more efficient and reliable science-based paradigm. Thus, OPP views the ACSA as an important springboard to its next generation of data requirements because it incorporates existing knowledge, reduces/refines/replaces animal usage, and takes into account exposure characteristics. Some plans are under way in order to build a foundation and consensus for this new hypothesis-driven toxicology testing paradigm, including an extensive retrospective analysis of the pesticide database.

2.7 GUIDANCE ON THE INTERPRETATION OF HEPATOCELLULAR HYPERTROPHY

Introduction

This document is focused on the histological observation of hepatocellular hypertrophy, a change to the liver that is commonly observed in toxicological studies, particularly in rodents. The purpose of this document to provide general guidance for determining whether the observation of hepatocellular

[12] Barton et al. (2006). The acquisition and application of absorption, distribution, metabolism, and excretion (ADME) data in agricultural chemical safety assessments. *Critical Reviews in Toxicology,* 36:9–35; Carmichael et al. (2006). Agricultural chemical safety assessment: a multisector approach to the modernization of human safety requirements. *Critical Reviews in Toxicology,* 36:1–7; Cooper et al. (2006). A tiered approach to life stages testing for agricultural chemical safety assessment. *Critical Reviews in Toxicology,* 36:69–98; and Doe et al. (2006). A tiered approach to systemic toxicity testing for agricultural chemical safety assessment. *Critical Reviews in Toxicology,* 36:37–68.

hypertrophy in different laboratory species is indicative of an adaptive or an adverse event,[13] so that the most appropriate reference dose can be identified for the establishment of health-based guidance values. This document is intended to facilitate consistent and transparent decisions in pesticide evaluations, and to promote international harmonization in human risk assessment. This guidance should not be regarded as prescriptive; as with any assessment, scientific judgment and consideration of all pertinent information should be used. Because findings of liver effects can encompass a wide range of observations, reported effects should be considered individually and in combination in an overall weight-of-evidence assessment. This guidance places attention on the description of effects that are not adverse and therefore should not contribute towards the selection of a NOAEL; and on those effects that are typically considered to represent evidence of biologically significant toxicity and can contribute towards a selection of a lowest-observed-adverse-effect level (LOAEL).

Hepatocellular hypertrophy

Hepatocellular hypertrophy is a general increase in the size of the liver because of cell enlargement and accumulation of fluids. It is not attributable to tumour formation or to an increase in the number of cells (hyperplasia). An indication that hypertrophy is occurring in hepatocytes is usually an increase in the size and weight of the liver. At the cellular level, the response is a proliferation of the smooth endoplasmic reticulum (SER) that would be evident microscopically at an early stage at the tissue level as an increase in acidophilia (e.g. eosinophilia). Proliferation of SER would be confirmed by electron microscopy.

Hepatocellular hypertrophy is typically related to increased functional capacity. To maintain homeostasis in the whole organism, the hepatocyte frequently responds to xenobiotic exposure by increasing its metabolic capacity via induction of xenobiotic metabolizing enzymes. Such hepatic adaptive responses usually result from chemical interaction with cellular regulatory pathways (often receptor-mediated), leading to changes in gene expression and protein synthesis, and eventually cell growth and alteration of microsomal enzyme activities. Adaptive responses are potentially beneficial in that they enhance the capacity of the organism to respond to chemical-induced stress, and are reversible. However, there are limits to these homeostatic responses and it is important to recognize when these limits have been exceeded. Because toxicity is an exposure-related phenomenon, there are lower exposures that produce effects within the control of homeostatic mechanisms and higher exposures that result in effects that exceed the capacity of these mechanisms to return the organism to its previous condition once exposure has ceased.

Weight-of-evidence approach: factors to consider

No single effect is generally sufficient to support a determination that liver hypertrophy is adaptive or adverse. Determination of hepatotoxicity involves a detailed consideration of clinical chemistry and histopathology (or other relevant information such as histochemistry, morphometry and electron microscopy). The type, severity or magnitude, and dose–response relationship of observed effects, as well as the progression of observed lesions with duration of dosing, should be considered. It is important to evaluate whether the observed effects present a biologically plausible and consistent pattern of changes in clinical chemistry and histopathology indicative of hepatotoxicity. Sustained effects should be given more weight than transient effects. The key questions that should be addressed in the analysis are listed below.

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[13] *Adverse effects* are considered to be functional impairments or pathological lesions that may affect the performance of the whole organism or that reduce an organism's ability to cope with an additional challenge (USEPA, 2002; see footnote 19). On the other hand, an adaptive effect is an initial response of the organism to maintain homeostasis, and can be defined as those biological effects that do not cause biochemical, physiological, and morphological changes that affect the general well being, growth development or lifespan of the organism (Williams & Iatropoulos, 2002; see footnote 20).

Does the histological evidence support the hypothesis that the hepatocellular hypertrophy is an adaptive effect? Hypertrophy as an adaptive response should not be accompanied by other hepatic responses identifiable by histology, such as necrosis, apoptosis, pigment deposition, or hyperplasia (an increase in the number of cells, as a result of tissue regeneration or mitogenic stimulation). In rodents, hypertrophy and hyperplasia may occur together following exposure to microsomal enzyme inducers. Thus, it is important that the hyperplasia is histologically distinguished from the hypertrophy and characterized for its relevance for human risk assessment. Care should be exercised to ensure that eosinophilia is not attributable to the presence of eosinophilic foci of altered hepatocytes. In general terms, it has been stated that, "To the best of our knowledge there is neither any hepatocarcinogenic agent which does not elicit FAH [foci of altered hepatocytes], nor is there any model of hepatocarcinogenesis without formation of these lesions prior to the manifestation of benign or malignant hepatocellular neoplasms."[14] Thus, although neoplasia is not an inevitable outcome of FAHs, the possibility should be considered. Lesion type, distribution, and grade of severity should also be considered in determining whether and to what extent a liver finding is adverse. Differentiation of the zone of damage (e.g. periportal, centrilobular) may provide insight into the mode of action of hepatotoxicity. Also, it should be considered whether the liver hypertrophy occurred secondary to damage in another organ system (e.g. as a result of exposure to haemolytic or nephrotoxic agents).[15]

Does the clinical chemistry support the hypothesis that the hepatocellular hypertrophy is an adaptive effect? If there is no evidence of histopathological change, do the clinical chemistry findings exclude a conclusion of hepatotoxicity? The following changes in clinical chemistry can be considered to be indicators of liver damage, their extent and relevance depending on the species: decreased concentration of plasma albumin, increased activities of alanine aminotransferase (ALT), aspartate aminotransferase (AST), alkaline phosphatase (ALP) and gamma-glutamyltransferase (GGT), and increased concentration of free or total bilirubin and cholesterol. Increases in ALT and AST activity indicate damage to the hepatocyte, in particular cellular membrane leakage. On the other hand, hepatocellular hypertrophy alone can be associated with some increase in ALT or AST activity owing to membrane leakage, with no other evidence of significant hepatic injury. An increase in total bilirubin, cholesterol, and ALP and GGT activities can be indicators of damage to the biliary system (changes in free bilirubin indicate hepatocellular damage). A dose-dependent response and a statistically significant change would lend weight to the interpretation of the significance of these changes. However, statistical significance alone is not a reliable indicator of hepatic toxicity, particularly in a single parameter. Marginal changes in blood chemistry that show a biologically plausible and consistent pattern of effects might be considered to be indicative of liver toxicity. However, the values should be outside the normal range for control animals of the species (depending on strain, breeder, testing laboratory, etc.) being examined and not only different from those for the concurrent controls. Therefore, robust databases on consistent trends in the data, group means, the number of animals examined and the number affected are necessary for the important considerations in the clinical chemistry analysis.

Are the liver changes transient or sustained? Is there a progression of the effect? The results from studies of shorter duration should be compared with those from studies of longer duration or long-term tests to determine the progression of effects with duration of dosing and whether they are transient and reversible. Thus, recovery studies are very useful. It is sometimes difficult to use short-term studies to determine whether hepatocellular hypertrophy or liver size/weight is associated with adverse effects. If long-term studies of toxicity are available and show no progression of liver toxicity

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[14] Bannasch P, Haertel T, Su Q (2003) Significance of hepatic preneoplasia in risk identification and early detection of neoplasia. *Toxicologic Pathology*, 31:134–139.

[15] Andrew, D. (2005) PSD guidance document: interpretation of liver enlargement in regulatory toxicity studies. York, England, Pesticides Safety Directorate, dated May 26, 2005. Available from http://www.pesticides.gov.uk/uploadedfiles/Liver%20paper%20post%20ACP(1).doc

(e.g. neoplasia, hyperplasia, degeneration, necrosis), then the observed cellular hypertrophy and/or increase in liver size/weight observed in short-term studies is not likely to be adverse.

Is liver hypertrophy accompanied by the induction of P450 or other xenobiotic metabolizing enzymes? Are there any toxicological effects consequent to that induction? Chemicals may induce enzymes responsible for rate-limiting steps in the metabolism or elimination of other xenobiotic or endogenous compounds. Such interactions can potentially lead to clinically relevant outcomes (e.g. reducing the efficacy of a drug, increasing the toxicity of another chemical, or altering hormonal homeostasis). To assess the adequacy of the margin between the dose that causes enzyme induction and the established health-based guidance value (e.g. ADI), the following factors should be considered:

- Is the extent of induction minimal or substantial?
- In the absence of data on enzyme induction, are there data to suggest the hypertrophy is due to factors unlikely to be associated with enzyme induction (e.g. chlorinated hydrocarbon-induced lipid accumulation)?
- Are there data characterizing the induction (e.g. which receptors are activated or which isoenzymes are induced) and its human relevance?
- Are there interspecies comparative data (e.g. from studies with human and animal hepatocytes in vitro) characterizing chemical interactions (both induction and inhibition)?
- Can the evaluation of microsomal enzyme induction help to interpret the basis of effects found in other organs or tissues?

The IPCS document on chemical-specific adjustment factors provides useful guidance for evaluating toxicokinetic and toxicodynamic data to address interspecies and interindividual differences.[16]

General principles

The following principles should be followed in the final assessment of liver hypertrophy:

- In the absence of histopathological damage and relevant clinical chemistry changes, at the dose that induces only hepatocellular hypertrophy and/or liver size/weight changes, hypertrophy should not be identified as an adverse effect or used for establishing health-based guidance values. This dose should be identified as a lowest-observed-effect level (LOEL).
- If hepatotoxicity, as characterized by toxicologically significant changes in histopathology and/or clinical chemistry, occurs at doses higher than those causing liver hypertrophy, then the LOAEL for the study should be the dose that elicits hepatotoxicity (or some other relevant toxicity found in the study).
- If there is insufficient information to determine whether the observed liver hypertrophy is an adaptive or an adverse response, then the default is to assume that the effect is adverse.
- If other organ responses are observed that may be the secondary consequence of enhanced hepatic metabolism (e.g. increased hepatic clearance of thyroid hormones), these effects should be

[16] IPCS (2005) Chemical-specific adjustment factors for interspecies differences and human variability: guidance document for use of data in dose–concentration response assessment. Harmonization Project Document No. 2. Geneva, WHO.

evaluated for their relevance to the establishment of health-based guidance values.

- The lowest-observed-effect level (LOEL) for the induction of xenobiotic metabolizing enzymes should not be lower than the established health-based guidance value (e.g. ADI).

- The observation of hyperplasia or neoplasia would result in consideration of a mode-of-action analysis. Liver hypertrophy and a range of other morphological changes can result from chemically-mediated effects on different nuclear receptors, but not all these mechanisms are necessarily relevant to humans. The IPCS Framework for analysing the mode of action of an agent in causing hepatic effects in animals and its relevance for humans[17] should be followed.

In summary, a weight-of-evidence approach should be used to interpret findings of hepatotocellular hypertrophy. Hepatocellular hypertrophy and the associated increase in liver size and weight are morphological descriptions and do not necessarily characterize nor indicate liver damage. The principles of this guidance (including the weight-of-evidence approach) were especially applied by the 2006 JMPR in its evaluation of liver effects caused by boscalid, haloxyfop, quinoxyfen and thiacloprid.[18] For additional information, the evaluator is referred to the USEPA[19] and the UK PSD[3] documents, as well as a paper by William & Iatropoulos.[20] For the interpretation of histopathology, the evaluator is further referred to standard text books of pathology.[21]

Recommendation

The consistent interpretation of findings from studies of toxicity to determine whether they have significance for human health safety assessments is a critical aspect of the evaluation. Thus the Meeting recommended that the interpretation of effects other than hepatocellular hypertrophy that may be modest or adaptive (e.g. reductions in body weight, changes in some organ weights), that may not be associated with any functional impairment or structural damage, should be considered in the IPCS Harmonization Project.

2.8 UPDATING THE PRINCIPLES AND METHODS OF RISK ASSESSMENT: MRLS FOR PESTICIDESAND VETERINARY DRUGS.

The Meeting welcomed the report[22] of a workshop hosted by FAO, WHO and The Dutch National Institute for Public Health and the Environment (RIVM) at Bilthoven in The Netherlands in November 2005. The workshop was organized within the framework of the *Project to Update the Principles and Methods for the Risk Assessment of Chemicals in Food*.

The main aim of the workshop was to harmonize, to the extent possible, risk assessment procedures for pesticide residues and veterinary drug residues. The workshop issued 14

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[17] Boobis A, Cohen SM, Dellarco V et al. (2006) IPCS Framework For Analysing the Relevance of a Cancer Mode of Action for Humans. *Critical Reviews in Toxicology* (in press).

[18] See section 4. Full toxicological evaluations to be published as *Pesticide residues in food—2006 evaluations. Part II. Toxicological.* Geneva, World Health Organization.

[19] USEPA (2002) Hepatocellular hypertrophy. HED Guidance Document # G2002.01, October 21, 2002. Office of Pesticide Programs, Health Effects Division (HED), USEPA. Available on request.

[20] Williams GM, Iatropoulos MJ (2002) Alteration of liver cell function and proliferation: differentiation between adaptation and toxicity. *Toxicologic Pathology*, 30:41–53.

[21] For example: Cheville NF (1994) *Ultrastructural pathology—an introduction to interpretation.* Iowa State Press; and Haschek WM, Rousseaux CG (1998) *Handbook of toxicologic pathology*. New York, NY, Academic Press, Inc.

22 FAO/WHO. 2006. Updating the Principles and Methods of Risk Assessment: MRLs for Pesticides and Veterinary Drugs. http://www.fao.org/ag/AGP/AGPP/Pesticid/JMPR/DOWNLOAD/bilthoven_2005.pdf

recommendations, some of which were directed to JECFA, some to JMPR and some to both. This report provides a response to the recommendations relevant to JMPR. The numbering is preserved from the workshop report.

Recommendation 5. Partitioning of residues in milk into the fat is influenced by the molecular structure of the compound. Furthermore, the fat content of milk is variable. JECFA proposes MRLs for whole milk. JMPR now recommends two MRLs for fat-soluble compounds, one on whole milk and one on milk fat. This is necessary to estimate residues in processed dairy commodities. The workshop recommended that JECFA and JMPR consider harmonizing this practice.

The partition of fat-soluble compounds between the fat and non-fat phases of milk has been the subject of recent JMPR Reports[23] [24].

The convention had been adopted, that milks contain 4% fat and that fat-soluble compounds partition exclusively into the fat. Until 2004 the JMPR followed the Codex convention of expressing the MRL for fat-soluble compounds in milk on the basis of the calculated whole product, assuming that all milks contain 4% fat[24]. The main purpose of this convention was to allow a calculation of an MRL for fat-soluble compounds in dairy products containing fat concentrations different from that of milk.

The 2004 JMPR noted that some pesticides have intermediate solubility in fat; even if they are regarded as fat-soluble they can be distributed equally between the fat and non-fat portions of milk.

The 2004 JMPR decided that, for fat-soluble pesticides, two maximum residue levels would be estimated where the data permit: one for whole milk and one for milk fat. For enforcement purposes, a comparison could be made either of the residues in milk fat with the MRL for milk (fat) or of the residue in whole milk with the MRL for milk. When needed, maximum residue levels for milk products could then be calculated from the two values, by taking into account the fat content of the milk product and the contributions from the fat and non-fat fractions[24].

The MRL for milk estimated by JMPR should be equivalent to the MRL for whole milk estimated by JECFA.

Recommendation 6. For dual-use substances the evaluation of the application as a pesticide/drug to animals should be undertaken using the same principles. This can be achieved by several means that require coordination between JECFA and JMPR and also CCRVDF and CCPR (risk assessment policy) and will involve the adoption of mutual notification and co-ordination of procedures.

Recommendation 7. JMPR and JECFA should carry out a comprehensive review of all commodity and tissue definitions. As appropriate: harmonizing meat and muscle tissue definitions, combining definitions of poultry and poultry meat, avoid subdivision into specific commodities for milk and eggs, harmonize definition of animal fat to be equivalent and to exclude dairy milk, harmonize definitions for aquatic species, and consider whether JECFA MRLs for liver and kidney should include other offal. Subsequently, amending instructions on the portion of commodity to which the MRL applies is recommended.

The Meeting agreed that recommendations 6, 7 and 11 (see below) requiring coordination and harmonization should progress through a process involving a joint task group from JMPR and JECFA.

Recommendation 8. National governments are encouraged to submit GAP information particularly on 'minor crops' during the data and information call-in process for JMPR.

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[23] FAO. 2003. 2.6 Expression of MRLs for fat-soluble pesticides in milk and milk products. Pesticide Residues in Food – Report 2003. FAO Plant Production and Protection Paper, 176:7-8.

[24] FAO. 2004. 2.7 Revisited: MRLs for fat-soluble pesticides in milk and milk products. Pesticide Residues in Food – Report 2004. FAO Plant Production and Protection Paper, 178:24-25.

The Meeting encouraged the submission of GAP information on minor or specialty crops especially where it was the same or very similar to a registered use on a major crop of the same crop group. Such information would facilitate extrapolation to the minor crop.

Tables of summary GAP information are not generally adequate to convey the nuances of the use pattern necessary for evaluation. For example, it is not always clear from summary tables if the label specifies the maximum number of applications or maximum application amount per season or if there is such a limitation. Sometimes information other than label information is included in summary tables. A copy of the label directions or an English translation of the relevant label directions should be provided.

Recommendation 9. JMPR should continue to evaluate extrapolation of pesticide residues data between geographic zones.

JMPR extrapolates supervised residue trial data between geographic zones when the use pattern (label instructions such as application rate, timing, etc) is the same and when the cultural practices for producing the crop are similar. For example, at this meeting, residue data for aminopyralid on wheat and wheat straw from different geographic zones were combined because the use patterns were similar and the cultural practices for wheat production are known to be similar.

Recommendation 11. Procedures for extrapolation from one species of animal having a full data set and recommended MRLs to another species need to be agreed upon and harmonized guidance documents prepared. This should be based on past experience with specific cases.

When pesticide residues occur in crops and feeds, those residues may readily transfer to food-producing livestock. It is not practical to control the species of livestock that might have access to feeds with various pesticide treatment histories and in such situations MRLs are preferably recommended for the range of livestock commodities that might contain the residues.

In 2002[25] the JMPR decided that the results of cattle feeding studies would be used to support MRLs for mammalian meat and offal and milks. Similarly, the results of studies in chickens or laying hens would be extrapolated to poultry meat, offal and eggs.

The JMPR will maintain this practice of setting broad group MRLs for animal commodities where residues occur via the animal feed.

The situation is different for direct application to an animal. Residues should occur only where there is a registered use for that species. The Meeting agreed that extrapolation to a second species would be considered where the uses were similar and where past experience suggests sufficient comparability between species.

Recommendation 12. A general principle on recommending Group MRLs in wider circumstances should be considered in an attempt to cover more uses where national authorizations exist.

The report[22] explains the current situation:

The current JMPR approach to the estimation of group maximum residue levels is explained in the FAO Manual26. Group tolerances may be proposed where data are available on a number of crops within that crop group or at least two species are included in products of animal origin.

Commodity groupings described in the Codex Classification of Foods and Feeds are the basis for group maximum residue levels. Generally, for a group limit to be proposed, residue levels in the main commodities of the group should not be too divergent and registered uses should be similar. In

[25] FAO. 2002. 2.11 Maximum residue levels for animal commodities – group MRLs. Pesticide Residues in Food – Report 2002. FAO Plant Production and Protection Paper, 172:20-23.

[26] FAO 2002. Submission and evaluation of pesticide residues data for the estimation of maximum residue levels in food and feed. FAO Plant Production and Protection Paper, 170.
http://www.fao.org/ag/agp/agpp/pesticid/p.htm.

some cases where the residues on one or a few commodities in the group are quite different from the rest, it may be possible to recommend a limit for "group, except …..".

MRLs for pesticide residues in food commodities are needed for control-of-use and as trade standards.

Registered uses may vary widely from place to place because of the climate, the variation in pests to be controlled and the cultural practices employed to produce the crop, so control-of-use MRLs are also likely to vary from place to place. Such MRLs are useful for checking if the pesticide has been correctly used, but are problematic for international trade.

MRLs for control-of-use are parochial, while MRLs for trade purposes should be global.

Codex MRLs are used as trade standards. For many commodities, including commodities from minor or specialty crops, MRLs as trade standards are now the predominant need.

From a trade perspective, it is better to have an MRL than no MRL if residues are likely to arise in that food commodity. Even if the MRL is set too low (say 20–50% of what it should be) because of the inadequate data it is better than no MRL.

The Meeting agreed that a more liberal extrapolation to group MRLs was needed.

The Meeting recommended that CCPR consider the following scientific assessment policy for group MRLs.

After dietary intake assessment, commodity group MRLs may be proposed on the following minimum conditions:

(1) The pesticide is registered or authorized for use on the crop group; and

(2) Relevant and adequate residue data are available for at least one major commodity of the group. (However, all relevant data for the commodities of the group should be taken into account.)

If the recommended group MRL is subsequently found to be inadequate for some commodities and their registered uses, there would be no impediment to submission of further data to amend the group MRL or to propose specific commodity MRLs.

In line with the alternative GAP proposal, if the IESTI calculations suggested that short-term intake would exceed the ARfD of the compound for one or more commodities in the group, the JMPR would examine and recommend alternative proposals including alternative GAP and single commodity MRLs.

2.9 RESIDUES IN ROTATIONAL CROPS

The JMPR regularly reviews residues in follow up or rotational crops as part of its evaluation of residues in food. The residues in follow up crops are usually composed of various metabolites in low concentrations and the compounds included in the residue definition are generally below the LOQ and do not require any further action.

Boscalid evaluated by the 2006 JMPR represents a special case because it persists in soil for a relatively long period of time (estimated half lives ranged between 108 days and over one year under aerobic soil conditions) and can be taken up extensively by crops grown in treated areas. It is estimated that following repeated application of the compound at recommended rates the residues in soil would vary approximately in the range of 0.5 and 2 mg/kg.

The Meeting was initially provided with only three confined rotational crop studies, indicating that residues of boscalid in radish leaves and wheat forage were relatively high following the application of boscalid on bare soil at 2.1 kg/ha (typically 2–3 times higher than the maximum recommended rate). Based on a special request additional rotational field studies were submitted.

These studies indicated that, following the use, according to GAP, high residues could occasionally occur, i.e., up to 15 mg/kg in mustard green leaves, 7 mg/kg in straw of wheat and hay, 1 mg/kg in cantaloupe and summer squash. Whereas lower residues may occur in a large variety of crops planted in fields previously treated with boscalid.

The occurrence of such residues has the potential to cause trade disruptions and an under estimation of the dietary intake, particularly for crops in which the compound is not registered.

The Meeting emphasized that in cases where the residues in follow-up and rotational crops may occur at levels above the LOQ, in addition to the minimum data requirement as specified in the *FAO Manual*, the data submitters should automatically provide information on:

Metabolism in root or tuber vegetables;

results of field studies on follow-up and rotational crops carried out at various times after the application of the pesticide;

environmental fate studies, and

any other relevant information, which may assist the comprehensive evaluation of residues in food.

The Meeting recommended to CCPR to request member countries to provide information on how residues in follow up crops, including the special case of boscalid, are regulated at the national level. This information will be taken into account in making recommendations based on the evaluation of residues in follow-up and rotational crops at a future meeting.

2.10 USE OF STATISTICAL METHODS IN THE EVALUATION OF SUPERVISED FIELD TRIAL DATA FOR THE ESTIMATION OF MAXIMUM RESIDUE LEVELS

The Meeting utilized the NAFTA spreadsheet for assistance in evaluating field trial data in the estimation process for maximum residue levels. The spreadsheet was evaluated in 2004 and 2005 (Report 2004, Report 2005) and adopted as a tool to be used by JMPR reviewers.

The Meeting also tested a binomial spreadsheet first described by Hamilton at IUPAC (2006)[27]. To estimate an MRL from a set of residue data, the residue evaluator first uses a binomial (non-parametric) procedure to calculate the highest percentile value possible on the limited data with a 95% confidence limit, e.g. for 8 data points, the 68.8th percentile may be calculated. Next, that value is multiplied by factors from the empirical data distribution to produce the 95th and 99th percentile values. An empirical data distribution was obtained from approximately 75 sets of residue trials. The minimum number of data points required is 5.

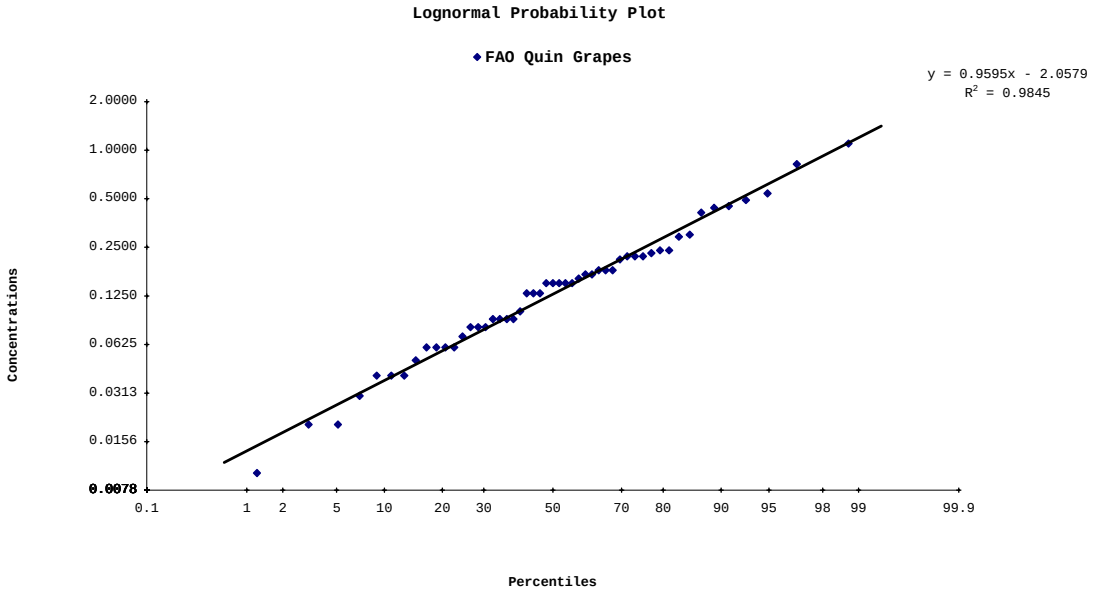
The two spreadsheets usually provided comparable estimates. The 95th percent upper confidence limit on the 95th percentile or the point estimate of the 99th percentile value from the NAFTA spreadsheet typically fell at or between the 95th percentile and 99.5th percentile point value estimates from the binomial spreadsheet. The two methods were judged to be mutually compatible, and it was agreed that both provide valuable information to the evaluator. It was also confirmed that the spreadsheet results are only suggested values and that the Meeting must always use best scientific judgment in the assignment of the maximum residue level.

The following is a typical calculation result from use of the spreadsheets. There were 51 field trials for the foliar application of the fungicide quinoxyfen to grapes: 0.01, 0.02 (2), 0.04 (3), 0.05 (2), 0.06 (4), 0.07, 0.08 (3), 0.09 (4), 0.10, 0.13 (3), 0.15 (5), 0.16, 0.17 (2), 0.18 (3), 0.21, 0.22 (3), 0.23, 0.24 (2), 0.29, 0.30, 0.41, 0.44, 0.45, 0.49, 0.54, 0.82 and 1.1 mg/kg.

[27] Hamilton, D. 2006. Statistical calculation of MRLs. 11th IUPAC International Congress of Pesticide Chemistry. 6-11 August, Kobe, Japan. Abstract III-4-09B

The NAFTA calculation indicates the 95% percent upper confidence limit of the 95th percentile is 0.91 mg/kg and that the 99th percentile is 1.16 mg/kg for a log normal distribution. The binomial calculation yields a 95th percentile of 0.712 mg/kg and a 99.5th percentile of 1.425 mg/kg. The Meeting considered the 99th percentile value of 1.16 mg/kg as a good estimate and rounded it up to 2 mg/kg. The Meeting recognized that the recommended value provided by the NAFTA spreadsheet represents a regional policy decision and therefore elected to consider all outputs from use of the spreadsheet. For log normal situations, attentions will focus on the 99th percentile.

NAFTA (log normal)



	Regulator: FAO **Chemical:** Quin **Crop:** Grapes **PHI:** **App. Rate:** **Submitter:** **n:** 51 **min:** 0.01 **max:** 1.10 **median;** 0.15 **average:** 0.19		
	95th Percentile	**99th Percentile**	**99.9th Percentile**
EU Method I Normal	0.53 (0.61)	0.66 (0.77)	0.82 (--)
EU Method I Log Normal	0.61 **(0.91)**	**1.16** (1.92)	2.40 (--)
EU Method II Distribution-Free		0.44	
California Method μ + 3σ		**0.80**	
UPLMedian95th		**0.77**	
Approximate Shapiro-Francia Normality Test		0.9845 p-value > 0.05 : Do not reject lognormality assumption	

Binomial

Mean =	0.19	94.3	value =	**0.673**
n=	51	**0.057**	95th percentile=	**0.712**
		0.95	99.5th percentile =	**1.425**
1	1.100	0.155		0.170
2	0.820	0.234		0.191
3	0.540	0.231		0.124
4	0.490	0.167		0.082
5	0.450	0.095		0.043
6	0.440	0.044		0.019
7	0.410	0.017		0.007
8	0.300	0.006		0.002
9	0.290	0.002		0.000
10	0.240	0.000		0.000
11	0.240	0.000		0.000
12	0.230	0.000		0.000
13	0.220	0.000		0.000
14	0.220	0.000		0.000
15	0.220	0.000		0.000
16	0.210	0.000		0.000
17	0.180	0.000		0.000
18	0.180	0.000		0.000
19	0.180	0.000		0.000
20	0.170	0.000		0.000
21	0.170	0.000		0.000
22	0.160	0.000		0.000
23	0.150	0.000		0.000
24	0.150	0.000		0.000
25	0.150	0.000		0.000
26	0.150	0.000		0.000
27	0.150	0.000		0.000
28	0.130	0.000		0.000
29	0.130	0.000		0.000
30	0.130	0.000		0.000
31	0.100	0.000		0.000
32	0.090	0.000		0.000
33	0.090	0.000		0.000
34	0.090	0.000		0.000
35	0.090	0.000		0.000
36	0.080	0.000		0.000
37	0.080	0.000		0.000
38	0.080	0.000		0.000
39	0.070	0.000		0.000
40	0.060	0.000		0.000
41	0.060	0.000		0.000
42	0.060	0.000		0.000
43	0.060	0.000		0.000
44	0.050	0.000		0.000
45	0.040	0.000		0.000
46	0.040	0.000		0.000
47	0.040	0.000		0.000
48	0.030	0.000		0.000
49	0.020	0.000		0.000
50	0.020	0.000		0.000
51	0.010	0.000		0.000

Values above the estimate ("Outliers")

With a sufficient number of residue data points, it is likely that the spreadsheet estimate of the maximum residue level will be *less than* the highest residue value. An increasing number of data points are accompanied by an increasing probability that one or more of those points will exceed the 95th or 99th percentile estimate of the MRL. The Meeting concluded that such apparent "outliers" will

not be routinely excluded from the data set and that the maximum residue estimate will include the highest value. The Meeting will consider such situations on a case-by-case basis. The exclusion of one or more high values at the 99th or 99.5th percentiles will alert the evaluator to look very carefully at the particular field trial and analysis to ascertain if there is an error in the study that would justify deletion of the result from consideration.

Scaling (rounding)

The use of the statistical spreadsheets provides information on the 95th and 99th/99.5th percentile of residue distributions. The relationship of a selected value to all values can be approximated. For example, selection of the 99th percentile value gives a measure of confidence that about 1 residue value in each 100 may exceed the selected value. This is a benchmark not previously available. It was previously judged necessary to "round up" considerably on the value selected for the maximum residue level. This is no longer the situation where the statistical estimation tools are utilized.

In order to more fully reflect the impact of this new tool, the Meeting concluded that the scaling steps last presented in the 2001 JMPR Report (General Consideration 2.3), would be abandoned in those situations where the statistical tools are successfully used. For example, using the scaling approach, a value of 7.2 is raised to 10. If the 7.2 value is shown to be the 99th percentile of a log normal distribution or the 99.5th percentile distribution from the non-parametric binomial procedure, it would be possible to estimate the maximum residue level at 8. Of course, expert judgment must be used in estimating the value. If only a few data points were in the distribution or if a significant fraction of the points were near the highest value, then thought might be given to using a value greater than 8.

The Meeting further concluded that estimations should continue to be expressed as one significant figure, with exceptions on a case-by-case basis. This recognizes the inherent uncertainties in sampling and in analysis and in the frequent practice of compositing sample sets, where data sets from countries are combined when they appear not to be from different populations.

Conclusions

The Meeting concluded that:

The statistical spreadsheets described above are to be used by the evaluators as a tool to assist in the estimation of maximum residue levels, and the spreadsheets will be included in the next revision of the FAO Manual.

The widespread use of such statistical procedures will be useful in the promotion of harmonized maximum residue limit estimations among the various national and regional authorities.

Statistical tools are an aid to the reviewer and are not a substitute for sound scientific judgment. Thus, values falling above the spreadsheet maximum residue level estimate are not routinely discarded.

The statistical procedures provide a good estimate of the 95th to 99th percentile range where there are sufficient data points. In such situations the scaling system is not needed.

2.11 OECD GUIDANCE AND GUIDELINES FOR RESIDUE CHEMISTRY

Under the auspices of the OECD Working Group on Pesticides (WGP), an OECD Pesticide Residue Chemistry Group has been given the task of writing harmonized guidelines and associated guidance documents for the various topics of residue chemistry for pesticides in foods/feeds. The Pesticide Residue Chemistry Group is composed of experts from numerous OECD member countries from around the globe and includes the FAO as well as pesticide industry experts. Several members of the FAO Panel of JMPR also participate in the Group. During the drafting of the various documents, the

writers have consulted national and regional guidelines and the *FAO Manual.*

A primary goal of the project is to provide standardized procedures/methods for the various residue chemistry requirements, so that industry may submit one set of studies to the various OECD member countries for registration. This will facilitate work sharing among national and regional authorities.

The Group has finalized and obtained approval for guidelines covering Plant Metabolism, Livestock Metabolism, Rotational Crop Metabolism, Rotational Crop Field Trials, and Residues in Livestock. Additionally, a Residue Definition guidance document and an Overview document were prepared. The guidelines were accompanied by templates designed to be standardized summary documents for industry submission as part of a registration package. These documents were presented in draft form to the experts of the FAO Panel of the 2005 JMPR, for comments. Numerous comments were submitted via the FAO to the Group and were incorporated in the final documents.

Work has now progressed on the writing of the second set of documents: Analytical Method Guidance, Nature of the Residue in Processing Guideline, and Storage Stability Guideline are in an advanced draft stage. Final drafts will be available for comment by the JMPR. Initial drafting of the Magnitude of the Residue in Processed Commodities Guideline and Guidance has commenced, and planning continues for the Crop Field Trial Guideline.

Implications for the JMPR

The Guidelines and Guidance documents will impact the FAO Panel's methods and procedures for the review of residue chemistry. For example, the new OECD livestock feed tables provide information on livestock diets in three regions and will allow the JMPR to make a more inclusive and improved calculation of the livestock dietary exposure for livestock commodity maximum residue levels (see General Item 2.13).

Conclusions

The JMPR welcomes the publication of the OECD residue chemistry guidelines and guidance documents, with a view to improving the work of the JMPR. The documents will be utilized in the preparation of future versions of the *FAO Manual* with the aims of maximum harmonization and future opportunities for work share.

The JMPR looks forward to reviewing and commenting on the guidelines and guidance documents currently under preparation.

2.12 OECD TEMPLATES FOR RESIDUE SUPERVISED TRIALS DATA

The Meeting was informed that the OECD, through its "Residue Chemistry Expert Group", has initiated the development of guidelines and templates for supervised residue trials on plants as part of its test guideline development program. Under this programme certain draft templates (e. g., for livestock metabolism, livestock feeding, crop metabolism and rotational crops) have already been prepared. This process is welcomed as it provides a foundation for further work-sharing and strengthens harmonization.

The FAO/OECD Workshop "Electronic field trial data for pesticides" (Rome, February 2006) has shown that manufacturers use their data from residue trials, which are present in an electronic format, to print individual study reports and also to generate other required data summary sheets. One main conclusion of the workshop was that the submission of residue supervised trials data in electronic format could support and facilitate the evaluation of pesticide residues submitted to the JMPR as well as to national authorities for pesticide registration. It would also reduce the probability of errors in data entry and transfer.

However, the structure of the existing draft OECD templates allows only that data are reported in free text fields in so-called “rich text areas”.

The Meeting stressed the fact that the templates for residue supervised trials on plants need a more detailed structure due to the huge amount of residues data which have to be handled by the manufacturer, by the national authorities and by the JMPR. Less structured templates would require a considerable manual data entry which should be avoided. The more detailed structure would mean that a number of prompts that are now included in free text fields become distinct data entry fields or numeric fields which would also allow a standardised electronic exchange of relevant data between databases.

National authorities and JMPR would benefit from such structured templates allowing for the electronic import of detailed residue data. Hence it would be possible to improve further existing working procedures of the data evaluation by national and regional authorities and by JMPR.

2.13 OECD LIVESTOCK FEED TABLES AND POSSIBLE IMPLICATIONS FOR THE WORK OF JMPR

As part of the ongoing development of harmonised guidelines and guidance documents for registration of pesticide products, the OECD Pesticide Residue Chemistry Group has developed a set of livestock feed tables. These tables were initially developed as part of the OECD test guideline for Residues in Livestock. The purpose of the tables is to enable chemical manufacturers to determine appropriate livestock dietary burden for a number of regions for the conduct of livestock feeding studies or transfer studies. The conduct of livestock feeding studies is a costly exercise and the tables are a way of ensuring that a single feeding study will be acceptable to all regulators, thereby avoiding the need for other studies if the dietary burden does not adequately account for all regions.

During the development phase of the feed tables, a working group considered livestock production practices in various countries (extensive vs intensive), the different types of feeds used, typical percentages of feed intakes and also nutritionally based information used by livestock production industries. The regions in the feed tables include US & Canada, the EU, Australia and New Zealand, which represent both intensive and extensive livestock production practices.

The feed tables (Annex 6) include four categories of feed items: forages and fodders, roots and tubers, grains and seeds and processed by-products. The various percentages of each feed item in the four categories are tabulated for typical diets of cattle (beef and dairy), sheep (lambs and rams/ewes), pigs/swine (breeding & finishing) and poultry including hens (layers and broilers) and turkeys. For simplicity and ease of use, the OECD tables include information on percentage Dry Matter (DM) for each feed item as well as whether the STMR or highest residue (HR) should be used in the maximum dietary burden calculations.

The Meeting noted the work of the OECD Pesticide Residue Chemistry Group in relation to livestock feed items and estimates of dietary burden. In relation to the current practices of JMPR for the estimation of maximum dietary burden, it was highlighted that the OECD tables indicate a change from use of highest residue for grains and seeds to use of STMR for pre-harvest treatments[28]. This change was proposed by the OECD group on the basis that for many grains and seeds, the forage and/or fodder components of grain and seed crops would contribute to a larger proportion of the residue in the dietary burden than the grain itself. The exception to this is for post-harvest grain and/or seed treatments where the highest residue must be used. All other current JMPR practices and methods in relation to livestock burden remain the same.

[28] Pesticide Residues in Food, 2004, 178, p. 26 – 29, General Considerations Item 2.28.

The Meeting considered this difference between current JMPR practice and the OECD proposal and decided that the current JMPR practice is still appropriate as there may be situations where a feedlot or user of a pesticide product on-farm may use grain from a single source and therefore the STMR may not always be appropriate. However, the Meeting agreed that the OECD feed table be adopted, noting that in most cases, the forage and/or fodder components of a grain or seed crop would dominate the livestock burden and would therefore still provide a realistic and conservative estimate of livestock exposure to residues in feed items.

The Meeting noted that the current livestock feed table used by JMPR is not as extensive or as detailed as the OECD table, as it was originally based on US feed levels. It was considered that the current feed table (Appendix IX in the *FAO Manual* 2002) should be replaced with the OECD feed tables for the estimation of dietary burden for recommending maximum residue levels in animal commodities.

Use of the modified tables would be an improvement in the work of JMPR in terms of accounting for appropriate percentages of typical feeds used in different regions and the inclusion of feeds that had not previously been considered by JMPR due to lack of appropriate information. Examples of feeds not previously considered by JMPR include various pulse grains, a range of root and tuber crops, grape pomace and limited forage intake by poultry.

The Meeting agreed to replace Appendix IX of the *FAO Manual* 2002 with the OECD livestock feed tables and in addition to use the new tables in the 2007 Meeting of the JMPR. The full tables with definitions of commodities will be included in the next update of the FAO Manual.

2.14 PILOT PROJECT ON WORK SHARING FOR QUINOXYFEN

Quinoxyfen was selected by the CCPR as a candidate compound for a work-share exercise (ALINORM 05/28/24, 37th Session of the CCPR, 2005, paragraph 257). The first exercise was conducted with trifloxystrobin (JMPR Report 2004, General Consideration 2.4). The experience gained from that work was incorporated into a plan for the current exercise (JMPR Report 2005, General Consideration 2.1). The JMPR Report 2005 indicated that workshare in the context of JMPR was defined as an independent expert peer review of existing evaluations and incorporation of text, tables, and figures from existing national/regional evaluations into the JMPR assessments. It was emphasized that validated information could be incorporated into the JMPR evaluations but the final assessment must be a totally independent.

WHO procedure and result

There were three evaluations available from the United States (US) EPA, Australia and the United Kingdom/European Union (UK/EU). There was also a comparison of the US and UK evaluations, performed by Bob Tomerlin of the US EPA. The style, level of detail and content of the documents indicated that the three evaluations had been performed independently.

The first step was to prepare a table by which to compare the no-observed-adverse-effect levels (NOAELs)/effects identified for each study by the company, the US, EU and Australia. This showed that although there were some minor differences in the effects noted at the lowest-observed-adverse-effect level (LOAEL), there was only one study for which the actual NOAEL value differed, but this did not have any impact on the ADIs proposed. There was also agreement on the absence of genotoxicity, carcinogenicity and reproductive toxicity.

Using the EU draft as the basis for the JMPR working paper, the following changes were made:

Minor editing;

Reorganization of the study order; preparation of a summary, tables for results of studies of acute toxicity and genotoxicity etc, to suit the JMPR format;

Addition of details of five extra studies completed after the EU evaluation. Some were in the Australian review and use was made of appropriate texts/tables.

Checking of critical details with study reports and addition of some extra detail and tables to permit independent evaluation by the JMPR Meeting of key findings—making some use of tabulation from the text from Australia.

FAO procedure and result

Quinoxyfen residue chemistry evaluation packages were received from Australia, the EU (UK), and the USA. The documents provided varied from a single composite report of the residue chemistry to individual reports for specific residue chemistry topics. None of the authorities provided detailed reviews of studies of environmental fate beyond the confined rotational crop study evaluation from the UK. Quinoxyfen was not a workshare compound for any group of national governments, and thus the national review packages received were prepared independently by each authority.

A methodical but practical approach was taken to the use of the national evaluations. First, a comparison was made of the studies submitted to Australia, the EU (UK), the USA, and the JMPR. The study submitted to the JMPR was also the study submitted to at least two of the three authorities for:

metabolism in goats;

metabolism in wheat;

metabolism in grapes;

metabolism in cucumbers;

analytical methods—livestock;

livestock feeding—ruminant.

As might be expected, the field trial reports were country-specific with no overlap, except for inclusion of European field trials in the studies in grapes reported by Australia and some Australian studies in grapes in the UK report.

The residue definitions of the three authorities were compared as a measure of agreement of findings. *The residue definitions of Australia, the EU, and the USA are harmonized*. All define the residue in plant commodities for both monitoring and risk assessment as quinoxyfen. Australia and the EU define the residue in livestock commodities for both monitoring and risk assessment as quinoxyfen, while the US has not considered the issue.

The national evaluations for the six areas listed above were *compared* to see if they were consistent with one another. For example, the reviews of studies of metabolism in goats for Australia and the EU were compared to see if similar metabolic pathways were listed with similar distributions of metabolites. The following national evaluations were then adapted with slight modifications into the JMPR evaluation:

metabolism in goats from Australia;

metabolism in wheat from the UK;

metabolism in grapes from the USA;

metabolism in cucumber from the USA.

Additionally, tables and limited text were incorporated from the US evaluations of the metabolism in tomato and metabolism in sugar beets. Data on these crops were reported from the US only. In this case, the original studies provided by the manufacturer were consulted.

The analytical methods for cattle commodities submitted to JMPR were the same as those provided by Australia and the UK. Both national reports lacked sufficient details. Moreover, the method for poultry (eggs) was provided only to the JMPR.

Although the ruminant feeding study was reviewed by both Australia and the UK, the format and table utilized were not particularly appropriate for JMPR purposes. It was judged more efficient to consider the manufacturer's study submissions.

Some effort was made to incorporate field trial summary information (tables) from the various national sources, but this was not generally effective. For example, some tables were taken from the US evaluation for cherries, but the rather extensive modifications required negated any savings in time.

Conclusions and considerations

WHO

1. The total time taken to complete the final draft working paper was about 70–100 hours. Performing this evaluation using only the sponsor's submission would probably require in the region of 200–250 hours. Therefore a significant saving in time (50–70%) was achieved. The two main contributors to time taken were reviewing the new studies and putting into JMPR style. The former is unavoidable when using a 10-year-old evaluation; the latter leaves some scope for further time savings.

2. Quinoxyfen was a straightforward workshare example, with no severe toxicity, good agreement on NOAELs, and a reasonable draft text available. It probably represents the optimum in time savings. More complex compounds are not likely to yield such significant savings in time.

FAO

1. It is estimated that the incorporation of sections from national evaluations saved approximately 15–20% of the preparation time needed by a reviewer in creating an evaluation and appraisal for the JMPR Meeting. This is based on time distribution of 70% for the evaluation and 30% for the appraisal and dietary intake calculations. Total time typically required to perform an evaluation and appraisal for a new chemical using only the manufacturer's data submissions is about 240–300 hours. The use of the national evaluations for metabolism and the incorporation of some tables elsewhere saved about 25% of the time needed for the evaluation, or about 15–20% overall, i.e. about 48–60 hours were saved.

2. Quinoxyfen represents the optimum case for workshare in that its metabolism is not complex, the analytical methods are straightforward, and its uses are limited to foliar applications only on a few crops. If residue definitions differ among the national/regional reviews, workshare becomes problematic.

3. The greatest obstacles to worksharing for residue chemistry in FAO JMPR continue to be the different formats used by the various national authorities and different studies reviewed by the national authorities. This situation will improve as more workshare reviews are conducted by an expanded number of national authorities. Multi-national workshare should directly benefit JMPR.

Recommendations of the JMPR

The evaluations conducted by national and regional authorities are useful to JMPR in the preparation of compound evaluations. Appropriate use of materials from these evaluations can save significant preparation time for the JMPR experts preparing the draft evaluation for the Meeting.

The JMPR recommends that:

A mechanism is needed to identify national and regional evaluations (toxicology and residue chemistry) available for those compounds scheduled for evaluation at a subsequent JMPR meeting. The JMPR Joint Secretaries are requested to explore means for securing such information and for acquiring evaluations identified. Likewise, sponsors and government organizations should take steps to permit formal exchange of documents with JMPR.

Where several independent evaluations on a pesticide are available in a given subject area, and where the JMPR expert is able to validate the information either by comparing national reviews (e.g. end-point comparisons for the toxicology), or by limited referral to the original studies, text and tables from the national/regional evaluations may be incorporated directly into the JMPR evaluation, taking care to include sufficient detail for an independent assessment by the JMPR.

With the dossier submitted to the JMPR, sponsors should include copies of available evaluations performed by regional or national authorities. This recommendation in no manner negates the requirement for the manufacturer(s) to provide *all* relevant original studies, as these will continue to be the primary source.

International, regional and national organizations should look to further harmonize the style and format of documents describing the assessment of risk of chemicals to human health. Efforts to develop a common format for the evaluation of pesticide data should be pursued and encouraged. A common format acceptable to national and regional authorities and to JMPR is critical to the efficient use of work sharing.

The pilot workshare exercises had been shown to be of benefit to toxicology and residue chemistry evaluations and there was no need to perform further pilot studies.

3. DIETARY RISK ASSESSMENT FOR PESTICIDE RESIDUES IN FOODS

Assessment of risk from long-term dietary intake

Risks associated with long-term dietary intake were assessed for compounds for which MRLs were recommended and STMRs estimated at the present Meeting. International Estimated Daily Intakes (IEDIs) were calculated by multiplying the concentrations of residues (STMRs, STMR-Ps or MRL) by the average daily per capita consumption estimated for each commodity on the basis of the 13 GEMS/Food Consumption cluster diets (General Consideration 2.3)[29]. IEDIs are expressed as a percentage of the ADI for a 55 kg or 60 kg person, depending on the cluster diet.

The percentages are rounded to one whole number up to 9 and to the nearest 10 above that. Percentages above 100 should not necessarily be interpreted as giving rise to a health concern because of the conservative assumptions used in the assessments. The detailed calculations of long-term dietary intakes are given in Annex 3.

The data provided to the Meeting did not allow the allocation of an ADI for aminopyralid and no long-term intake assessment was conducted for this compound.

Cyfluthrin (includes beta-cyfluthrin), cypermethrin (including alpha and zeta-cypermethrin) and cyromazine were evaluated at this Meeting under the periodic review programme and new ADIs were allocated. The long-term dietary risk assessment for these compounds will be considered during the periodic review for residues at a subsequent Meeting.

The assessment for boscalid was not conducted as STMR values could not be recommended for annual crops due to lack of data and a complete dietary assessment could not be calculated.

The assessment for haloxyfop was not conducted as the residue data available is not appropriate. The assessment for this compound will be considered during the periodic review for residues at a future Meeting.

The evaluation of aldicarb, dimethoate, disulfoton, fenamiphos, pirimiphos-methyl and thiophanate methyl performed at this Meeting do not affect the long-term dietary assessment conducted by previous JMPR for these compounds

The long-term intake of acephate, chlorpyrifos, imidacloprid, methoxyfenozide and propiconazole made at the present Meeting, from the consumption of cranberry contributed to 0% ADI of each compound, and do not affect the final conclusion of the long-term dietary assessment conducted by the previous JMPR for these compounds. The detailed calculations for these compounds are not shown in Annex 3.

A summary of the long-term dietary of risk assessments conducted by the present meeting is shown on Table 1. Calculations of dietary intake can be further refined at the national level by taking into account more detailed information, as described in the Guidelines for predicting intake of pesticide residues[30].

Table 1. Summary of long-term dietary of risk assessments conducted by the 2006 JMPR.

CCPR code	Compound Name	ADI (mg/kg bw)	Range of IEDI or EDI*, as % of maximum ADI
219	*Bifenazate*	*0 - 0.01*	*1 – 20*
022	*Diazinon*	*0 - 0.005*	*5 – 60**

[29] The GEMS/Food Consumption Cluster Diets http://www.who.int/foodsafety/chem/gems/en/index1.html

[30] WHO (1997) Guidelines for predicting dietary intake of pesticide residues. 2nd revised edition, GEMS/Food Document WHO/FSF/FOS/97.7, Geneva

CCPR code	Compound Name	ADI (mg/kg bw)	Range of IEDI or EDI*, as % of maximum ADI
032	*Endosulfan*	*0 – 0.006*	*2 – 20*
185	*Fenpropathrin*	*0 – 0.03*	*3 - 80*
211	*Fludioxinil*	*0 – 0.4*	*0 – 2*
101	*Pirimicarb*	*0 - 0.02*	*1 – 10*
148	*Propamocarb*	*0 - 0.4*	*0 – 1*
113	*Propargite*	*0 - 0.01*	*2 – 30*
210	*Pyraclostrobin*	*0 - 0.03*	*0 – 7*
222	*Quinoxyfen*	*0 - 0.2*	*0 – 1*
065	*Thiabendazole*	*0 – 0.1*	*2 – 20*
223	*Thiacloprid*	*0 - 0.01*	*1 – 10*

* the assessment includes residues at MRL level for most of the commodities

Assessment of risk from short-term dietary intake

Risks associated with short-term dietary intake were assessed for compounds for which STMR and HR values were estimated at the present Meeting and for which acute reference doses (ARfDs) had been established, in commodities for which data on consumption were available. The procedures for calculating the short-term intake were defined primarily in 1997 at an FAO/WHO Geneva Consultation[31], refined at the International Conference on Pesticide Residues Variability and Acute Dietary Risk Assessment sponsored by the Pesticide Safety Directorate and at subsequent JMPR Meetings. Data on the consumption of large portions were provided by the governments of Australia, France, The Netherlands, Japan, South Africa, the UK and the USA. Data on unit weights and per cent edible portions were provided by the governments of France, Sweden, the UK and the USA. The body weights of adults and children aged ≤ 6 years were provided by the governments of Australia, France, The Netherlands, South Africa, the UK and the USA. The consumption, unit weight and body weight data used for the short-term intake calculation were compiled by GEMS/FOOD and are available at www.who.int/foodsafety/chem/acute_data/en/. The documents are dated 01/01/2003 (large portions and body weights) and 05/02/2003 (unit weights).

The procedures used for calculating the International Estimated Short-Term Intake (IESTI) are described in detail in Chapter 3 of the 2003 JMPR report. A detailed guidance on setting ARfD are described in Section 2.1 of the 2004 JMPR report[32].

Cyfluthrin (includes beta-cyfluthrin), cypermethrin (including alpha- and zeta-cypermethrin) and cyromazine were evaluated at this Meeting under the periodic review programme and ARfD were allocated. The short-term dietary risk assessment for these compounds will be considered during the periodic review for residues at a subsequent Meeting.

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[31] WHO (1997) Food consumption and exposure assessment of chemicals. Report of a FAO/WHO Consultation. Geneva, Switzerland, 10-14 February 1997, Geneva

[32] *Pesticide residues in food.* 2003. Report of the Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Expert Group on Pesticide Residues. Chapter 3, FAO Plant Production and Protection Paper 176, Food and Agriculture Organization, Rome, 2004

The data provided to the Meeting did not allow the allocation of an ARfD for aminopyralid and no short-term intake assessment was conducted for this compound.

An ARfD for fenpropathrin might be necessary but has as yet not been considered by the Meeting. Furthermore, the short-term assessment was not finalized for this compound.

The assessment was not conducted for haloxyfop as the residue data available is not appropriate. The assessment for this compound will be considered during the periodic review for residues in the future.

The evaluation of aldicarb and dimethoate performed at this Meeting do not affect the short-term dietary assessment conducted by the previous JMPR for these compounds

On the basis of data received by the present or previous Meeting, the establishment of an ARfD for bifenazate, boscalid, fludioxinil, propargite, quinoxyfen and thiophanate methyl was considered to be unnecessary. Therefore, the short-term intakes of these compounds were not estimated.

The short-term intakes as percentages of the ARfDs for the general population and for children are summarized in Table 2. The percentages are rounded to one whole number up to 9 and to nearest 10 above that. Percentages above 100 should not necessarily be interpreted as giving rise to a health concern because of the conservative assumptions used in the assessments.

The detailed calculations of short-term dietary intakes are given in Annex 4. Detailed calculations for acephate, chlorpyrifos, diazinon, disulfoton, imidacloprid, methoxyfenozide and propiconazole are not included as only the intake from the consumption of one commodity was assessed in each case.

Table 2: Summary of short-term dietary risk assessments conducted by the 2006 JMPR.

CCPR code	Compound Name	ARfD (mg/kg bw)	Commodity	Percentage of ARf D	
				General population	Children aged ≤ 6 years
095	*Acephate*	*0.1*	*Cranberry*	*1*	*1*
017	*Chlorpyrifos*	*0.1*	*Cranberry*	*2*	*4*
022	*Diazinon*	*0.03*	*Cranberry*	*2*	*3*
074	*Disulfoton*	*0.02*	*Cauliflowers*	*150*	*380*
033	*Endosulfan*	*0.02*	*Broccoli*	*210*	*390*
			Celery	*120*	*270*
			Cherries	*40*	*120*
			Tomato	*40*	*110*
			Other 24-26 commodities	*0 - 90*	*0 - 100*
085	*Fenamiphos*	*0.003*	*Melons, except watermelon*	*40*	*90*
			Watermelon	*120*	*310*
086	*Pirimiphos-methyl*	*0.2*	*All 20 commodities*	*0 - 10*	*0 - 30*
206	*Imidacloprid*	*0.4*	*Cranberry*	*0*	*0*
209	*Methoxyfenozide*	*0.9*	*Cranberry*	*0*	*0*
101	*Pirimicarb*	*0.1*	*All 48 commodities*	*0 – 40*	*0 – 70*
148	*Propamocarb*	*2*	*All 17 commodities*	*0 – 40*	*0 – 80*
160	*Propiconazole*	*0.3*	*Cranberry*	*0*	*0*
210	*Pyraclostrobin*	*0.05*	*All 60 commodities*	*0 - 30*	*0 – 80*
065	*Thiabendazole*	*1*	*All 16 commodities*	*0 – 20*	*0 – 60*
		*0.3**		*0 – 70**	
223	*Thiacloprid*	*0.03*	*All 58 commodities*	*0 - 30*	*0 - 90*

* For women of childbearing age

5.4. Residues in follow up crops

CCPR to request member countries to provide information on how residues in follow up crops, including the special case of boscalid, are regulated at the national level. This information will be taken into account in making recommendations based on the evaluation of residues in follow-up and rotational crops at a future meeting.

5.5 Work sharing

The evaluations conducted by national and regional authorities are useful to JMPR in the preparation of compound evaluations. Appropriate use of materials from these evaluations can save significant preparation time for the JMPR experts preparing the draft evaluation for the Meeting.

The JMPR recommends that:

- A mechanism is needed to identify national and regional evaluations (toxicology and residue chemistry) available for those compounds scheduled for evaluation at a subsequent JMPR meeting. The JMPR Joint Secretaries are requested to explore means for securing such information and for acquiring evaluations identified. Likewise, sponsors and government organizations should take steps to permit formal exchange of documents with JMPR.
- Where several independent evaluations on a pesticide are available in a given subject area, and where the JMPR expert is able to validate the information either by comparing national reviews (e.g. end-point comparisons for the toxicology), or by limited referral to the original studies, text and tables from the national/regional evaluations may be incorporated directly into the JMPR evaluation, taking care to include sufficient detail for an independent assessment by the JMPR.
- With the dossier submitted to the JMPR, sponsors should include copies of available evaluations performed by regional or national authorities. This recommendation in no manner negates the requirement for the manufacturer(s) to provide *all* relevant original studies, as these will continue to be the primary source.
- International, regional and national organizations should look to further harmonize the style and format of documents describing the assessment of risk of chemicals to human health. Efforts to develop a common format for the evaluation of pesticide data should be pursued and encouraged. A common format acceptable to national and regional authorities and to JMPR is critical to the efficient use of work sharing.
- The pilot workshare exercises had been shown to be of benefit to toxicology and residue chemistry evaluations and there was no need to perform further pilot studies.

6. FUTURE WORK

The items listed below should be considered by the Meeting in 2008 and 2009. The compounds listed include those recommended as priorities by the CCPR at its 38th and earlier sessions and compounds scheduled for re-evaluation within the CCPR periodic review programme.

Updated calls for data are available at least ten months before each JMPR meeting from the webpages of the Joint Secretariat:

http://www.fao.org/ag/AGP/AGPP/Pesticid/

http://www.who.int/ipcs/food/en/

2008 JMPR

Toxicological evaluations		Residue evaluations	
New compounds			
Azoxystrobin		Azoxystrobin	
Mandipropamid		Mandipropamid	
Periodic re-evaluations			
Bioresmethrin (093)	2009R	Azinphos-methyl (002)	2007T
Buprofezin (173)	2009R	Chlorpyrifos-methyl (090)	2008T
Chlorpyrifos-methyl (090)	2008R	lamba-Cyhalothrin replacement of cyhalothrin	2007T
Hexithiazox (176)	2009R	Procymidone (136)	2007T
		Vinclozolin (159)	2007T
		Cypermethrins	2006T
Evaluations			
		Ethoxyquin (35) For use on pears	2005T

2009 JMPR

Toxicological evaluations		Residue evaluations	
New Compounds			
Bifenthrin (178)	2010R	Benalaxyl (155)	2005T

Cadusafos (174)	2010R	Bioresmethrin (093)	2008T
Chlorothalanil (081)	2010R	Buprofezin (173)	2008T
Cyloxydim (179)	2010R	Hexithiazox (176)	2008T

ANNEX 1: ACCEPTABLE DAILY INTAKES, ACUTE REFERENCE DOSES, SHORT-TERM AND LONG-TERM DIETARY INTAKES, RECOMMENDED MAXIMUM RESIDUE LIMITS AND SUPERVISED TRIALS MEDIAN RESIDUE VALUES RECORDED BY THE 2006 MEETING

The following extracts of the results of the annual Joint FAO/WHO Meeting on Pesticide Residues (JMPR) are provided to make them accessible to interested parties at an early date.

The Meeting evaluated thirty pesticides. Five were new compounds, and seven were re-evaluated within the periodic review programme of the Codex Committee on Pesticide Residues (CCPR). The Meeting established acceptable daily intakes (ADIs) and acute reference doses (ARfDs). The original schedule of compounds to be evaluated was amended for cypermethrin and triadimefon/triadimenol. For cypermethrin only its toxicology was evaluated as no residue data was received. The evaluation of triadimefon/triadimenol was postponed to 2007 as the peer review process could not be completed in time.

The Meeting estimated maximum residue levels, which it recommended for use as maximum residue limits (MRLs) by the CCPR. It also estimated supervised trials median residue (STMR) and highest residue (HR) levels as a basis for estimation of the dietary intake of residues of the pesticides reviewed. Application of HR levels is explained in the report of the 1999 Meeting (section 2.4). The allocations and estimates are shown in the Table on the next page.

Pesticides for which the estimated dietary intakes might, on the basis of the available information, exceed their ADIs are marked with footnotes, as explained in detail in the report of the 1999 Meeting (section 2.2). Footnotes are also applied to specific commodities when the available information indicated that the ARfD of a pesticide might be exceeded when the commodity was consumed.

The Table includes the Codex reference numbers of the compounds and the Codex classification numbers (CCNs) of the commodities, to facilitate reference to the Codex maximum limits for pesticide residues (Codex Alimentarius, Vol. 2B) and other documents and working documents of the Codex Alimentarius Commission. Both compounds and commodities are listed in alphabetical order.

Apart from the abbreviations indicated above, the following qualifications are used in the Table.

* (following name of pesticide)	New compound
** (following name of pesticide)	Compound reviewed within CCPR periodic review programme
* (following recommended MRL)	At or about the limit of quantification
HR-P	Highest residue in a processed commodity, in mg/kg, calculated by multiplying the HR in the raw commodity by the processing factor
Po	The recommendation accommodates post-harvest treatment of the commodity.
PoP (following recommendation for processed foods (classes D and E in the Codex classification)	The recommendation accommodates post-harvest treatment of the primary food commodity.
STMR-P	An STMR for a processed commodity calculated by applying the concentration or reduction factor for the process to the STMR calculated for the raw agricultural commodity.
V (following recommendations for commodities of animal origin)	The recommendation accommodates veterinary uses.
W (in place of a recommended MRL)	The previous recommendation is withdrawn, or withdrawal of the recommended MRL or existing Codex or draft MRL is recommended.

Recommended maximum residue levels, STMR and HR values and allocated ADI and ARfD values

Pesticide (Codex reference number)	CCN	Commodity	Recommended MRL mg/kg		STMR or STMR-P, mg/kg	HR or HR-P mg/kg
			New	Previous		
Acephate (095)	FB0265	Cranberry	0.5	-	0.18	0.2
ADI: 0–0.03 mg/kg bw						
ARfD: 0.1 mg/kg bw						
Definition of residue for compliance with MRLs: acephate. Definition of residue for estimation of dietary intake: acephate and methamidophos. The definitions apply to both plant and animal commodities.						
Aldicarb (117)	None of the residue data relating to available GAP suggests a lower maximum residue level to replace the current proposal of 0.5 mg/kg for aldicarb in potato.					
Aminopyralid (220)*	Due to an incomplete data submission the evaluation could not be finalized; provisionally maximum residue levels were estimated, they are not recommended for use as maximum residue limits (MRLs).					
Bifenazate (219)*	AM 0660	Almond hulls	10		5.0	
ADI: 0–0.01 mg/kg bw	SO 0691	Cotton seed	0.3		0.01	
ARfD: unnecessary	DF 0269	Dried grapes (= currants, raisins, cultanas)	2		0.59	
	MO 0105	Edible offal (mammalian)	0.01*		0.01	
	PE 0112	Eggs	0.01*		0	
	VC 0045	Fruiting vegetables, cucurbits	0.5		0.04	
	FB 0269	Grapes	0.7		0.185	
	DH 1100	Hops, dry	20		7.8	
	MM 0095	Meat (from mammals other than marine mammals)	0.05 (fat)		0.01 muscle 0.01 fat	
	FM 0813	Milk fats	0.05		0.01	
	ML 0106	Milks	0.01*		0.01	
	HH 0738	Mints	40		12.9	
	VO 0444	Peppers, Chili	3		1.1	
	VO 0445	Peppers, Sweet (including Pimento or pimiento)	2		0.235	
	FP 0009	Pome fruits	0.7		0.175	
	PM 0110	Poultry meat	0.01* (fat)		0 muscle 0 fat	
	PO 0111	Poultry, Edible offal of	0.01*		0	
	FS 0012	Stone fruits	2		0.34	
	FB 0275	Strawberry	2		0.63	
	VO 0448	Tomato	0.5		0.095	
	TN 0085	Tree nuts	0.2		0.03	
	JF 0226	Apple juice			0.030	
		Apple pomace, wet			0.32	

Pesticide (Codex reference number)	CCN	Commodity	Recommended MRL mg/kg		STMR or STMR-P, mg/kg	HR or HR-P mg/kg
			New	Previous		
		Cotton seed hulls			0.0023	
		Cotton seed meal			0.00004	
	OR 0691	Cotton seed refined oil			0.00004	
	DF 0014	Plum, dried (prunes)			0.02	
	JF 0269	Grape juice			0.020	
		Tomato paste			0.13	
		Tomato puree			0.53	
		Definition of the residue (for compliance with the MRL and for estimation of dietary intake): Sum of bifenazate and bifenazate-diazene (diazenecarboxylic acid, 2-(4-methoxy-[1,1'-biphenyl-3-yl] 1-methylethyl ester), expressed as bifenazate. The residue is fat soluble.				
		Note: Bifenazate is a fat-soluble compound. Previously, the milk MRL would have been marked with an F to indicate a procedure for calculating "MRLs" for processed dairy products. Currently, bifenazate MRLs for milk and milk fat are available to support "MRLs" for processed dairy products.				
Boscalid (221)*	AM	Almond hulls	15		4.1	
ADI: 0–0.04 mg/kg bw	FP 0226	Apple	2		0.365	
ARfD: unnecessary		Apple pomace			2.2	
		Apple juice			0.03	
	FI 0327	Banana	0.2		0.05	
	FB 0018	Berries and other small fruits (1)	10		2.53	
	SB 0716	Coffee	0.05*		0.05	
	FB 0269	Grapes	5		1.09	
	DF 0269	Dried grapes (= currants, raisins, sultanas)	10		2.6	
		Wet pomace			2.7	
		Wine			0.38	
		Grape juice			0.46	
	TN 0675	Pistachio	1		0.27	
	FS 0012	Stone fruit	3		1.21	
	DF 0014	Prunes			0.57	
		Puree note processed products of plum			0.40	
	TN 0085	Tree nuts (2)	0.05*		0.05	
		Definition of the residue (for compliance with the MRL for plant and animal commodities and for estimation of dietary intake for plant commodities): boscalid.				
		Definition of the residue (for estimation of dietary intake for animal commodities): sum of boscalid, 2-chloro-N-(4'-chloro-5-hydroxybiphenyl-2-yl)nicotinamide including its conjugate, expressed as boscalid. The residue is fat soluble.				
		(1) Except strawberry and grapes. (2) Except pistachio.				

Pesticide (Codex reference number)	CCN	Commodity	Recommended MRL mg/kg		STMR or STMR-P, mg/kg	HR or HR-P mg/kg
			New	Previous		
Chlorpyrifos (017)	FB 0265	Cranberry	1		0.49	0.55
ADI: 0-0.01 mg/kg bw						
ARfD: 0.1 mg/kg bw						
Definition of the residue (for compliance with MRLs and estimation of dietary intake in plant and animal commodities): chlorpyrifos. The Residue is fat-soluble.						
Cyfluthrin / beta-cyfluthrin (157)**						
Group ADI: 0–0.04 mg/kg bw						
Group ARfD: 0.04mg/kg bw						
Cypermethrins (including alpha- and zeta-cypermethrin (118)**						
Group ADI: 0–0.02 mg/kg bw						
Group ARfD: 0.04 mg/kg bw						
Cyromazine (169)**						
ADI: 0–0.06 mg/kg bw						
ARfD: 0.1 mg/kg bw						
Diazinon (022)	FB 0265	Cranberry	0.2		0.05	0.13
ADI: 0–0.005 mg/kg bw						
ARfD: 0.03 mg/kg bw						
Definition of the residue (for compliance with MRLs and estimation of dietary intake): diazinon. The Residue is fat-soluble.						
Dimethoate (027)	The MRL for barley recommended at the 1998 Meeting was agreed to be sufficient and that no further evaluation was required.					
Disulfoton (74)	VB 0404	Cauliflower	0.5	0.05	0.01	0.31[1]
ADI: 0–0.0003 mg/kg bw						
ARfD: 0.003 mg/kg bw						
Definition of the residue: sum of disulfoton, demeton-S and their sulphoxides and sulphones, expressed as disulfoton.						
(1) The information provided to the JMPR precludes an estimate that the dietary intake would be below the ARfD.						
Endosulfan (032)**	FI 0326	Avocado	0.5		0.14	0.35
ADI: 0–0.006 mg/kg bw	VP 0522	Broad bean (green pods and immature seeds)	W	0.5		
ARfD: 0.02 mg/kg bw	VB 0400	Broccoli	3	0.5	0.67	2.4[1]
	VB 0403	Cabbage, Savoy	W	2		
	VB 0041	Cabbages, Head	W	1		

Pesticide (Codex reference number)	**CCN**	**Commodity**	**Recommended MRL mg/kg**		**STMR or STMR-P, mg/kg**	**HR or HR-P mg/kg**
			New	Previous		
	SB 0715	Cacao beans	0.2	0.1	0.01	
	VR 0577	Carrot	W	0.2		
	VB 0404	Cauliflower	W	0.5	-	-
	VS 0624	Celery	7	2	2.6	5.0[1]
	FS 0013	Cherries	2	1	0.53	1.4[1]
	SB 0716	Coffee beans	0.2	0.1	0.02	
		Coffee beans, roasted			0.0013	
		Coffee, instant			0.0013	
	VP 0526	Common bean (pods and/or immature beans)	W	0.5		
	SO 0691	Cotton seed	0.3	1	0.02	
	OC 0691	Cotton seed oil, Crude	W	0.5		
	VC 0424	Cucumber	1	0.5	0.31	0.64
	FI 0322	Custard apple	0.5		0.14	0.35
	PE 0112	Eggs	0.03*		0.025	0.025
	VO 0440	Egg plant	0.1		0.006	0.06
	VP 0528	Garden pea (young pods)	W	0.5		
	FB 0269	Grapes	W	1		
	TN 0666	Hazelnuts	0.02*		0	0
	VL 0480	Kale	W	1		
	MO 0098	Kidney of cattle, goats, pigs and sheep	0.03*		0.004	0.006
	VL 0482	Lettuce, Head	W	1		
	VL 0483	Lettuce, Leaf	W	1		
	FI 0343	Litchi	2		0.95	1.3
	MO 0098	Liver of cattle, goats, pigs and sheep	0.1		0.054	0.078
	TN 0669	Macadamia nuts	0.02*		0	0
	GC0645	Maize	W	0.1		
	MM 0095	Meat (from mammals other than marine mammals)	0.2 (fat)	0.1 (fat)	fat 0.09 muscle 0.0039	fat 0.14 muscle 0.0056
	FI 0345	Mango	0.5		0.14	0.35
	VC 0046	Melons, except watermelon	2	0.5	0.09	0.3
	ML 0106	Milks	0.01	0.004 F	0.003	
	FM 0183	Milk fats	0.1		0.034	
	VA 0385	Onion, Bulb	W	0.2		
	FC 0004	Oranges, Sweet, Sour	W	0.5		
	FI 0350	Papaya	0.5		0.14	0.35
	FS 0247	Peach	W	1		
	FI 0352	Persimmon	2		0.95	1.3

Pesticide (Codex reference number)	CCN	Commodity	Recommended MRL mg/kg		STMR or STMR-P, mg/kg	HR or HR-P mg/kg
			New	Previous		
	FI 0353	Pineapple	W	2 Po		
	FS 0014	Plums (including prunes)	W	1		
	FP 0009	Pome fruits	W	1		
	VR 0589	Potato	0.05*	0.2	0.05	0.05
	PM 0110	Poultry meat	0.03*		0.025	0.025
	PO 0111	Poultry, edible offal of	0.03*		0.025	0.025
	SO 0495	Rape seed	W	0.5		
	GC 0649	Rice	W	0.1		
	VD 0541	Soya bean (dry)	1	1	0.2	
	OC 0541	Soya bean oil, crude	2		0.64	
	VL 0502	Spinach	W	2		
	VC 0431	Squash, Summer	0.5	0.5	0.09	0.23
	VR 0596	Sugar beet	W	0.1		
	SO 0702	Sunflower seed	W	1		
	VR 0508	Sweet potato	0.05*	0.2	0.05	0.05
	DT 1114	Tea, Green, Black	W	30		
	VO 0448	Tomato	1	0.5	0.22	0.85
	JF 0448	Tomato juice			0.04	
		Tomato paste			0.13	
		Tomato puree			0.11	
		Tomato canned fruit, unpeeled			0.11	
		Tomato canned fruit, peeled			0.03	
	GC 0654	Wheat	W	0.2		
Definition of the residue (for compliance with the MRL and for estimation of the dietary intake): sum of alpha endosulfan, beta endosulfan and endosulfan sulfate. This definition applies to plant and animal commodities. The residue is fat soluble. (1) The information provided to the JMPR precludes an estimate that the dietary intake would be below the ARfD.						
Fenamiphos (85)						
ADI: 0-0.0008 mg/kg bw	VC 0046	Melons, except watermelon	0.05	0.05*	0.02	0.04
ARfD: 0.003 mg/kg bw	VC 0432	Watermelon	0.05	0.05*	0.02	0.04[1]
Definition of the residue: sum of fenamiphos and its sulfoxide and sulfone, expressed as fenamiphos (1) The information provided to the JMPR precludes an estimate that the dietary intake would be below the ARfD.						
Fenpropathrin (185)	DT 1114	Tea Green, Black	2	-	0.14	1.38
ADI: 0–0.03 mg/kg bw						
Definition of the residue (for compliance with the MRL and for estimation of the dietary intake): fenpropathrin. The residue is fat soluble.						
Fludioxonil (211)	JF 226	Apple juice			0.17	
ADI: 0–0.4 mg/kg bw	AB 226	Apple pomace, dry	20		11	

Pesticide (Codex reference number)	CCN	Commodity	Recommended MRL mg/kg		STMR or STMR-P, mg/kg	HR or HR-P mg/kg
			New	Previous		
ARfD: unnecessary		Apple purée			0.25	
	FP0230	Pear	w	0.7		
	FP 0009	Pome fruits	5 Po		2.1	
Definition of the residue for compliance with MRLs and estimation of dietary intake in plant commodities: fludioxonil.						
Definition of the residue for compliance with MRLs and estimation of dietary intake in livestock commodities: fludioxonil and metabolites determined as 2,2-difluoro-1,3-benzodioxole-4-carboxylic acid and calculated as fludioxonil.						
Fludioxonil is fat-soluble.						
Haloxyfop (194)						
ADI: 0-0.0007 mg/kg bw						
ARfD: 0.08 mg/kg bw						
Imidacloprid (206)						
ADI: 0–0.06 mg/kg bw	FB 0265	Cranberry	0.05*		0.05	0.05
ARfD: 0.4 mg/kg bw						
Definition of the residue for compliance with MRLs and estimation of dietary intake: sum of imidacloprid and its metabolites containing the 6-chloropyridinyl moiety.						
Methoxyfenozide (209)	FB 0265	Cranberry	0.7		0.085	0.39
ADI: 0–0.1 mg/kg bw						
ARfD: 0.9 mg/kg bw						
Definition of the residue for compliance with MRLs and estimation of dietary intake: methoxyfenozide.						
Pirimicarb (101)**	AL 1020	Alfalfa fodder	W	20 dry wt		
ADI: 0–0.02 mg/kg bw	AL 1021	Alfalfa forage (green)	W	50 dry wt		
ARfD: 0.1 mg/kg bw	JF 0226	Apple juice			0.13	
		Apple sauce			0.09	
		Apple wet pomace			0.3	
	VS 0620	Artichoke, Globe	5		0.69	2.8
	VS 0621	Asparagus	0.01 (*)		0	0
	GC 0640	Barley	W	0.05 (*)	0.01	0.05
	AL 1030	Bean forage (green)			5.25	7
	VP 0062	Beans, shelled	W	0.1		
	VR 0574	Beetroot	W	0.05 (*)		
	FB 0018	Berries and other small fruits [(1)]	1		0.36	0.82
	FB 0264	Blackberries	W	0.5		
	VB 0040	Brassica (cole or cabbage) vegetables, head cabbages, Flowerhead brassicas	0.5		0.05	0.5
	VB 0400	Broccoli	W	1		
	VB 0402	Brussels sprouts	W	1		

Pesticide (Codex reference number)	**CCN**	**Commodity**	**Recommended MRL mg/kg**		**STMR or STMR-P, mg/kg**	**HR or HR-P mg/kg**
			New	Previous		
	VB 0041	Cabbages, Head	W	1		
	VB 0404	Cauliflower	W	1		
	VS 0624	Celery	W	1		
	CG 0080	Cereal grains [(2)]	0.05		0.01	0.05
		Chilli peppers (dried)	5		1.05	2.5
	FC 0001	Citrus fruits	3		0.015	0.08
	FC 0001	Citrus fruits (except oranges)	W	0.05 (*)		
	VP 0526	Common bean (pods and/or immature seeds)	W	1		
	SO 0691	Cotton seed	W	0.05 (*)		
	VC 0424	Cucumber	W	1		
	FB 0278	Currant, Black	W	0.5		
	DF 0014	Prunes			0.46	0.86
	VO 0440	Eggplants	W	1		
	PE 0112	Eggs	0.01 (*)	0.05 (*)		
	VL 0476	Endive	W	1		
	VC 0045	Fruiting vegetables, cucurbits [(3)]	1		0.18	0.44
	VO 0050	Fruiting vegetables, other than cucurbits [(4)]	0.5		0.105	0.25
	VA 0381	Garlic	0.1	0.5	0.01	0.09
	VC 0425	Gherkin	W	1		
	VL 0480	Kale	0.3		0.31	0.6
	VB 0405	Kohlrabi	W	0.5		
	VA 0384	Leek	W	0.5		
	VP 0060	Legume vegetables [(5)]	0.7		0.27	0.59
	VL 0482	Lettuce, head	5	1	2	3
	VL 0483	Lettuce, leaf	5		2	3
	AF 0645	Maize forage			0	0
	MO 0105	Edible offal (Mammalian)	0.01 (*)		0	0
	MM 0095	Meat (from mammals excluding marine mammals)	0.01 (*)	0.05 (*)	0	0
	VC 0046	Melons, except Watermelon	0.2		0.025	0.09
	ML 0106	Milks	0.01 (*)	0.05 (*)	0	0
	GC 0647	Oats	W	0.05 (*)		
	VA 0385	Onion, Bulb	0.1	0.5	0.01	0.09
	FC 0004	Oranges, Sweet, Sour	W	0.5		
	HH 0740	Parsley	W	1		
	VR 0588	Parsnip	W	0.05 (*)		
	AL 0072	Pea hay or Pea fodder (dry)	60 dry wt		16.4 dry wt	72 dry wt
	FS 0247	Peach	W	0.5		

Pesticide (Codex reference number)	CCN	Commodity	Recommended MRL mg/kg		STMR or STMR-P, mg/kg	HR or HR-P mg/kg
			New	Previous		
	VP 0063	Peas (pods and succulent=immature seeds)	W	0.2		
	TN 0672	Pecan	W	0.05 (*)		
	VO 0444	Peppers, Chili	W	2		
	VO 0445	Peppers, Sweet (incl Pimento or pimiento)	W	1		
	FS 0014	Plums (including prunes)	W	0.5		
	FP 0009	Pome fruits	1	1	0.18	0.91
	VR 0589	Potato	W	0.05 (*)	0	0
	PM 0110	Poultry meat	0.01 (*)		0	0
	PO 0111	Poultry, Edible offal of	0.01 (*)		0	0
	VD 0070	Pulses (6)	0.2		0.075	0.15
	VR 0494	Radish	W	0.05 (*)		
	SO 0495	Rape seed	0.05	0.2	0.01	0.02
	FB 0272	Raspberries, Red, Black	W	0.5		
	VR 0075	Root and tuber vegetables	0.05		0.01	0.02
	VL 0502	Spinach	W	1		
	FS 0012	Stone fruits	3		0.99	2.1
	AS 0081	Straw and fodder (dry) of cereal grains (7)	0.3 dry wt		0.015	0.33
	FB 0275	Strawberry	W	0.5		
	VR 0596	Sugar beet	W	0.05 (*)	0.01	0.02
	AV 0596	Sugar beet leaves or tops			0.76	4.3
	SO 0702	Sunflower seed	0.1		0.015	0.07
	VO 0447	Sweet corn (corn-on-the-cob)	W	0.05 (*)		
	VO 1275	Sweet corn (kernels)	0.05		0.01	0.02
	VO 0448	Tomato	W	1	0.12	0.31
	JF 0048	Tomato juice			0.07	
		Tomato puree			0.16	
	VR 0506	Turnip, Garden	W	0.05 (*)		
	VL 0473	Watercress	W	1		
	GC 0654	Wheat	W	0.05 (*)	0	0

Definition of the residue for estimation of dietary intake: Sum of pirimicarb, and its demethyl, demethyl formamido metabolites, expressed as pirimicarb for plant commodities and pirimicarb (parent compound only) for animal commodities.

(1) Excludes strawberries and grapes (2) Excludes rice (3) Excludes melons and water melons)

(4) Excludes edible fungi and sweetcorn (both kernels and corn-on-the-cob) (5) Excludes soya beans

(6) Excludes soya bean (dry) (7) Excludes rice straw and fodder, dry

Pirimiphos-methyl (086)

ADI: 0–0.03 mg/kg bw

ARfD: 0.2 mg/kg bw

Pesticide (Codex reference number)	CCN	Commodity	Recommended MRL mg/kg		STMR or STMR-P, mg/kg	HR or HR-P mg/kg
			New	Previous		
Propamocarb (148)**	VB 0041	Cabbages, Head	W	0.1		
ADI: 0–0.4 mg/kg bw	VB 0404	Cauliflower	0.2	0.2	0.035	0.09
ARfD: 2 mg/kg bw	VX 0624	Celery	W	0.2		
	VS 0469	Chicory witloof (sprouts)	2		0.60	0.90
	VC 0424	Cucumber	W	2		
	VR 0574	Beetroot	W	0.2		
	VB 0402	Brussels sprouts	W	1		
	VC 0045	Fruiting vegetables, cucurbits	5			
		Fruiting vegetables, cucurbits, except melons, and watermelons			0.59	4.8
	VL 0482	Lettuce, head	100	10	9.9	86
	VL 0483	Lettuce, leaf	100	10	9.9	86
	MO 0105	Edible offal (mammalians)	0.01*		0	0.01
	VO 0440	Eggplants	0.3		0.008	0.16
	PE 0012	Eggs	0.01*		0	0.01
	MM 0095	Meat (from mammals other than mammals)	0.01*		0	0.01
	VC 0046	Melons, except watermelon			0.04	0.53
	ML 0106	Milks	0.01*		0	
	VO 0485	Peppers, sweet	3	1	0.265	1.8
	VR 0589	Potato	0.3		0.05	0.17
	PM 0111	Poultry, edible offal of	0.01*		0	0.01
	PM 0110	Poultry meat	0.01*		0	0.01
	VR 0494	Radish	1	5	0.33	0.42
	VL 0502	Spinach	40		11.2	29
	FB 0275	Strawberry	W	0.1		
	VO 0448	Tomato	2	1	0.515	1.4
		Tomato purée			0.721	
		Tomato paste			1.54	
	VC 0432	Watermelon			0.04	0.53
Definition of the residue for compliance with MRLs and estimation of dietary intake for plant commodities: propamocarb						
Propargite (113)	VD0071	Beans (dry)	0.3	W	0.1	
ADI: 0–0.01mg/kg bw	VD0523	Broad bean (dry)	0.3		0.1	
ARfD: unnecessary	VD0524	Chick-pea (dry)	0.3		0.1	
	VD0545	Lupin (dry)	0.3		0.1	
	VR0589	Potato	0.03	W	0.01	
	TN0678	Walnuts	0.3	W	0.05	
Definition of the residue for compliance with MRL and for estimation of dietary intake: propargite. This definition applies to both plant and animal commodities. The residue is fat-soluble.						

Pesticide (Codex reference number)	**CCN**	**Commodity**	**Recommended MRL mg/kg**		**STMR or STMR-P, mg/kg**	**HR or HR-P mg/kg**
			New	Previous		
Propiconazole (160)	FB 0265	Cranberry	0.3		0.058	0.13
ADI: 0–0.07 mg/kg bw						
ARfD: 0.3 mg/kg bw						
Definition of the residue for compliance with MRL and for estimation of dietary intake: propiconazole						
Pyraclostrobin (210)	FP0226	Apple	0.5		0.104	0.29
ADI: 0–0.03 mg/kg bw		Beer			0.055	
ARfD: 0.05 mg/kg bw	VB0402	Brussels sprouts	0.3		0.03	0.14
	VB0041	Cabbage, head	0.2		0.02	0.09
	VC 4199	Cantaloupe	0.2		0.105	0.13
	FS0013	Cherry	W	1		
	SB0716	Coffee beans	0.3		0.025	
	VC0424	Cucumber	0.5		0.08	0.41
	VO 0440	Eggplant	0.3		0.12	0.21
	VB 0042	Flowerhead brassica	0.1		0.02	0.04
	DH1100	Hops, dry	15		4.0	
	VL0480	Kale	1		0.175	0.61
	VA0384	Leek	0.7		0.22	0.42
	VL0482	Lettuce, head	2		0.26	0.81
	FS0247	Peach	W	0.5		
	VP0064	Peas (immature succulent seeds)	0.02*		0.02	0.02
	VO0051	Peppers	0.5		0.08	0.25
	FS0014	Plum, including prunes	W	0.3		
	FB0272	Raspberry	2		0.78	1.28
	VD0541	Soya bean (dry)	0.05		0.02	
		Soya bean oil, refined			0.012	
	GC4673	Spelt	0.2		0.02	0.09
	FS0012	Stone fruits	1		0.43	0.63
	SO0702	Sunflower seed	0.3		0.055	
	OR0702	Sunflower seed oil, (refined)			0.00077	
Definition of the residue for compliance with MRL and for dietary intake estimation: pyraclostrobin						
Quinoxyfen (222) *	GC640	Barley	0.01 (*)		0.01	
ADI: 0–0.2 mg/kg bw		Beer			0.001	
ARfD: unnecessary	FS13	Cherries	0.4		0.12	
	FB278	Currants, black	1.		0.20	
	DF269	Dried grapes (=Currant, Raisins and Sultanas)			0.099	
	MO105	Edible offal (mammalian)	0.01 (*)		0.01	

Pesticide (Codex reference number)	CCN	Commodity	Recommended MRL mg/kg		STMR or STMR-P, mg/kg	HR or HR-P mg/kg
			New	Previous		
	PE0112	Eggs	0.01 (*)		0.003	
	FB269	Grapes	2		0.15	
	JF269	Grape juice			0.009	
	DH1100	Hops, dry	1		0.22	
	VL482	Lettuce, head	8		1.4	
	VL483	Lettuce, leaf	20		3.8	
	MM278	Meat (from mammals other than marine mammals)	0.02 fat		0.01 fat	
					0.002 muscle	
	VC46	Melons, except watermelon	0.1		0.01	
	ML106	Milks (excl. processed products)	0.01		0.002	
	FM183	Milk fats	0.2		0.02	
	VO51	Peppers	1		0.15	
		Peppers, chili, dried	10		1.5	
	PO 0111	Poultry, edible offal of	0.01		0.009	
	PM 0110	Poultry meat	0.02 fat		0.013 fat	
					0.000 muscle	
	FB275	Strawberry	1		0.32	
	VR596	Sugar beet root	0.03		0.01	
	AV1051	Sugar beet leaves or tops			0.22	
	GC654	Wheat	0.01 (*)		0.01	
		Wine of grapes			0.015	
Definition of the residue for compliance with MRL and estimation of dietary intake: quinoxyfen. The residue is fat soluble.						
Temephos (water treatment)	No ADI and ARfD established, margins of exposure (MoEs) calculated based on hypothetical exposure scenario.					
Thiabendazole (065)	FC0001	Citrus fruits	5 Po	3 Po	0.045	0.84
ADI: 0-01 mg/kg bw						
ARfD: 0.3 mg/kg/bw for women of child-bearing age						
ARfD: 1 mg/kg/bw for the general population						
Definition of the residue for compliance with MRLs and estimation of dietary intake for plant commodities: thiabendazole						
Definition of the residue for compliance with MRLs for animal commodities: sum of thiabendazole and 5-hydroxythiabendazole; and for estimation of dietary intake for animal commodities: sum of thiabendazole, 5-hydroxythiabendazole and its sulfate conjugate.						
Thiacloprid (223) *	AM 0660	Almond hulls	10		2.05	5.4
ADI: 0–0.01 mg/kg bw	DF 0226	Apple, dried			0.055	0.19
ARfD: 0.03 mg/kg bw	JF 0226	Apple, juice			0.0275	
	FB0018	Berries and other small fruits except grapes	1		0.275	0.62
	SO 0691	Cotton seed	0.02 (*)		0.02	0.02

Pesticide (Codex reference number)	**CCN**	**Commodity**	**Recommended MRL mg/kg**		**STMR or STMR-P, mg/kg**	**HR or HR-P mg/kg**
			New	Previous		
	VC 0424	Cucumbers	0.3		0.08	0.18
	MO 0105	Edible offal, mammalian	0.5		0.21	0.34
	VO 0440	Eggplants	0.7		0.185	0.38
	PE 0112	Eggs	0.02 (*)		0	0
	FI 0341	Kiwi fruits	0.2		0.02	0.1
	MF 0100	Mammalian fats, except milk fats			0.03	0.04
	MM 0095	Meat, mammalian	0.1		0.03	0.06
	VC 0046	Melons	0.2		0.02	0.02
	ML 0106	Milks	0.05		0.03	-
	SO 0495	Oilseed rape	0.5		0.065	0.33
	VO 0445	Pepper, sweet	1		0.22	0.38
	FP 0009	Pome fruits	0.7		0.11	0.38
	VR 0589	Potatoes	0.02 (*)		0	0
	PM 0110	Poultry meat	0.02 (*)		0	0
	PO 0111	Poultry, edible offal of	0.02 (*)		0	0
		Rape forage (fresh weight)			1.3	2.2
	GC 0649	Rice	0.02 (*)		0	0
	VC 4207	Squash, summer	0.3		0.08	0.18
	VC 0431	Squash, winter	0.2		0.02	0.02
	FS0012	Stone fruits	0.5		0.08	0.40
	JF 0448	Tomato, juice			0.1	
		Tomato, paste			0.429	
		Tomato, peeled			0.056	
	VO 0448	Tomatoes	0.5		0.165	0.29
	TN 0085	Treenuts	0.02		0.01	0.01
	VC 0432	Watermelons	0.2		0.02	0.02
	GC 0654	Wheat	0.1		0.025	0.04
		Wheat, forage	-		1.5	2.2
	AS 0654	Wheat, straw	5		0.71 (fresh matter)	1.7 (fresh matter)
	SO 0485	White mustard	0.5		0.065	0.33

Definition of the residue for compliance with MRLs and estimation of dietary intake in plant and animals tissues: thiacloprid. The residue is not fat soluble.

Thiophanate-methyl (077)

ADI: 0–0.08 mg/kg bw

ARfD: unnecessary

ANNEX 2: INDEX OF REPORTS AND EVALUATIONS OF PESTICIDES BY THE JMPR

Numbers in parentheses after the names of pesticides are Codex classification numbers. The abbreviations used are:

T, evaluation of toxicology

R, evaluation of residue and analytical aspects

E, evaluation of effects on the environment

Abamectin (177)	1992 (T,R), 1994 (T,R), 1995 (T), 1997 (T,R), 2000 (R)
Acephate (095)	1976 (T,R), 1979 (R), 1981 (R), 1982 (T), 1984 (T,R), 1987 (T), 1988 (T), 1990 (T,R), 1991 (corr. to 1990 R evaluation), 1994 (R), 1996 (R), 2002 (T), 2003 (R), 2004 (corr. to 2003 report), 2005 (T), 2006 (R)
Acrylonitrile	1965 (T,R)
Aldicarb (117)	1979 (T,R), 1982 (T,R), 1985 (R), 1988 (R), 1990 (R), 1991 (corr. to 1990 evaluation), 1992 (T), 1993 (R), 1994 (R), 1996 (R), 2001 (R), 2002 (R), 2006 (R)
Aldrin (001)	1965 (T), 1966 (T,R), 1967 (R), 1974 (R), 1975 (R), 1977 (T), 1990 (R), 1992 (R)
Allethrin	1965 (T,R)
Aminocarb (134)	1978 (T,R), 1979 (T,R)
Aminomethylphosphonic acid (AMPA, 198)	1997 (T,R)
Aminopyralid (220)	2006 (T, R)
Amitraz (122)	1980 (T,R), 1983 (R), 1984 (T,R), 1985 (R), 1986 (R), 1989 (R), 1990 (T,R), 1991 (R & corr. to 1990 R evaluation), 1998 (T)
Amitrole (079)	1974 (T,R), 1977 (T), 1993 (T,R), 1997 (T), 1998 (R)
Anilazine (163)	1989 (T,R), 1992 (R)
Azinphos-ethyl (068)	1973 (T,R), 1983 (R)
Azinphos-methyl (002)	1965 (T), 1968 (T,R), 1972 (R), 1973 (T), 1974 (R), 1991 (T,R), 1992 (corr. to 1991 report), 1993 (R), 1995 (R)
Azocyclotin (129)	1979 (R), 1981 (T), 1982 (R),1983 (R), 1985 (R), 1989 (T,R), 1991 (R), 1994 (T), 2005 (T,R)
Benalaxyl (155)	1986 (R), 1987 (T), 1988 (R), 1992 (R), 1993 (R), 2005 (T)
Bendiocarb (137)	1982 (T,R), 1984 (T,R), 1989 (R), 1990 (R)
Benomyl (069)	1973 (T,R), 1975 (T,R), 1978 (T,R), 1983 (T,R), 1988 (R), 1990 (R), 1994 (R), 1995 (T,E), 1998 (R)
Bentazone (172)	1991 (T,R), 1992 (corr. to 1991 report, Annex I), 1994 (R), 1995 (R), 1998 (T,R), 1999 (corr. to 1998

	report), 2004(T)
BHC (technical-grade)	1965 (T), 1968 (T,R), 1973 (T,R) (see also Lindane)
Bifenazate (219)	2006 (T, R)
Bifenthrin (178)	1992 (T,R), 1995 (R), 1996 (R), 1997 (R)
Binapacryl (003)	1969 (T,R), 1974 (R), 1982 (T), 1984 (R), 1985 (T,R)
Bioresmethrin (093)	1975 (R), 1976 (T,R), 1991 (T,R)
Biphenyl	See Diphenyl
Bitertanol (144)	1983 (T), 1984 (R), 1986 (R), 1987 (T), 1988 (R), 1989 (R), 1991 (R), 1998 (T), 1999 (R), 2002 (R)
Boscalid (221)	2006 (T, R)
Bromide ion (047)	1968 (R), 1969 (T,R), 1971 (R), 1979 (R), 1981 (R), 1983 (R), 1988 (T,R), 1989 (R), 1992 (R)
Bromomethane (052)	1965 (T,R), 1966 (T,R), 1967 (R), 1968 (T,R), 1971 (R), 1979 (R), 1985 (R), 1992 (R)
Bromophos (004)	1972 (T,R), 1975 (R), 1977 (T,R), 1982 (R), 1984 (R), 1985 (R)
Bromophos-ethyl (005)	1972 (T,R), 1975 (T,R), 1977 (R)
Bromopropylate (070)	1973 (T,R), 1993 (T,R)
Butocarboxim (139)	1983 (R), 1984 (T), 1985 (T), 1986 (R)
Buprofezin (173)	1991 (T,R), 1995 (R), 1996 (corr. to 1995 report.), 1999 (R)
sec-Butylamine (089)	1975 (T,R), 1977 (R), 1978 (T,R), 1979 (R), 1980 (R), 1981 (T), 1984 (T,R: withdrawal of temporary ADI, but no evaluation)
Cadusafos (174)	1991 (T,R), 1992 (R), 1992 (R)
Campheclor (071)	1968 (T,R), 1973 (T,R)
Captafol (006)	1969 (T,R), 1973 (T,R), 1974 (R), 1976 (R), 1977 (T,R), 1982 (T), 1985 (T,R), 1986 (corr. to 1985 report), 1990 (R), 1999 (acute Rf D)
Captan (007)	1965 (T), 1969 (T,R), 1973 (T), 1974 (R), 1977 (T,R), 1978 (T,R), 1980 (R), 1982 (T), 1984 (T,R), 1986 (R), 1987 (R and corr. to 1986 R evaluation), 1990 (T,R), 1991 (corr. to 1990 R evaluation), 1994 (R), 1995 (T), 1997 (R), 2000 (R), 2004 (T)
Carbaryl (008)	1965 (T), 1966 (T,R), 1967 (T,R), 1968 (R), 1969 (T,R), 1970 (R), 1973 (T,R), 1975 (R), 1976 (R), 1977 (R), 1979 (R), 1984 (R), 1996 (T), 2001 (T), 2002 (R)
Carbendazim (072)	1973 (T,R), 1976 (R), 1977 (T), 1978 (R), 1983 (T,R), 1985 (T,R), 1987 (R), 1988 (R), 1990 (R), 1994 (R), 1995 (T,E), 1998 (T,R), 2003 (R), 2005 (T)
Carbofuran (096)	1976 (T,R), 1979 (T,R), 1980 (T), 1982 (T), 1991 (R), 1993 (R), 1996 (T), 1997 (R), 1999 (corr. to 1997 report), 2002 (T, R), 2003 (R) (See also carbosulfan), 2004 (R)
Carbon disulfide (009)	1965 (T,R), 1967 (R), 1968 (R), 1971 (R), 1985 (R)

Carbon tetrachloride (010)	1965 (T,R), 1967 (R), 1968 (T,R), 1971 (R), 1979 (R), 1985 (R)
Carbophenothion (011)	1972 (T,R), 1976 (T,R), 1977 (T,R), 1979 (T,R), 1980 (T,R), 1983 (R)
Carbosulfan (145)	1984 (T,R), 1986 (T), 1991 (R), 1992 (corr. to 1991 report), 1993 (R), 1997 (R), 1999 (R), 2002 (R), 2003 (T, R), 2004 (R, corr. to 2003 report)
Cartap (097)	1976 (T,R), 1978 (T,R), 1995 (T,R)
Chinomethionat (080)	1968 (T,R) (as oxythioquinox), 1974 (T,R), 1977 (T,R), 1981 (T,R), 1983 (R), 1984 (T,R), 1987 (T)
Chlorbenside	1965 (T)
Chlordane (012)	1965 (T), 1967 (T,R), 1969 (R), 1970 (T,R), 1972 (R), 1974 (R), 1977 (T,R), 1982 (T), 1984 (T,R), 1986 (T)
Chlordimeform (013)	1971 (T,R), 1975 (T,R), 1977 (T), 1978 (T,R), 1979(T), 1980(T), 1985(T), 1986 (R), 1987 (T)
Chlorfenson	1965 (T)
Chlorfenvinphos (014)	1971 (T,R), 1984 (R), 1994 (T), 1996 (R)
Chlormequat (015)	1970 (T,R), 1972 (T,R), 1976 (R), 1985 (R), 1994 (T,R), 1997 (T), 1999 (acute Rf D), 2000 (R)
Chlorobenzilate (016)	1965 (T), 1968 (T,R), 1972 (R), 1975 (R), 1977 (R), 1980 (T)
Chloropicrin	1965 (T,R)
Chloropropylate	1968 (T,R), 1972 (R)
Chlorothalonil (081)	1974 (T,R), 1977 (T,R), 1978 (R), 1979 (T,R), 1981 (T,R), 1983 (T,R), 1984 (corr. to 1983 report and T evaluation), 1985 (T,R), 1987 (T), 1988 (R), 1990 (T,R), 1991 (corr. to 1990 evaluation), 1992 (T), 1993 (R), 1997 (R)
Chlorpropham (201)	1965 (T), 2000 (T), 2001 (R), 2005 (T)
Chlorpyrifos (017)	1972 (T,R), 1974 (R), 1975 (R), 1977 (T,R), 1981 (R), 1982 (T,R), 1983 (R), 1989 (R), 1995 (R), 1999 (T), 2000 (R), 2004 (R), 2006 (R)
Chlorpyrifos-methyl (090)	1975 (T,R), 1976 (R, Annex I only), 1979 (R), 1990, (R), 1991 (T,R), 1992 (T and corr. to 1991 report), 1993 (R), 1994 (R), 2001 (T)
Chlorthion	1965 (T)
Clethodim (187)	1994 (T,R), 1997 (R), 1999 (R), 2002 (R)
Clofentezine (156)	1986 (T,R), 1987 (R), 1989 (R), 1990 (R), 1992 (R), 2005 (T)
Coumaphos (018)	1968 (T,R), 1972 (R), 1975 (R), 1978 (R), 1980 (T,R), 1983 (R), 1987 (T), 1990 (T,R)
Crufomate (019)	1968 (T,R), 1972 (R)
Cyanophenfos (091)	1975 (T,R), 1978 (T: ADI extended, but no evaluation), 1980, (T), 1982 (R), 1983 (T)

Cycloxydim (179)	1992 (T,R), 1993 (R)
Cyfluthrin (157)	1986 (R), 1987 (T and corr. to 1986 report), 1989 (R), 1990 (R), 1992 (R), 2006 (T)
Cyhalothrin (146)	1984 (T,R), 1986 (R), 1988 (R)
Cyhexatin (067)	1970 (T,R), 1973 (T,R), 1974 (R), 1975 (R), 1977 (T), 1978 (T,R), 1980 (T), 1981 (T), 1982 (R), 1983 (R), 1985 (R), 1988 (T), 1989 (T), 1991 (T,R), 1992 (R), 1994 (T), 2005 (T,R)
Cypermethrin (118)	1979 (T,R), 1981 (T,R), 1982 (R), 1983 (R), 1984 (R), 1985 (R), 1986 (R), 1987 (corr. to 1986 evaluation), 1988 (R), 1990 (R), 2006 (T)
Cyprodinil (207)	2003 (T,R), 2004 (corr. to 2003 report)
Cyromazine (169)	1990 (T,R), 1991 (corr. to 1990 R evaluation), 1992 (R), 2006 (T)
2,4-D (020)	1970 (T,R), 1971 (T,R), 1974 (T,R), 1975 (T,R), 1980 (R), 1985, (R), 1986 (R), 1987 (corr. to 1986 report, Annex I), 1996 (T), 1997 (E), 1998 (R), 2001 (R)
Daminozide (104)	1977 (T,R), 1983 (T), 1989 (T,R), 1991 (T)
DDT (021)	1965 (T), 1966 (T,R), 1967 (T,R),1968 (T,R), 1969 (T,R), 1978 (R), 1979 (T), 1980 (T), 1983 (T), 1984 (T), 1993 (R), 1994 (R), 1996 (R)
Deltamethrin (135)	1980 (T,R), 1981 (T,R), 1982 (T,R), 1984 (R), 1985 (R), 1986 (R), 1987 (R), 1988 (R), 1990 (R), 1992 (R), 2000 (T), 2002 (R)
Demeton (092)	1965 (T), 1967 (R), 1975 (R), 1982 (T)
Demeton-S-methyl (073)	1973 (T,R), 1979 (R), 1982 (T), 1984 (T,R), 1989 (T,R), 1992 (R), 1998 (R)
Demeton-S-methylsulphon (164)	1973 (T,R), 1982 (T), 1984 (T,R), 1989 (T,R), 1992 (R)
Dialifos (098)	1976 (T,R), 1982 (T), 1985 (R)
Diazinon (022)	1965 (T), 1966 (T), 1967 (R), 1968 (T,R), 1970 (T,R), 1975 (R), 1979 (R), 1993 (T,R), 1994 (R), 1996 (R), 1999 (R), 2001 (T) , 2006 (T, R)
1,2-Dibromoethane (023)	1965 (T,R), 1966 (T,R), 1967 (R), 1968 (R), 1971 (R), 1979 (R), 1985 (R)
Dicloran (083)	2003 (R)
Dichlorfluanid (082)	1969 (T,R), 1974 (T,R), 1977 (T,R), 1979 (T,R), 1981 (R),1982 (R), 1983 (T,R), 1985 (R)
1,2-Dichloroethane (024)	1965 (T,R), 1967 (R), 1971 (R), 1979 (R), 1985 (R)
Dichlorvos (025)	1965 (T,R), 1966 (T,R), 1967 (T,R), 1969 (R), 1970 (T,R), 1974 (R), 1977 (T), 1993 (T,R)
Dicloran (083)	1974 (T,R), 1977 (T,R), 1998 (T,R)
Dicofol (026)	1968 (T,R), 1970 (R), 1974 (R), 1992 (T,R), 1994 (R)
Dieldrin (001)	1965 (T), 1966 (T,R), 1967 (T,R), 1968 (R), 1969 (R), 1970, (T,R), 1974 (R), 1975 (R), 1977 (T), 1990

	(R), 1992 (R)
Diflubenzuron (130)	1981 (T,R), 1983 (R), 1984 (T,R), 1985 (T,R), 1988 (R), 2001 (T), 2002 (R)
Dimethenamid- P (214)	2005 (T,R)
Dimethipin (151)	1985 (T,R), 1987 (T,R), 1988 (T,R), 1999 (T), 2001 (R), 2004 (T)
Dimethoate (027)	1965 (T), 1966 (T), 1967 (T,R), 1970 (R), 1973 (R in evaluation of formothion), 1977 (R), 1978 (R), 1983 (R) 1984 (T,R) 1986 (R), 1987 (T,R), 1988 (R), 1990 (R), 1991 (corr. to 1990 evaluation), 1994 (R), 1996 (T), 1998 (R), 2003 (T,R), 2004 (corr. to 2003 report), 2006 (R)
Dimethrin	1965 (T)
Dinocap (087)	1969 (T,R), 1974 (T,R), 1989 (T,R), 1992 (R), 1998 (R), 1999 (R), 2000 (T), 2001 (R)
Dioxathion (028)	1968 (T,R), 1972 (R)
Diphenyl (029)	1966 (T,R), 1967 (T)
Diphenylamine (030)	1969 (T,R), 1976 (T,R), 1979 (R), 1982 (T), 1984 (T,R), 1998 (T), 2001 (R), 2003 (R)
Diquat (031)	1970 (T,R), 1972 (T,R), 1976 (R), 1977 (T,R), 1978 (R), 1994 (R)
Disulfoton (074)	1973 (T,R), 1975 (T,R), 1979 (R), 1981 (R), 1984 (R), 1991 (T,R), 1992 (corr. to 1991 report, Annex I), 1994 (R), 1996 (T), 1998 (R), 2006 (R)
Dithianon (180)	1992 (T,R), 1995 (R), 1996 (corr. to 1995 report)
Dithiocarbamates (105)	1965 (T), 1967 (T,R), 1970 (T,R), 1983 (R propineb, thiram), 1984 (R propineb), 1985 (R), 1987 (T thiram), 1988 (R thiram), 1990 (R), 1991 (corr. to 1990 evaluation), 1992 (T thiram), 1993 (T,R), 1995 (R), 1996 (T,R ferbam, ziram;, R thiram), 2004 (R)
4,6-Dinitro-*ortho*-cresol (DNOC)	1965 (T)
Dodine (084)	1974 (T,R), 1976 (T,R), 1977 (R), 2000 (T), 2003 (R) 2004 (corr. to 2003 report)
Edifenphos (099)	1976 (T,R), 1979 (T,R), 1981 (T,R)
Endosulfan (032)	1965 (T), 1967 (T,R), 1968 (T,R), 1971 (R), 1974 (R), 1975 (R), 1982 (T), 1985 (T,R), 1989 (T,R), 1993 (R), 1998 (T), 2006 (R)
Endrin (033)	1965 (T), 1970 (T,R), 1974 (R), 1975 (R), 1990 (R), 1992 (R)
Esfenvalerate (204)	2002 (T, R)
Ethephon (106)	1977 (T,R), 1978 (T,R), 1983 (R), 1985 (R), 1993 (T), 1994 (R), 1995 (T), 1997 (T), 2002 (T)
Ethiofencarb (107)	1977 (T,R), 1978 (R), 1981 (R), 1982 (T,R), 1983 (R)
Ethion (034)	1968 (T,R), 1969 (R), 1970 (R), 1972 (T,R), 1975 (R), 1982 (T), 1983 (R), 1985 (T), 1986 (T), 1989 (T), 1990 (T), 1994 (R)

Ethoprophos (149)	1983 (T), 1984 (R), 1987 (T), 1999 (T), 2004 (R)
Ethoxyquin (035)	1969 (T,R), 1998 (T), 1999 (R). 2005 (T)
Ethylene dibromide	See 1,2-Dibromoethane
Ethylene dichloride	See 1,2-Dichloroethane
Ethylene oxide	1965 (T,R), 1968 (T,R), 1971 (R)
Ethylenethiourea (ETU) (108)	1974 (R), 1977 (T,R), 1986 (T,R), 1987 (R), 1988 (T,R), 1990 (R), 1993 (T,R)
Etofenprox (184)	1993 (T,R)
Etrimfos (123)	1980 (T,R), 1982 (T,R[1]), 1986 (T,R), 1987 (R), 1988 (R), 1989 (R), 1990 (R)
Famoxadone (208)	2003 (T,R)
Fenamiphos (085)	1974 (T,R), 1977 (R), 1978 (R), 1980 (R), 1985 (T), 1987 (T), 1997 (T), 1999 (R), 2002 (T), 2006 (R)
Fenarimol (192)	1995 (T, R, E), 1996 (R and corr. to 1995 report)
Fenbuconazole (197)	1997 (T,R)
Fenbutatin oxide (109)	1977 (T,R), 1979 (R), 1992 (T), 1993 (R)
Fenchlorfos (036)	1968 (T,R), 1972 (R), 1983 (R)
Fenhexamid (215)	2005 (T,R)
Fenitrothion (037)	1969 (T,R), 1974 (T,R), 1976 (R), 1977 (T,R), 1979 (R), 1982, (T) 1983 (R), 1984 (T,R), 1986 (T,R), 1987 (R and corr. to 1986 R evaluation), 1988 (T), 1989 (R), 2000 (T), 2003 (R), 2004 (R, corr. to 2003 report)
Fenpropathrin (185)	1993 (T,R), 2006 (R)
Fenpropimorph (188)	1994 (T), 1995 (R), 1999 (R), 2001 (T), 2004 (T)
Fenpyroximate (193)	1995 (T,R), 1996 (corr. to 1995 report.), 1999 (R), 2004 (T)
Fensulfothion (038)	1972 (T,R), 1982 (T), 1983 (R)
Fenthion (039)	1971 (T,R), 1975 (T,R), 1977 (R), 1978 (T,R), 1979 (T), 1980 (T), 1983 (R), 1989 (R), 1995 (T,R,E), 1996 (corr. to 1995 report), 1997 (T), 2000 (R)
Fentin compounds (040)	1965 (T), 1970 (T,R), 1972 (R), 1986 (R), 1991 (T,R), 1993 (R), 1994 (R)
Fenvalerate (119)	1979 (T,R), 1981 (T,R), 1982 (T), 1984 (T,R), 1985 (R), 1986 (T,R), 1987 (R and corr. to 1986 report), 1988 (R), 1990 (R), 1991 (corr. to 1990 R evaluation)
Ferbam	See Dithiocarbamates, 1965 (T), 1967 (T,R), 1996 (T,R)
Fipronil (202)	1997 (T), 2000 (T), 2001 (R)
Fipronil-desulfinyl	1997 (T)
Flucythrinate (152)	1985 (T,R), 1987 (R), 1988 (R), 1989 (R), 1990 (R), 1993 (R)
Fludioxinil (211)	2004 (T,R), 2006 (R)
Flumethrin (195)	1996 (T,R)

Flusilazole (165)	1989 (T,R), 1990 (R), 1991 (R), 1993 (R), 1995 (T)
Flutolanil (205)	2002 (T, R)
Folpet (041)	1969 (T,R), 1973 (T), 1974 (R), 1982 (T), 1984 (T,R), 1986 (T), 1987 (R), 1990 (T,R), 1991 (corr. to 1990 R evaluation), 1993 (T,R), 1994 (R), 1995 (T), 1997 (R), 1998 (R), 1999(R) , 2002 (T), 2004 (T)
Formothion (042)	1969 (T,R), 1972 (R), 1973 (T,R), 1978 (R), 1998 (R)
Glufosinate-ammonium (175)	1991 (T,R), 1992 (corr. to 1991 report, Annex I), 1994 (R), 1998 (R), 1999 (T,R)
Glyphosate (158)	1986 (T,R), 1987 (R and corr. to 1986 report), 1988 (R), 1994 (R), 1997 (T,R), 2004 (T), 2005 (R)
Guazatine (114)	1978 (T.R), 1980 (R), 1997 (T,R)
Haloxyfop (194)	1995 (T,R), 1996 (R and corr. to 1995 report), 2001 (R), 2006 (T)
Heptachlor (043)	1965 (T), 1966 (T,R), 1967 (R), 1968 (R), 1969 (R), 1970 (T,R), 1974 (R), 1975 (R), 1977 (R), 1987 (R), 1991 (T,R), 1992 (corr. to 1991 report, Annex I), 1993 (R), 1994 (R)
Hexachlorobenzene (044)	1969 (T,R), 1973 (T,R), 1974 (T,R), 1978(T), 1985 (R)
Hexaconazole (170)	1990 (T,R), 1991 (R and corr. to 1990 R evaluation), 1993 (R)
Hexythiazox (176)	1991 (T,R), 1994 (R), 1998 (R)
Hydrogen cyanide (045)	1965 (T,R)
Hydrogen phosphide (046)	1965 (T,R), 1966 (T,R), 1967 (R), 1969 (R), 1971 (R)
Imazalil (110)	1977 (T,R), 1980 (T,R), 1984 (T,R), 1985 (T,R), 1986 (T), 1988 (R), 1989 (R), 1991 (T), 1994 (R), 2000 (T), 2001 (T), 2005 (T)
Imidacloprid (206)	2001 (T), 2002 (R), 2006 (R)
Indoxacarb (216)	2005 (T,R)
Iprodione (111)	1977 (T,R), 1980 (R), 1992 (T), 1994 (R), 1995 (T), 2001 (R)
Isofenphos (131)	1981 (T,R), 1982 (T,R), 1984 (R), 1985 (R), 1986 (T,R), 1988 (R), 1992 (R)
Kresoxim-methyl (199)	1998 (T,R), 2001 (R)
Lead arsenate	1965 (T), 1968 (T,R)
Leptophos (088)	1974 (T,R), 1975 (T,R), 1978 (T,R)
Lindane (048)	1965 (T), 1966 (T,R), 1967 (R), 1968 (R), 1969 (R), 1970 (T,R, published as Annex VI to 1971 evaluations), 1973 (T,R), 1974 (R), 1975 (R), 1977 (T,R), 1978 (R), 1979 (R), 1989 (T,R), 1997 (T), 2002 (T), 2003 (R), 2004 (corr. to 2003 report)
Malathion (049)	1965 (T), 1966 (T,R), 1967 (corr. to 1966 R evaluation), 1968 (R), 1969 (R), 1970 (R), 1973 (R), 1975 (R), 1977 (R), 1984 (R), 1997 (T), 1999 (R), 2000 (R), 2003 (T), 2004 (R)

Maleic hydrazide (102)	1976 (T,R), 1977 (T,R), 1980 (T), 1984 (T,R), 1996 (T), 1998 (R)
Mancozeb (050)	1967 (T,R), 1970 (T,R), 1974 (R), 1977 (R), 1980 (T,R), 1993 (T,R)
Maneb	See Dithiocarbamates, 1965 (T), 1967 (T,R), 1987 (T), 1993 (T,R)
Mecarbam (124)	1980 (T,R), 1983 (T,R), 1985 (T,R), 1986 (T,R), 1987 (R)
Metalaxyl (138)	1982 (T,R), 1984 (R), 1985 (R), 1986 (R), 1987 (R), 1989 (R), 1990 (R), 1992 (R), 1995 (R)
Metalaxyl –M (212)	2002 (T), 2004 (R)
Methacrifos (125)	1980 (T,R), 1982 (T), 1986 (T), 1988 (T), 1990 (T,R), 1992 (R)
Methamidophos (100)	1976 (T,R), 1979 (R), 1981 (R), 1982 (T,R), 1984 (R), 1985 (T), 1989 (R), 1990 (T,R), 1994 (R), 1996 (R), 1997 (R), 2002 (T), 2003 (R), 2004 (R, corr. to 2003 report)
Methidathion (051)	1972 (T,R), 1975 (T,R), 1979 (R), 1992 (T,R), 1994 (R), 1997 (T)
Methiocarb (132)	1981 (T,R), 1983 (T,R), 1984 (T), 1985 (T), 1986 (R), 1987 (T,R), 1988 (R), 1998 (T), 1999 (R), 2005 (R)
Methomyl (094)	1975 (R), 1976 (R), 1977 (R), 1978 (R), 1986 (T,R), 1987 (R), 1988 (R), 1989 (T,R), 1990 (R), 1991 (R), 2001 (T,R), 2004 (R)
Methoprene (147)	1984 (T,R), 1986 (R), 1987 (T and corr. to 1986 report), 1988 (R), 1989 (R), 2001 (T), 2005 (R)
Methoxychlor	1965 (T), 1977 (T)
Methoxyfenozide (209)	2003 (T, R), 2004 (corr. to 2003 report), 2006 (R)
Methyl bromide (052)	See Bromomethane
Metiram (186)	1993 (T), 1995 (R)
Mevinphos (053)	1965 (T), 1972 (T,R), 1996 (T), 1997 (E,R), 2000 (R)
MGK 264	1967 (T,R)
Monocrotophos (054)	1972 (T,R), 1975 (T,R), 1991 (T,R), 1993 (T), 1994 (R)
Myclobutanil (181)	1992 (T,R), 1997 (R), 1998 (R)
Nabam	See Dithiocarbamates, 1965 (T), 1976 (T,R)
Nitrofen (140)	1983 (T,R)
Novaluron (217)	2005 (T,R)
Omethoate (055)	1971 (T,R), 1975 (T,R), 1978 (T,R), 1979 (T), 1981 (T,R), 1984 (R), 1985 (T), 1986 (R), 1987 (R), 1988 (R), 1990 (R), 1998 (R)
Organomercury compounds	1965 (T), 1966 (T,R), 1967 (T,R)
Oxamyl (126)	1980 (T,R), 1983 (R), 1984 (T), 1985 (T,R), 1986 (R), 2002 (T,R)

Oxydemeton-methyl (166)	1965 (T, as demeton-*S*-methyl sulfoxide), 1967 (T), 1968 (R), 1973 (T,R), 1982 (T), 1984 (T,R), 1989 (T,R), 1992 (R), 1998 (R), 1999 (corr. to 1992 report), 2002 (T), 2004 (R)
Oxythioquinox	See Chinomethionat
Paclobutrazol (161)	1988 (T,R), 1989 (R)
Paraquat (057)	1970 (T,R), 1972 (T,R), 1976 (T,R), 1978 (R), 1981 (R), 1982 (T), 1985 (T), 1986 (T), 2003 (T), 2004 (R)
Parathion (058)	1965 (T), 1967 (T,R), 1969 (R), 1970 (R), 1984 (R), 1991 (R), 1995 (T,R), 1997 (R), 2000 (R)
Parathion-methyl (059)	1965 (T), 1968 (T,R), 1972 (R), 1975 (T,R), 1978 (T,R), 1979 (T), 1980 (T), 1982 (T), 1984 (T,R), 1991 (R), 1992 (R), 1994 (R), 1995 (T), 2000 (R), 2003 (R)
Penconazole (182)	1992 (T,R), 1995 (R)
Permethrin (120)	1979 (T,R), 1980 (R), 1981 (T,R), 1982 (R), 1983 (R), 1984 (R), 1985 (R), 1986 (T,R), 1987 (T), 1988 (R), 1989 (R), 1991 (R), 1992 (corr. to 1991 report), 1999 (T)
2-Phenylphenol (056)	1969 (T,R), 1975 (R), 1983 (T), 1985 (T,R), 1989 (T), 1990 (T,R), 1999 (T,R), 2002 (R)
Phenothrin (127)	1979 (R), 1980 (T,R), 1982 (T), 1984 (T), 1987 (R), 1988 (T,R)
Phenthoate (128)	1980 (T,R), 1981 (R), 1984 (T)
Phorate (112)	1977 (T,R), 1982 (T), 1983 (T), 1984 (R), 1985 (T), 1990 (R), 1991 (R), 1992 (R), 1993 (T), 1994 (T), 1996 (T), 2004 (T), 2005 (R)
Phosalone (060)	1972 (T,R), 1975 (R), 1976 (R), 1993 (T), 1994 (R), 1997 (T), 1999 (R), 2001 (T)
Phosmet (103)	1976 (R), 1977 (corr. to 1976 R evaluation), 1978 (T,R), 1979 (T,R), 1981 (R), 1984 (R), 1985 (R), 1986 (R), 1987 (R and corr. to 1986 R evaluation), 1988 (R), 1994 (T), 1997 (R), 1998 (T), 2002 (R), 2003(R)
Phosphine	See Hydrogen phosphide
Phosphamidon (061)	1965 (T), 1966 (T), 1968 (T,R), 1969 (R), 1972 (R), 1974 (R), 1982 (T), 1985 (T), 1986 (T)
Phoxim (141)	1982 (T), 1983 (R), 1984 (T,R), 1986 (R), 1987 (R), 1988 (R)
Piperonyl butoxide (062)	1965 (T,R), 1966 (T,R), 1967 (R), 1969 (R), 1972 (T,R), 1992 (T,R), 1995 (T), 2001 (R), 2002 (R)
Pirimicarb (101)	1976 (T,R), 1978 (T,R), 1979 (R), 1981 (T,R), 1982 (T), 1985 (R), 2004 (T), 2006 (R)
Pirimiphos-methyl (086)	1974 (T,R), 1976 (T,R), 1977 (R), 1979 (R), 1983 (R), 1985 (R), 1992 (T), 1994 (R), 2003 (R), 2004 (R, corr. to 2003 report), 2006 (T)
Prochloraz (142)	1983 (T,R), 1985 (R), 1987 (R), 1988 (R), 1989 (R),

	1990 (R), 1991 (corr. to 1990 report, Annex I, and R evaluation), 1992 (R), 2001 (T), 2004 (R)
Procymidone(136)	1981 (R), 1982 (T), 1989 (T,R), 1990 (R), 1991 (corr. to 1990 Annex I), 1993 (R), 1998 (R)
Profenofos (171)	1990 (T,R), 1992 (R), 1994 (R), 1995 (R)
Propamocarb (148)	1984 (T,R), 1986 (T,R), 1987 (R), 2005 (T), 2006 (R)
Propargite (113)	1977 (T,R), 1978 (R), 1979 (R), 1980 (T,R), 1982 (T,R), 1999 (T), 2002 (R), 2006 (R)
Propham (183)	1965 (T), 1992 (T,R)
Propiconazole (160)	1987 (T,R), 1991 (R), 1994 (R), 2004 (T)
Propineb	1977 (T,R), 1980 (T), 1983 (T), 1984 (R), 1985 (T,R), 1993 (T,R), 2004 (R)
Propoxur (075)	1973 (T,R), 1977 (R), 1981 (R), 1983 (R), 1989 (T), 1991 (R), 1996 (R)
Propylenethiourea (PTU, 150)	1993 (T,R), 1994 (R), 1999 (T)
Pyraclostrobin (210)	2003 (T), 2004 (R), 2006 (R)
Pyrazophos (153)	1985 (T,R), 1987 (R), 1992 (T,R), 1993 (R)
Pyrethrins (063)	1965 (T), 1966 (T,R), 1967 (R), 1968 (R), 1969 (R), 1970 (T), 1972 (T,R), 1974 (R), 1999 (T), 2000 (R), 2003 (T,R), 2005 (R)
Pyriproxyfen (200)	1999 (R,T), 2000 (R), 2001 (T)
Quinoxyfen (223)	2006 (T, R)
Quintozene (064)	1969 (T,R) 1973 (T,R), 1974 (R), 1975 (T,R), 1976 (Annex I, corr. to 1975 R evaluation), 1977 (T,R), 1995 (T,R), 1998 (R)
Spinosad (203)	2001 (T,R, 2004 (R)
Sulfuryl fluoride (218)	2005 (T,R)
2,4,5-T (121)	1970 (T,R), 1979 (T,R), 1981 (T)
Tebuconazole (189)	1994 (T,R), 1996 (corr. to Annex II of 1995 report), 1997 (R)
Tebufenozide (196)	1996 (T,R), 1997 (R), 1999 (R), 2001 (T,R), 2003(T)
Tecnazine (115)	1974 (T,R), 1978 (T,R), 1981 (R), 1983 (T), 1987 (R), 1989 (R), 1994 (T,R)
Teflubenzuron (190)	1994 (T), 1996 (R)
Temephos	2006 (T)
Terbufos (167)	1989 (T,R), 1990 (T,R), 2003 (T), 2005 (R)
Thiabendazole (065)	1970 (T,R), 1971 (R), 1972 (R), 1975 (R), 1977 (T,R), 1979 (R), 1981 (R), 1997 (R), 2000 (R), 2006 (T, R)
Thiacloprid (223)	2006 (T, R)
Thiodicarb (154)	1985 (T,R), 1986 (T), 1987 (R), 1988 (R), 2000 (T), 2001 (R)
Thiometon (076)	1969 (T,R), 1973 (T,R), 1976 (R), 1979 (T,R), 1988 (R)

Thiophanate-methyl (077)	1973 (T,R), 1975 (T,R), 1977 (T), 1978 (R), 1988 (R), 2002 (R), 1990 (R), 1994 (R), 1995 (T,E), 1998 (T,R), 2006 (T)
Thiram (105)	See Dithiocarbamates, 1965 (T), 1967 (T,R), 1970 (T,R), 1974 (T), 1977 (T), 1983 (R), 1984 (R), 1985 (T,R), 1987 (T), 1988 (R), 1989 (R), 1992 (T), 1996 (R)
Tolclofos-methyl (191)	1994 (T,R) 1996 (corr. to Annex II of 1995 report)
Tolylfluanid (162)	1988 (T,R), 1990 (R), 1991 (corr. to 1990 report), 2002 (T,R), 2003 (R)
Toxaphene	See Camphechlor
Triadimefon (133)	1979 (R), 1981 (T,R), 1983 (T,R), 1984 (R), 1985 (T,R), 1986 (R), 1987 (R and corr. to 1986 R evaluation), 1988 (R), 1989 (R), 1992 (R), 1995 (R), 2004 (T)
Triadimenol (168)	1989 (T,R), 1992 (R), 1995 (R), 2004 (T)
Triazolylalanine	1989 (T,R)
Triazophos (143)	1982 (T), 1983 (R), 1984 (corr. to 1983 report, Annex I), 1986 (T,R), 1990 (R), 1991 (T and corr. to 1990 R evaluation), 1992 (R), 1993 (T,R), 2002 (T)
Trichlorfon (066)	1971 (T,R), 1975 (T,R), 1978 (T,R), 1987 (R)
Trichloronat	1971 (T,R)
Trichloroethylene	1968 (R)
Tricyclohexyltin hydroxide	See Cyhexatin
Trifloxystrobin (213)	2004 (T, R)
Triforine (116)	1977 (T), 1978 (T, R), 1997 (T)
Triphenyltin compounds	See Fentin compounds
Vamidothion (078)	1973 (T,R), 1982 (T), 1985 (T,R), 1987 (R), 1988 (T), 1990 (R), 1992 (R)
Vinclozolin (159)	1986 (T,R), 1987 (R and corr. to 1986 report and R evaluation), 1988 (T,R), 1989 (R), 1990 (R), 1992 (R), 1995 (T)
Zineb (105)	See Dithiocarbamates, 1965 (T), 1967 (T,R), 1993 (T)
Ziram (105)	See Dithiocarbamates, 1965 (T), 1967 (T,R), 1996 (T,R)

ANNEX 3: INTERNATIONAL ESTIMATED DAILY INTAKES OF PESTICIDE RESIDUES

13 Clusters:	A	B	C	D	E	F	G	H	I	J	K	L	M
Regional diet:	Africa	Africa/Europe/Middle East	Africa/Middle East	Europe/Middle East	Europe	Europe	Far East	Latin America	Africa	Africa	Latin America	Far East	Europe/Latin America

BIFENAZATE (219) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person											
			A		B		C		D		E		F	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
JF 0226	Apple juice	0.03	0.0	0.0	2.8	0.1	0.1	0.0	1.1	0.0	6.8	0.2	7.4	0.2
OR 0691	Cotton seed oil, edible	0.00004	0.9	0.0	4.9	0.0	1.7	0.0	6.6	0.0	0.0	0.0	0.3	0.0
MO 0105	Edible offal (mammalian)	0.01	3.9	0.0	14.4	0.1	5.2	0.1	11.8	0.1	11.7	0.1	7.6	0.1
PE 0112	Eggs	0	2.5		29.7		25.1		24.5		37.8		27.4	
VC 0045	Fruiting vegetables, cucurbits	0.04	26.6	1.1	107.5	4.3	95.9	3.8	82.2	3.3	25.4	1.0	23.2	0.9
FB 0269	Grape (incl wine) Note	0.185	3.7	0.7	116.8	21.6	25.4	4.7	31.4	5.8	96.3	17.8	35.8	6.6
JF 0269	Grape juice	0.02	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	1.4	0.0	1.0	0.0
DF 0269	Grape, dried (= currants, raisins and sultanas)	0.59	0.0	0.0	2.9	1.7	0.4	0.2	0.4	0.2	2.3	1.4	1.7	1.0
DH 1100	Hops, dry	7.8	0.1	0.8	0.1	0.8	0.1	0.8	0.1	0.8	0.3	2.3	0.1	0.8
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.01	5.5	0.1	23.3	0.2	7.7	0.1	11.0	0.1	18.0	0.2	26.3	0.3
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	0.01	22.2	0.2	93.2	0.9	30.8	0.3	44.1	0.4	72.2	0.7	105.0	1.1
ML 0106	Milks (excl processed products)	0.01	68.8	0.7	190.6	1.9	79.4	0.8	302.6	3.0	179.6	1.8	237.9	2.4
HH 0738	Mints	12.9	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VO 0444	Peppers, chili	1.1	0.7	0.8	14.9	16.4	4.1	4.5	3.2	3.5	3.1	3.4	2.0	2.2
VO 0445	Peppers, sweet (incl. pim(i)ento)	0.235	0.7	0.2	14.9	3.5	8.8	2.1	3.2	0.8	3.1	0.7	2.0	0.5
DF 0014	Plum, dried (prunes)	0.02	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.6	0.0
FP 0009	Pome fruit Note	0.175	0.5	0.1	79.9	14.0	21.8	3.8	43.6	7.6	51.5	9.0	35.1	6.1
PM 0110	Poultry meat	0	7.1	0.0	58.5	0.0	31.9	0.0	24.0	0.0	61.0	0.0	27.3	0.0
PO 0111	Poultry, edible offal of	0	0.4	0.0	0.4	0.0	1.7	0.0	0.1	0.0	0.6	0.0	0.2	0.0
FS 0012	Stone fruit Note	0.34	0.7	0.2	44.1	15.0	14.1	4.8	26.6	9.0	26.3	8.9	8.3	2.8
FB 0275	Strawberry	0.63	0.0	0.0	5.0	3.2	2.0	1.3	1.7	1.1	5.2	3.3	4.1	2.6
VO 0448	Tomato (incl juice, peeled) Note	0.095	9.8	0.9	179.8	17.1	104.0	9.9	64.7	6.1	16.4	1.6	22.9	2.2
	Tomato paste	0.13	0.5	0.1	1.3	0.2	3.5	0.5	1.0	0.1	3.8	0.5	4.5	0.6
TN 0085	Tree nuts	0.03	4.2	0.1	21.5	0.6	3.9	0.1	3.0	0.1	5.5	0.2	10.2	0.3

Annex 3

BIFENAZATE (219) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person											
			A		B		C		D		E		F	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
	Total intake (µg/person)=			5.9		101.6		37.7		42.2		53.2		30.6
	Bodyweight per region (kg bw) =			60		60		60		60		60		60
	ADI (µg/person)=			600		600		600		600		600		600
	%ADI=			1.0%		16.9%		6.3%		7.0%		8.9%		5.1%
	Rounded%ADI=			1%		20%		6%		7%		9%		5%

BIFENAZATE (219) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
JF 0226	Apple juice	0.03	0.1	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.7	0.0	0.9	0.0	5.7	0.2
OR 0691	Cotton seed oil, edible	0.00004	1.0	0.0	0.7	0.0	1.0	0.0	1.4	0.0	1.5	0.0	5.5	0.0	1.2	0.0
MO 0105	Edible offal (mammalian)	0.01	4.8	0.0	10.7	0.1	4.0	0.0	4.0	0.0	6.5	0.1	6.6	0.1	5.6	0.1
PE 0112	Eggs	0	22.1		71.5		16.6		5.1		17.6		35.2		57.4	
VC 0045	Fruiting vegetables, cucurbits	0.04	69.7	2.8	25.9	1.0	14.9	0.6	18.0	0.7	18.7	0.7	39.1	1.6	44.2	1.8
FB 0269	Grape (incl wine) Note	0.185	2.6	0.5	3.9	0.7	9.5	1.8	0.3	0.1	4.8	0.9	8.7	1.6	43.4	8.0
JF 0269	Grape juice	0.02	0.0	0.0	0.1	0.0	1.0	0.0	0.0	0.0	0.6	0.0	0.4	0.0	3.6	0.1
DF 0269	Grape, dried (= currants, raisins and sultanas)	0.59	0.0	0.0	0.2	0.1	0.2	0.1	0.0	0.0	0.3	0.2	0.4	0.2	2.6	1.5
DH 1100	Hops, dry	7.8	0.0	0.0	0.1	0.8	0.1	0.8	0.1	0.8	0.1	0.8	0.1	0.8	0.6	4.7
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.01	11.0	0.1	17.9	0.2	6.1	0.1	5.7	0.1	16.4	0.2	12.2	0.1	31.7	0.3
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	0.01	43.8	0.4	71.5	0.7	24.5	0.2	22.9	0.2	65.7	0.7	48.9	0.5	126.6	1.3
ML 0106	Milks (excl processed products)	0.01	66.0	0.7	121.1	1.2	81.6	0.8	102.4	1.0	207.7	2.1	57.0	0.6	287.9	2.9
HH 0738	Mints	12.9	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VO 0444	Peppers, chili	1.1	8.7	9.6	13.0	14.3	4.2	4.6	4.7	5.2	1.7	1.9	2.6	2.9	4.4	4.8
VO 0445	Peppers, sweet (incl. pim(i)ento)	0.235	0.0	0.0	9.4	2.2	4.2	1.0	4.7	1.1	1.7	0.4	2.6	0.6	4.4	1.0
DF 0014	Plum, dried (prunes)	0.02	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.6	0.0
FP 0009	Pome fruit Note	0.175	20.8	3.6	11.6	2.0	3.3	0.6	0.1	0.0	10.7	1.9	23.6	4.1	36.9	6.4
PM 0110	Poultry meat	0	17.6	0.0	131.3	0.0	25.1	0.0	4.7	0.0	145.9	0.0	27.7	0.0	115.1	0.0
PO 0111	Poultry, edible offal of	0	0.4	0.0	1.0	0.0	1.9	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.3	0.0
FS 0012	Stone fruit Note	0.34	6.7	2.3	4.3	1.5	1.4	0.5	0.1	0.0	4.9	1.7	4.9	1.7	17.7	6.0

FB 0275	Strawberry	0.63	0.0	0.0	1.8	1.1	0.1	0.1	0.0	0.0	0.3	0.2	6.2	3.9	5.9	3.7
VO 0448	Tomato (incl juice, peeled) Note	0.095	23.1	2.2	23.3	2.2	12.6	1.2	14.6	1.4	33.2	3.2	4.3	0.4	98.2	9.3
	Tomato paste	0.13	0.1	0.0	2.1	0.3	0.6	0.1	0.4	0.1	0.6	0.1	1.4	0.2	1.2	0.2
TN 0085	Tree nuts	0.03	16.3	0.5	15.7	0.5	9.7	0.3	1.9	0.1	19.1	0.6	29.0	0.9	5.6	0.2
	Total intake (µg/person)=			22.7		29.0		12.7		10.7		15.4		20.1		52.5
	Bodyweight per region (kg bw) =			55		60		60		60		60		55		60
	ADI (µg/person)=			550		600		600		600		600		550		600
	%ADI=			4.1%		4.8%		2.1%		1.8%		2.6%		3.7%		8.7%
	Rounded%ADI=			4%		5%		2%		2%		3%		4%		9%

Notes
Pome fruit consumption (in diet columns) reduced by subtraction of 1.5 × apple juice consumption.
Stone fruit consumption (in diet columns) reduced by subtraction of 2.9 × dried plums consumption.
Grapes consumption (in diet columns) reduced by subtraction of 4 × dried grapes consumption and 1.4 × grape juice consumption.
Tomato consumption (in diet columns) reduced by subtraction of 4 × tomato paste consumption.

DIAZINON (22) International Estimated Daily Intake (IEDI) ADI = 0 - 0.005 mg/kg bw

		STMR or	Diets: g/person per day Intake = daily intake: µg/person											
Codex		STMR-P	A		B		C		D		E		F	
Code	Commodity	mg/kg	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
TN 0660	Almond	0.05	0.0	0.0	1.9	0.1	1.0	0.1	0.0	0.0	1.0	0.1	0.8	0.0
JF 0226	Apple juice	0.0004	0.0	0.0	2.8	0.0	0.1	0.0	1.1	0.0	6.8	0.0	7.4	0.0
FB 0264	Blackberries	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.3	0.0
FB 4079	Boysenberry	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0
VB 0400	Broccoli	0.5	0.0	0.0	0.7	0.4	1.2	0.6	0.1	0.1	4.2	2.1	4.0	2.0
VB 0403	Cabbage, Savoy	0.01	0.3	0.0	11.7	0.1	0.0	0.0	5.5	0.1	3.2	0.0	15.0	0.2
VC 4199	Cantaloupe	0.2	1.8	0.4	13.4	2.7	11.3	2.3	5.8	1.2	2.8	0.6	1.0	0.2
VR 0577	Carrot	0.5	0.6	0.3	15.1	7.6	8.1	4.1	13.9	7.0	27.1	13.6	28.4	14.2
MO 1280	Cattle kidney	0.01	0.4	0.0	4.4	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.6	0.0
MO 1281	Cattle liver	0.01	0.4	0.0	4.4	0.0	1.7	0.0	0.9	0.0	1.0	0.0	0.6	0.0
FS 0013	Cherries	1	0.0	0.0	6.8	6.8	0.9	0.9	6.2	6.2	3.6	3.6	0.4	0.4
PE 0840	Chicken eggs	0.02	2.2	0.0	29.5	0.6	10.6	0.2	24.0	0.5	33.6	0.7	27.4	0.5
PM 0840	Chicken meat	0.02	5.5	0.1	43.1	0.9	28.6	0.6	22.1	0.4	38.6	0.8	26.3	0.5
PO 0840	Chicken, edible offal of	0.02	0.3	0.0	0.4	0.0	1.5	0.0	0.1	0.0	0.5	0.0	0.2	0.0
VL 0467	Chinese cabbage, type pe-tsai	0.05	0.3	0.0	2.6	0.1	0.0	0.0	5.5	0.3	0.0	0.0	1.9	0.1

Annex 3

DIAZINON (22) International Estimated Daily Intake (IEDI) ADI = 0 - 0.005 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person											
			A		B		C		D		E		F	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
VP 0526	Common bean (green pods and/or immature seeds)	0.2	0.5	0.1	4.7	0.9	4.1	0.8	0.0	0.0	13.1	2.6	0.0	0.0
FB 0265	Cranberries	0.05	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.6	0.0
VC 0424	Cucumber	0.1	0.3	0.0	12.7	1.3	5.9	0.6	11.5	1.2	6.1	0.6	7.1	0.7
FB 0021	Currants, red, black, white	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.4	3.1	0.6	2.0	0.4
VP 0529	Garden pea, shelled (immature seeds only)	0.2	0.0	0.0	0.9	0.2	5.4	1.1	0.3	0.1	9.7	1.9	1.0	0.2
MM 0814	Goat meat: 20% as fat	0.3	0.4	0.1	0.4	0.1	0.3	0.1	0.3	0.1	0.0	0.0	0.0	0.0
MM 0814	Goat meat: 80% as muscle	0.02	1.8	0.0	1.6	0.0	1.4	0.0	1.0	0.0	0.1	0.0	0.0	0.0
MO 0814	Goat, edible offal of	0.01	0.5	0.0	0.3	0.0	0.3	0.0	0.6	0.0	0.0	0.0	0.0	0.0
DH 1100	Hops, dry	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1
VL 0480	Kale	0.05	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.3	0.6	0.0	1.9	0.1
FI 0341	Kiwi fruit	0.2	0.0	0.0	2.9	0.6	0.1	0.0	0.2	0.0	2.7	0.5	1.8	0.4
VB 0405	Kohlrabi	0.2	0.3	0.1	0.1	0.0	0.0	0.0	5.5	1.1	12.3	2.5	1.9	0.4
VL 0482	Lettuce, head	0.5	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VL 0483	Lettuce, leaf	0.5	0.0	0.0	9.2	4.6	1.0	0.5	0.1	0.1	5.4	2.7	18.0	9.0
GC 0645	Maize (incl flour, incl germ, incl oil, incl beer)	0.02	82.7	1.7	148.4	3.0	135.9	2.7	31.8	0.6	33.3	0.7	7.5	0.2
MM 0097	Meat of cattle, pigs & sheep: 20% as fat	0.3	3.8	1.1	21.4	6.4	4.9	1.5	10.1	3.0	16.9	5.1	25.6	7.7
MM 0097	Meat of cattle, pigs & sheep: 80% as muscle	0.02	15.0	0.3	85.7	1.7	19.5	0.4	40.2	0.8	67.5	1.4	102.3	2.0
ML 0106	Milks (excl processed products)	0.02	68.8	1.4	190.6	3.8	79.4	1.6	302.6	6.1	179.6	3.6	237.9	4.8
-	Onion, dry	0.05	4.3	0.2	45.6	2.3	27.4	1.4	30.2	1.5	22.1	1.1	12.2	0.6
-	Onion, green (= shallot, Welsh and spring onion)	1	1.2	1.2	3.9	3.9	5.6	5.6	1.1	1.1	1.1	1.1	2.4	2.4
FS 0247	Peach	0.2	0.2	0.0	24.8	5.0	3.3	0.7	1.8	0.4	5.4	1.1	1.6	0.3
VO 0445	Peppers, sweet (incl. pim(i)ento)	0.05	0.7	0.0	14.9	0.7	8.8	0.4	3.2	0.2	3.1	0.2	2.0	0.1
MO 0818	Pig, edible offal of	0.01	0.3	0.0	3.2	0.0	0.0	0.0	3.7	0.0	6.4	0.1	3.1	0.0
FI 0353	Pineapple (incl canned, juice)	0.1	3.8	0.4	6.2	0.6	0.6	0.1	0.9	0.1	7.7	0.8	8.2	0.8
FS 0014	Plum*	1	0.1	0.1	5.3	5.3	2.5	2.5	7.0	7.0	5.5	5.5	0.9	0.9
DF 0014	Plum, dried (prunes)	2	0.0	0.0	0.2	0.4	0.0	0.0	0.1	0.2	0.5	1.0	0.6	1.2
FP 0009	Pome fruit*	0.04	0.5	0.0	79.9	3.2	21.8	0.9	43.6	1.7	51.5	2.1	35.1	1.4
VR 0494	Radish	0.1	0.0	0.0	1.3	0.1	0.6	0.1	2.0	0.2	1.2	0.1	0.0	0.0
FB 0272	Raspberries, red, black	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.4	0.9	0.2	0.2	0.0
MO 1288	Sheep kidney	0.01	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
MO 1289	Sheep liver	0.01	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-

Annex 3

DIAZINON (22) International Estimated Daily Intake (IEDI) ADI = 0 - 0.005 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person A diet	A intake	B diet	B intake	C diet	C intake	D diet	D intake	E diet	E intake	F diet	F intake
VL 0502	Spinach	0.5	0.0	0.0	5.0	2.5	1.1	0.6	0.1	0.1	2.6	1.3	0.1	0.1
-	Squashes & pumpkins & gourds	0.05	16.3	0.8	12.3	0.6	14.4	0.7	21.9	1.1	3.2	0.2	1.0	0.1
FB 0275	Strawberry	0.1	0.0	0.0	5.0	0.5	2.0	0.2	1.7	0.2	5.2	0.5	4.1	0.4
VO 0447	Sweet corn (corn-on-the-cob)	0.02	7.3	0.1	1.0	0.0	0.1	0.0	0.5	0.0	3.3	0.1	3.6	0.1
VO 0448	Tomato (incl juice, paste, peeled)	0.5	11.8	5.9	185.0	92.5	118.0	59.0	60.7	30.4	31.6	15.8	40.9	20.5
TN 0678	Walnut	0.01	0.0	0.0	1.3	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.1	0.0
	Total intake (µg/person)=			14.6		159.7		90.1		73.9		74.7		72.9
	Bodyweight per region (kg bw) =			60		60		60		60		60		60
	ADI (µg/person)=			300		300		300		300		300		300
	%ADI=			4.9%		53.2%		30.0%		24.6%		24.9%		24.3%
	Rounded %ADI=			5%		50%		30%		20%		20%		20%

DIAZINON (22) International Estimated Daily Intake (IEDI) ADI = 0 - 0.005 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person G diet	G intake	H diet	H intake	I diet	I intake	J diet	J intake	K diet	K intake	L diet	L intake	M diet	M intake
TN 0660	Almond	0.05	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0
JF 0226	Apple juice	0.0004	0.1	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.7	0.0	0.9	0.0	5.7	0.0
FB 0264	Blackberries	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0
FB 4079	Boysenberry	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
VB 0400	Broccoli	0.5	3.2	1.6	7.8	3.9	0.0	0.0	0.0	0.0	0.3	0.2	0.4	0.2	6.6	3.3
VB 0403	Cabbage, Savoy	0.01	3.4	0.0	0.4	0.0	2.4	0.0	0.3	0.0	0.4	0.0	7.9	0.1	5.8	0.1
VC 4199	Cantaloupe	0.2	3.8	0.8	3.1	0.6	0.4	0.1	0.7	0.1	1.3	0.3	3.5	0.7	6.2	1.2
VR 0577	Carrot	0.5	5.4	2.7	7.9	4.0	2.5	1.3	3.5	1.8	4.1	2.1	8.6	4.3	19.4	9.7
MO 1280	Cattle kidney	0.01	0.0	0.0	0.9	0.0	0.4	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0	0.0
MO 1281	Cattle liver	0.01	0.0	0.0	0.9	0.0	0.4	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.4	0.0
FS 0013	Cherries	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	2.5	2.5
PE 0840	Chicken eggs	0.02	17.5	0.4	28.0	0.6	6.1	0.1	5.1	0.1	16.9	0.3	33.5	0.7	34.4	0.7
PM 0840	Chicken meat	0.02	12.0	0.2	43.4	0.9	15.0	0.3	4.4	0.1	64.0	1.3	26.8	0.5	96.7	1.9

Annex 3

DIAZINON (22) International Estimated Daily Intake (IEDI) ADI = 0 - 0.005 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
PO 0840	Chicken, edible offal of	0.02	0.4	0.0	0.9	0.0	1.8	0.0	0.0	0.0	0.5	0.0	0.9	0.0	0.2	0.0
VL 0467	Chinese cabbage, type pe-tsai	0.05	3.4	0.2	0.4	0.0	2.4	0.1	0.3	0.0	0.5	0.0	7.9	0.4	0.3	0.0
VP 0526	Common bean (green pods and/or immature seeds)	0.2	0.0	0.0	1.9	0.4	0.0	0.0	0.0	0.0	0.3	0.1	1.8	0.4	8.0	1.6
FB 0265	Cranberries	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.1
VC 0424	Cucumber	0.1	7.9	0.8	0.6	0.1	0.2	0.0	0.0	0.0	0.4	0.0	5.5	0.6	5.3	0.5
FB 0021	Currants, red, black, white	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VP 0529	Garden pea, shelled (immature seeds only)	0.2	2.0	0.4	0.8	0.2	0.0	0.0	0.0	0.0	0.4	0.1	0.5	0.1	0.8	0.2
MM 0814	Goat meat: 20% as fat	0.3	0.4	0.1	0.2	0.1	0.4	0.1	0.9	0.3	0.1	0.0	0.1	0.0	0.0	0.0
MM 0814	Goat meat: 80% as muscle	0.02	1.6	0.0	0.7	0.0	1.7	0.0	3.6	0.1	0.5	0.0	0.3	0.0	0.2	0.0
MO 0814	Goat, edible offal of	0.01	0.4	0.0	0.2	0.0	0.4	0.0	0.8	0.0	0.1	0.0	0.1	0.0	0.1	0.0
DH 1100	Hops, dry	0.5	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.3
VL 0480	Kale	0.05	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3	0.0
FI 0341	Kiwi fruit	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.6	0.3	1.0	0.2
VB 0405	Kohlrabi	0.2	3.4	0.7	0.0	0.0	0.0	0.0	0.3	0.1	0.5	0.1	7.9	1.6	0.7	0.1
VL 0482	Lettuce, head	0.5	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VL 0483	Lettuce, leaf	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.3
GC 0645	Maize (incl flour, incl germ, incl oil, incl beer)	0.02	35.2	0.7	298.6	6.0	248.1	5.0	57.4	1.1	63.1	1.3	58.6	1.2	85.5	1.7
MM 0097	Meat of cattle, pigs & sheep: 20% as fat	0.3	9.8	2.9	17.3	5.2	4.8	1.4	3.4	1.0	16.2	4.9	11.1	3.3	30.8	9.2
MM 0097	Meat of cattle, pigs & sheep: 80% as muscle	0.02	39.0	0.8	69.2	1.4	19.1	0.4	13.4	0.3	64.7	1.3	44.4	0.9	123.1	2.5
ML 0106	Milks (excl processed products)	0.02	66.0	1.3	121.1	2.4	81.6	1.6	102.4	2.0	207.7	4.2	57.0	1.1	287.9	5.8
-	Onion, dry	0.05	16.8	0.8	8.6	0.4	6.9	0.3	12.1	0.6	18.6	0.9	23.8	1.2	28.4	1.4
-	Onion, green (= shallot, Welsh and spring onion)	1	0.6	0.6	19.3	19.3	0.4	0.4	3.9	3.9	4.2	4.2	10.7	10.7	1.7	1.7
FS 0247	Peach	0.2	1.7	0.3	1.7	0.3	1.1	0.2	0.1	0.0	1.0	0.2	1.7	0.3	10.2	2.0
VO 0445	Peppers, sweet (incl. pim(i)ento)	0.05	0.0	0.0	9.4	0.5	4.2	0.2	4.7	0.2	1.7	0.1	2.6	0.1	4.4	0.2
MO 0818	Pig, edible offal of	0.01	2.2	0.0	3.6	0.0	0.2	0.0	0.2	0.0	1.5	0.0	3.7	0.0	1.7	0.0
FI 0353	Pineapple (incl canned, juice)	0.1	3.9	0.4	11.7	1.2	12.6	1.3	11.1	1.1	16.6	1.7	21.4	2.1	22.6	2.3
FS 0014	Plum*	1	3.0	3.0	0.8	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.9	0.9	0.5	0.5
DF 0014	Plum, dried (prunes)	2	0.1	0.2	0.2	0.4	0.0	0.0	0.0	0.0	0.2	0.4	0.2	0.4	0.6	1.2
FP 0009	Pome fruit*	0.04	20.8	0.8	11.6	0.5	3.3	0.1	0.1	0.0	10.7	0.4	23.6	0.9	36.9	1.5
VR 0494	Radish	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	0.1	0.0	0.0	0.3	0.0
FB 0272	Raspberries, red, black	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.1

Annex 3

DIAZINON (22) International Estimated Daily Intake (IEDI) ADI = 0 - 0.005 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person G diet	G intake	H diet	H intake	I diet	I intake	J diet	J intake	K diet	K intake	L diet	L intake	M diet	M intake
MO 1288	Sheep kidney	0.01	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
MO 1289	Sheep liver	0.01	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VL 0502	Spinach	0.5	9.4	4.7	0.4	0.2	0.0	0.0	0.0	0.0	0.2	0.1	4.3	2.2	2.0	1.0
-	Squashes & pumpkins & gourds	0.05	7.1	0.4	4.6	0.2	11.3	0.6	3.0	0.2	7.0	0.4	6.7	0.3	7.6	0.4
FB 0275	Strawberry	0.1	0.0	0.0	1.8	0.2	0.1	0.0	0.0	0.0	0.3	0.0	6.2	0.6	5.9	0.6
VO 0447	Sweet corn (corn-on-the-cob)	0.02	0.2	0.0	2.4	0.0	2.2	0.0	3.3	0.1	1.7	0.0	2.8	0.1	11.2	0.2
VO 0448	Tomato (incl juice, paste, peeled)	0.5	23.5	11.8	31.7	15.9	15.0	7.5	16.2	8.1	35.6	17.8	9.9	5.0	103.0	51.5
TN 0678	Walnut	0.01	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.0
	Total intake (µg/person)=			36.7		65.6		21.4		21.2		42.5		41.6		107.6
	Bodyweight per region (kg bw) =			55		60		60		60		60		55		60
	ADI (µg/person)=			275		300		300		300		300		275		300
	%ADI=			13.3%		21.9%		7.1%		7.1%		14.2%		15.1%		35.9%
	Rounded %ADI=			10%		20%		7%		7%		10%		20%		40%

ENDOSULFAN (32) International Estimated Daily Intake (IEDI) ADI = 0 - 0.006 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person A diet	A intake	B diet	B intake	C diet	C intake	D diet	D intake	E diet	E intake	F diet	F intake
FI 0326	Avocado	0.14	3.7	0.5	1.0	0.1	0.2	0.0	0.0	0.0	0.9	0.1	0.8	0.1
VB 0400	Broccoli	0.67	0.0	0.0	0.7	0.5	1.2	0.8	0.1	0.1	4.2	2.8	4.0	2.7
MO 1280	Cattle kidney	0.004	0.4	0.0	4.4	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.6	0.0
MO 1281	Cattle liver	0.054	0.4	0.0	4.4	0.2	1.7	0.1	0.9	0.0	1.0	0.1	0.6	0.0
VS 0624	Celery	2.6	0.0	0.0	0.9	2.3	0.0	0.0	2.0	5.2	1.5	3.9	0.0	0.0
FS 0013	Cherries	0.53	0.0	0.0	6.8	3.6	0.9	0.5	6.2	3.3	3.6	1.9	0.4	0.2
SB 0715	Cocoa beans (incl mass)	0.01	0.8	0.0	3.4	0.0	0.8	0.0	0.8	0.0	5.6	0.1	5.2	0.1
SB 0716	Coffee beans (incl green, extracts, roasted)	0.02	3.1	0.1	12.6	0.3	2.9	0.1	1.4	0.0	10.1	0.2	18.0	0.4
SO 0691	Cotton seed (for oil processing only)	0.02	5.6	0.1	30.6	0.6	10.6	0.2	41.3	0.8	0.0	0.0	1.9	0.0
VC 0424	Cucumber	0.31	0.3	0.1	12.7	3.9	5.9	1.8	11.5	3.6	6.1	1.9	7.1	2.2
FI 0332	Custard apple	0.14	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-

Annex 3

ENDOSULFAN (32) International Estimated Daily Intake (IEDI) ADI = 0 - 0.006 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person											
			A		B		C		D		E		F	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
VO 0440	Egg plant	0.006	1.7	0.0	17.5	0.1	12.3	0.1	1.7	0.0	0.8	0.0	0.4	0.0
PE 0112	Eggs	0.025	2.5	0.1	29.7	0.7	25.1	0.6	24.5	0.6	37.8	0.9	27.4	0.7
TN 0666	Hazelnut	0	0.0	0.0	2.1	0.0	0.0	0.0	0.1	0.0	1.3	0.0	0.3	0.0
TN 0669	Macadamia nut	0	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
FI 0345	Mango (incl juice, pulp)	0.14	6.3	0.9	1.0	0.1	4.6	0.6	0.2	0.0	0.7	0.1	0.3	0.0
MM 0095	Meat from mammals other than marine mammals	0.0039	27.7	0.1	116.5	0.5	38.5	0.2	55.1	0.2	90.2	0.4	131.3	0.5
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.09	5.5	0.5	23.3	2.1	7.7	0.7	11.0	1.0	18.0	1.6	26.3	2.4
VC 0046	Melons, except watermelon	0.09	3.6	0.3	26.7	2.4	22.6	2.0	11.5	1.0	5.6	0.5	2.0	0.2
ML 0106	Milks (excl processed products)	0.003	68.8	0.2	190.6	0.6	79.4	0.2	302.6	0.9	179.6	0.5	237.9	0.7
FI 0350	Papaya	0.14	5.1	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
FI 0352	Persimmon, American	0.95	0.0	0.0	0.8	0.8	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
VR 0589	Potato (incl flour, frozen, starch, tapioca)	0.05	19.1	1.0	160.8	8.0	61.2	3.1	243.6	12.2	230.1	11.5	204.7	10.2
PM 0110	Poultry meat	0.025	7.1	0.2	58.5	1.5	31.9	0.8	24.0	0.6	61.0	1.5	27.3	0.7
PO 0111	Poultry, edible offal of	0.025	0.4	0.0	0.4	0.0	1.7	0.0	0.1	0.0	0.6	0.0	0.2	0.0
MO 1288	Sheep kidney	0.004	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
MO 1289	Sheep liver	0.054	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VD 0541	Soya bean (dry, incl oil)	0.2	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
OR 0541	Soya bean oil, refined Note	0.64	1.6	1.0	6.5	4.2	6.0	3.8	4.0	2.6	6.3	4.0	7.0	4.5
VC 0431	Squash, summer (= courgette)	0.09	0.0	0.0	8.3	0.7	11.4	1.0	7.3	0.7	3.2	0.3	0.3	0.0
VR 0508	Sweet potato	0.05	60.5	3.0	0.6	0.0	5.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
VO 0448	Tomato (excl juice, paste, peeled)	0.22	1.3	0.3	178.4	39.2	102.8	22.6	53.4	11.7	1.6	0.4	0.0	0.0
JF 0448	Tomato juice	0.04	5.2	0.2	0.5	0.0	0.4	0.0	2.1	0.1	6.9	0.3	15.2	0.6
	Tomato paste	0.13	0.5	0.1	1.3	0.2	3.5	0.5	1.0	0.1	3.8	0.5	4.5	0.6
	Tomato, peeled	0.03	0.1	0.0	0.4	0.0	0.5	0.0	0.4	0.0	4.9	0.2	3.2	0.1
	Total intake (µg/person)=			9.4		72.9		40.1		44.8		33.8		26.9
	Bodyweight per region (kg bw) =			60		60		60		60		60		60
	ADI (µg/person)=			360		360		360		360		360		360
	%ADI=			2.6%		20.2%		11.1%		12.5%		9.4%		7.5%
	Rounded%ADI=			3%		20%		10%		10%		9%		8%

Annex 3

ENDOSULFAN (32) International Estimated Daily Intake (IEDI) ADI = 0 - 0.006 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
FI 0326	Avocado	0.14	0.2	0.0	13.9	1.9	1.0	0.1	1.7	0.2	3.4	0.5	0.5	0.1	2.1	0.3
VB 0400	Broccoli	0.67	3.2	2.1	7.8	5.2	0.0	0.0	0.0	0.0	0.3	0.2	0.4	0.3	6.6	4.4
MO 1280	Cattle kidney	0.004	0.0	0.0	0.9	0.0	0.4	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0	0.0
MO 1281	Cattle liver	0.054	0.0	0.0	0.9	0.0	0.4	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.4	0.0
VS 0624	Celery	2.6	0.0	0.0	0.3	0.8	0.0	0.0	0.0	0.0	1.0	2.6	0.0	0.0	4.2	10.9
FS 0013	Cherries	0.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	2.5	1.3
SB 0715	Cocoa beans (incl mass)	0.01	0.8	0.0	1.9	0.0	0.8	0.0	0.8	0.0	2.1	0.0	1.2	0.0	5.4	0.1
SB 0716	Coffee beans (incl green, extracts, roasted)	0.02	0.2	0.0	7.0	0.1	0.5	0.0	0.2	0.0	5.3	0.1	5.7	0.1	12.4	0.2
SO 0691	Cotton seed (for oil processing only)	0.02	6.3	0.1	4.4	0.1	6.3	0.1	8.8	0.2	9.4	0.2	34.4	0.7	7.5	0.2
VC 0424	Cucumber	0.31	7.9	2.4	0.6	0.2	0.2	0.1	0.0	0.0	0.4	0.1	5.5	1.7	5.3	1.6
FI 0332	Custard apple	0.14	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VO 0440	Egg plant	0.006	20.1	0.1	0.1	0.0	0.6	0.0	6.3	0.0	0.5	0.0	6.3	0.0	0.7	0.0
PE 0112	Eggs	0.025	22.1	0.6	71.5	1.8	16.6	0.4	5.1	0.1	17.6	0.4	35.2	0.9	57.4	1.4
TN 0666	Hazelnut	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
TN 0669	Macadamia nut	0	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
FI 0345	Mango (incl juice, pulp)	0.14	12.7	1.8	26.2	3.7	6.1	0.9	12.7	1.8	9.2	1.3	8.0	1.1	1.9	0.3
MM 0095	Meat from mammals other than marine mammals	0.0039	54.8	0.2	89.4	0.3	30.6	0.1	28.6	0.1	82.1	0.3	61.1	0.2	158.3	0.6
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.09	11.0	1.0	17.9	1.6	6.1	0.6	5.7	0.5	16.4	1.5	12.2	1.1	31.7	2.8
VC 0046	Melons, except watermelon	0.09	7.5	0.7	6.1	0.5	0.7	0.1	1.4	0.1	2.5	0.2	6.9	0.6	12.4	1.1
ML 0106	Milks (excl processed products)	0.003	66.0	0.2	121.1	0.4	81.6	0.2	102.4	0.3	207.7	0.6	57.0	0.2	287.9	0.9
FI 0350	Papaya	0.14	1.3	0.2	11.5	1.6	1.6	0.2	13.7	1.9	14.5	2.0	1.0	0.1	0.6	0.1
FI 0352	Persimmon, American	0.95	1.5	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	3.7	3.5	0.1	0.0
VR 0589	Potato (incl flour, frozen, starch, tapioca)	0.05	52.7	2.6	57.1	2.9	50.1	2.5	4.3	0.2	54.7	2.7	41.0	2.1	168.0	8.4
PM 0110	Poultry meat	0.025	17.6	0.4	131.3	3.3	25.1	0.6	4.7	0.1	145.9	3.6	27.7	0.7	115.1	2.9
PO 0111	Poultry, edible offal of	0.025	0.4	0.0	1.0	0.0	1.9	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.3	0.0
MO 1288	Sheep kidney	0.004	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
MO 1289	Sheep liver	0.054	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VD 0541	Soya bean (dry, incl oil)	0.2	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
OR 0541	Soya bean oil, refined Note	0.64	4.3	2.8	10.6	6.8	2.0	1.3	1.4	0.9	19.5	12.5	9.2	5.9	22.0	14.1
VC 0431	Squash, summer (= courgette)	0.09	2.4	0.2	1.5	0.1	0.0	0.0	0.0	0.0	3.8	0.3	2.2	0.2	2.5	0.2
VR 0508	Sweet potato	0.05	47.4	2.4	7.8	0.4	22.0	1.1	20.9	1.0	5.5	0.3	20.8	1.0	6.1	0.3
VO 0448	Tomato (excl juice, paste, peeled)	0.22	22.8	5.0	4.1	0.9	12.3	2.7	1.8	0.4	32.8	7.2	0.4	0.1	27.3	6.0
JF 0448	Tomato juice	0.04	0.0	0.0	0.8	0.0	0.1	0.0	7.2	0.3	0.0	0.0	2.4	0.1	45.2	1.8

ENDOSULFAN (32) International Estimated Daily Intake (IEDI) ADI = 0 - 0.006 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
	Tomato paste	0.13	0.1	0.0	2.1	0.3	0.6	0.1	0.4	0.1	0.6	0.1	1.4	0.2	1.2	0.2
	Tomato, peeled	0.03	0.2	0.0	14.5	0.5	0.2	0.0	0.0	0.0	0.3	0.0	0.8	0.0	1.2	0.0
	Total intake (µg/person)=			24.3		33.5		11.2		8.4		37.4		21.1		60.3
	Bodyweight per region (kg bw) =			55		60		60		60		60		55		60
	ADI (µg/person)=			330		360		360		360		360		330		360
	%ADI=			7.4%		9.3%		3.1%		2.3%		10.4%		6.4%		16.8%
	Rounded%ADI=			7%		9%		3%		2%		10%		6%		20%

PIRIMICARB (101) International Estimated Daily Intake (IEDI) ADI = 0 - 0.02 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person											
			A		B		C		D		E		F	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
JF 0226	Apple juice	0.13	0.0	0.0	2.8	0.4	0.1	0.0	1.1	0.1	6.8	0.9	7.4	1.0
VS 0620	Artichoke globe	0.69	0.0	0.0	10.0	6.9	2.1	1.4	0.1	0.1	0.8	0.6	0.1	0.1
VS 0621	Asparagus	0	0.0	0.0	1.1	0.0	0.6	0.0	0.2	0.0	1.2	0.0	0.1	0.0
FB 0018	Berries and other small fruits	0.36	0.1	0.0	12.3	4.4	0.0	0.0	6.2	2.2	5.6	2.0	4.9	1.8
VB 0400	Broccoli	0.05	0.0	0.0	0.7	0.0	1.2	0.1	0.1	0.0	4.2	0.2	4.0	0.2
VB 0401	Broccoli, Chinese	0.05	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VB 0402	Brussels sprouts	0.05	0.0	0.0	0.1	0.0	2.8	0.1	5.5	0.3	1.5	0.1	1.9	0.1
VB 0403	Cabbage, Savoy	0.05	0.3	0.0	11.7	0.6	0.0	0.0	5.5	0.3	3.2	0.2	15.0	0.8
VC 4199	Cantaloupe	0.18	1.8	0.3	13.4	2.4	11.3	2.0	5.8	1.0	2.8	0.5	1.0	0.2
VB 0404	Cauliflower	0.05	0.1	0.0	5.2	0.3	1.2	0.1	0.1	0.0	1.7	0.1	0.1	0.0
GC 0080	Cereal grains (except rice)	0.01	265.9	2.7	682.3	6.8	668.4	6.7	471.3	4.7	352.5	3.5	316.0	3.2
VC 0423	Chayote	0.18	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
FC 0001	Citrus fruit (incl juice)	0.015	15.7	0.2	100.5	1.5	63.2	0.9	27.8	0.4	52.6	0.8	56.9	0.9
VC 0424	Cucumber	0.18	0.3	0.1	12.7	2.3	5.9	1.1	11.5	2.1	6.1	1.1	7.1	1.3
MO 0105	Edible offal (mammalian)	0	3.9	0.0	14.4	0.0	5.2	0.0	11.8	0.0	11.7	0.0	7.6	0.0
VO 0440	Egg plant	0.105	1.7	0.2	17.5	1.8	12.3	1.3	1.7	0.2	0.8	0.1	0.4	0.0
PE 0112	Eggs	0	2.5	0.0	29.7	0.0	25.1	0.0	24.5	0.0	37.8	0.0	27.4	0.0
VB 0042	Flowerhead brassicas	0.05	0.2	0.0	11.1	0.6	3.6	0.2	0.4	0.0	7.7	0.4	4.1	0.2

Annex 3

PIRIMICARB (101) International Estimated Daily Intake (IEDI) ADI = 0 - 0.02 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person A diet	A intake	B diet	B intake	C diet	C intake	D diet	D intake	E diet	E intake	F diet	F intake
VA 0381	Garlic	0.01	0.4	0.0	3.9	0.0	3.8	0.0	3.7	0.0	1.0	0.0	0.6	0.0
VC 0425	Gherkin	0.18	0.3	0.1	12.7	2.3	5.9	1.1	11.5	2.1	6.1	1.1	7.1	1.3
VL 0480	Kale	0.31	0.0	0.0	0.0	0.0	0.0	0.0	5.5	1.7	0.6	0.2	1.9	0.6
VB 0405	Kohlrabi	0.05	0.3	0.0	0.1	0.0	0.0	0.0	5.5	0.3	12.3	0.6	1.9	0.1
VP 0060	Legume vegetables (except soya beans)	0.27	1.1	0.3	23.0	6.2	18.0	4.9	1.7	0.5	26.5	7.2	5.3	1.4
-	Lettuce and similar (incl witloof chicory sprouts)	2	0.1	0.2	21.7	43.4	3.5	7.0	0.4	0.8	8.7	17.4	18.0	36.0
MM 0095	Meat from mammals other than marine mammals	0	27.7	0.0	116.5	0.0	38.5	0.0	55.1	0.0	90.2	0.0	131.3	0.0
VC 0046	Melons, except watermelon	0.025	3.6	0.1	26.7	0.7	22.6	0.6	11.5	0.3	5.6	0.1	2.0	0.1
ML 0106	Milks (excl processed products)	0	68.8	0.0	190.6	0.0	79.4	0.0	302.6	0.0	179.6	0.0	237.9	0.0
VO 0442	Okra	0.105	3.9	0.4	1.0	0.1	5.3	0.6	0.1	0.0	0.0	0.0	0.0	0.0
-	Onion, dry	0.01	4.3	0.0	45.6	0.5	27.4	0.3	30.2	0.3	22.1	0.2	12.2	0.1
VO 0051	Peppers	0.105	1.4	0.1	29.9	3.1	13.0	1.4	6.3	0.7	6.2	0.7	4.0	0.4
FS 0014	Plum (except dried plums)	0.99	0.1	0.1	5.3	5.3	2.5	2.5	7.0	6.9	5.5	5.4	0.9	0.9
DF 0014	Plum, dried (prunes)	0.46	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.0	0.5	0.2	0.6	0.3
FP 0009	Pome fruit (incl apple juice)	0.18	0.5	0.1	79.9	14.4	21.8	3.9	43.6	7.8	51.5	9.3	35.1	6.3
PM 0110	Poultry meat	0	7.1	0.0	58.5	0.0	31.9	0.0	24.0	0.0	61.0	0.0	27.3	0.0
PO 0111	Poultry, edible offal of	0	0.4	0.0	0.4	0.0	1.7	0.0	0.1	0.0	0.6	0.0	0.2	0.0
VD 0070	Pulses (except soya beans)	0.075	44.6	3.3	26.5	2.0	17.1	1.3	14.4	1.1	14.1	1.1	8.7	0.7
SO 0495	Rape seed (incl oil)	0.01	0.9	0.0	1.8	0.0	2.5	0.0	1.9	0.0	35.7	0.4	26.1	0.3
VR0075	Root and tuber vegetables	0.01	528.2	5.3	352.8	3.5	78.5	0.8	270.3	2.7	324.1	3.2	261.3	2.6
-	Squashes & pumpkins & gourds	0.18	16.3	2.9	12.3	2.2	14.4	2.6	21.9	3.9	3.2	0.6	1.0	0.2
FS 0012	Stone fruit (except plums)	0.99	0.6	0.6	39.4	39.0	11.6	11.5	19.9	19.7	22.3	22.0	9.1	9.0
SO 0702	Sunflower seed (incl oil)	0.015	0.7	0.0	44.5	0.7	20.5	0.3	29.6	0.4	21.2	0.3	5.4	0.1
VO 1275	Sweet corn kernels (incl corn on the cob + frozen + preserved)	0.01	7.4	0.1	1.0	0.0	0.1	0.0	0.7	0.0	3.2	0.0	3.6	0.0
VO 0448	Tomato (excl juice, paste, peeled)	0.105	1.3	0.1	178.4	18.7	102.8	10.8	53.4	5.6	1.6	0.2	0.0	0.0
JF 0448	Tomato juice	0.07	5.2	0.4	0.5	0.0	0.4	0.0	2.1	0.1	6.9	0.5	15.2	1.1
	Total intake (µg/person)=			17.7		170.2		63.3		66.5		81.0		70.9
	Bodyweight per region (kg bw) =			60		60		60		60		60		60
	ADI (µg/person)=			1200		1200		1200		1200		1200		1200
	%ADI=			1.5%		14.2%		5.3%		5.5%		6.7%		5.9%
	Rounded %ADI=			1%		10%		5%		6%		7%		6%

PIRIMICARB (101) International Estimated Daily Intake (IEDI) ADI = 0 - 0.02 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
JF 0226	Apple juice	0.13	0.1	0.0	0.5	0.1	0.1	0.0	0.0	0.0	0.7	0.1	0.9	0.1	5.7	0.7
VS 0620	Artichoke globe	0.69	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.7
VS 0621	Asparagus	0	3.7	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.1	0.0
FB 0018	Berries and other small fruits	0.36	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.5	0.0	0.0	4.7	1.7
VB 0400	Broccoli	0.05	3.2	0.2	7.8	0.4	0.0	0.0	0.0	0.0	0.3	0.0	0.4	0.0	6.6	0.3
VB 0401	Broccoli, Chinese	0.05	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VB 0402	Brussels sprouts	0.05	3.4	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.5	0.0	7.9	0.4	0.3	0.0
VB 0403	Cabbage, Savoy	0.05	3.4	0.2	0.4	0.0	2.4	0.1	0.3	0.0	0.4	0.0	7.9	0.4	5.8	0.3
VC 4199	Cantaloupe	0.18	3.8	0.7	3.1	0.5	0.4	0.1	0.7	0.1	1.3	0.2	3.5	0.6	6.2	1.1
VB 0404	Cauliflower	0.05	3.2	0.2	0.1	0.0	0.3	0.0	0.1	0.0	0.6	0.0	0.4	0.0	1.4	0.1
GC 0080	Cereal grains (except rice)	0.01	240.1	2.4	422.8	4.2	351.4	3.5	311.4	3.1	201.8	2.0	186.4	1.9	375.3	3.8
VC 0423	Chayote	0.18	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
FC 0001	Citrus fruit (incl juice)	0.015	17.3	0.3	156.8	2.4	14.9	0.2	42.5	0.6	222.8	3.3	40.4	0.6	132.3	2.0
VC 0424	Cucumber	0.18	7.9	1.4	0.6	0.1	0.2	0.0	0.0	0.0	0.4	0.1	5.5	1.0	5.3	1.0
MO 0105	Edible offal (mammalian)	0	4.8	0.0	10.7	0.0	4.0	0.0	4.0	0.0	6.5	0.0	6.6	0.0	5.6	0.0
VO 0440	Egg plant	0.105	20.1	2.1	0.1	0.0	0.6	0.1	6.3	0.7	0.5	0.1	6.3	0.7	0.7	0.1
PE 0112	Eggs	0	22.1	0.0	71.5	0.0	16.6	0.0	5.1	0.0	17.6	0.0	35.2	0.0	57.4	0.0
VB 0042	Flowerhead brassicas	0.05	9.6	0.5	7.9	0.4	0.6	0.0	0.2	0.0	0.9	0.0	1.1	0.1	8.0	0.4
VA 0381	Garlic	0.01	6.4	0.1	1.2	0.0	0.1	0.0	0.3	0.0	1.9	0.0	5.0	0.1	2.5	0.0
VC 0425	Gherkin	0.18	7.9	1.4	0.6	0.1	0.2	0.0	0.0	0.0	0.4	0.1	5.5	1.0	5.3	1.0
VL 0480	Kale	0.31	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.3	0.1
VB 0405	Kohlrabi	0.05	3.4	0.2	0.0	0.0	0.0	0.0	0.3	0.0	0.5	0.0	7.9	0.4	0.7	0.0
VP 0060	Legume vegetables (except soya beans)	0.27	6.7	1.8	6.2	1.7	1.4	0.4	0.5	0.1	1.7	0.5	3.8	1.0	26.3	7.1
-	Lettuce and similar (incl witloof chicory sprouts)	2	4.7	9.4	7.0	14.0	0.4	0.8	1.3	2.6	2.0	4.0	4.7	9.4	30.3	60.6
MM 0095	Meat from mammals other than marine mammals	0	54.8	0.0	89.4	0.0	30.6	0.0	28.6	0.0	82.1	0.0	61.1	0.0	158.3	0.0
VC 0046	Melons, except watermelon	0.025	7.5	0.2	6.1	0.2	0.7	0.0	1.4	0.0	2.5	0.1	6.9	0.2	12.4	0.3
ML 0106	Milks (excl processed products)	0	66.0	0.0	121.1	0.0	81.6	0.0	102.4	0.0	207.7	0.0	57.0	0.0	287.9	0.0

Annex 3

PIRIMICARB (101) International Estimated Daily Intake (IEDI) ADI = 0 - 0.02 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person G diet	G intake	H diet	H intake	I diet	I intake	J diet	J intake	K diet	K intake	L diet	L intake	M diet	M intake
VO 0442	Okra	0.105	4.1	0.4	1.0	0.1	7.0	0.7	15.9	1.7	1.1	0.1	3.9	0.4	0.2	0.0
-	Onion, dry	0.01	16.8	0.2	8.6	0.1	6.9	0.1	12.1	0.1	18.6	0.2	23.8	0.2	28.4	0.3
VO 0051	Peppers	0.105	8.7	0.9	22.4	2.4	8.4	0.9	9.4	1.0	3.3	0.3	5.3	0.6	8.9	0.9
FS 0014	Plum (except dried plums)	0.99	3.0	3.0	0.8	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.9	0.9	0.5	0.5
DF 0014	Plum, dried (prunes)	0.46	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.6	0.3
FP 0009	Pome fruit (incl apple juice)	0.18	20.8	3.7	11.6	2.1	3.3	0.6	0.1	0.0	10.4	1.9	23.6	4.2	36.9	6.6
PM 0110	Poultry meat	0	17.6	0.0	131.3	0.0	25.1	0.0	4.7	0.0	145.9	0.0	27.7	0.0	115.1	0.0
PO 0111	Poultry, edible offal of	0	0.4	0.0	1.0	0.0	1.9	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.3	0.0
VD 0070	Pulses (except soya beans)	0.075	16.0	1.2	32.4	2.4	24.7	1.9	34.2	2.6	50.7	3.8	8.0	0.6	16.9	1.3
SO 0495	Rape seed (incl oil)	0.01	9.9	0.1	5.9	0.1	0.3	0.0	1.0	0.0	0.0	0.0	15.5	0.2	9.9	0.1
VR0075	Root and tuber vegetables	0.01	139.1	1.4	109.8	1.1	409.6	4.1	444.6	4.4	145.3	1.5	127.0	1.3	225.6	2.3
-	Squashes & pumpkins & gourds	0.18	7.1	1.3	4.6	0.8	11.3	2.0	3.0	0.5	7.0	1.3	6.7	1.2	7.6	1.4
FS 0012	Stone fruit (except plums)	0.99	4.0	4.0	4.1	4.0	1.3	1.3	0.1	0.1	5.5	5.4	4.6	4.5	18.9	18.8
SO 0702	Sunflower seed (incl oil)	0.015	2.7	0.0	8.8	0.1	13.5	0.2	0.2	0.0	3.6	0.1	0.6	0.0	10.4	0.2
VO 1275	Sweet corn kernels (incl corn on the cob + frozen + preserved)	0.01	0.2	0.0	2.5	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.8	0.0	6.9	0.1
VO 0448	Tomato (excl juice, paste, peeled)	0.105	22.8	2.4	4.1	0.4	12.3	1.3	1.8	0.2	32.8	3.4	0.4	0.0	27.3	2.9
JF 0448	Tomato juice	0.07	0.0	0.0	0.8	0.1	0.1	0.0	7.2	0.5	0.0	0.0	2.4	0.2	45.2	3.2
	Total intake (µg/person)=			39.8		38.9		18.5		18.5		29.3		32.2		119.8
	Bodyweight per region (kg bw) =			55		60		60		60		60		55		60
	ADI (µg/person)=			1100		1200		1200		1200		1200		1100		1200
	%ADI=			3.6%		3.2%		1.5%		1.5%		2.4%		2.9%		10.0%
	Rounded %ADI=			4%		3%		2%		2%		2%		3%		10%

PROPAMOCARB (148) International Estimated Daily Intake (IEDI) ADI = 0 - 0.4 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person A diet	A intake	B diet	B intake	C diet	C intake	D diet	D intake	E diet	E intake	F diet	F intake
VB 0404	Cauliflower	0.035	0.1	0.0	5.2	0.2	1.2	0.0	0.1	0.0	1.7	0.1	0.1	0.0

VC 0423	Chayote	0.59	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VC 0424	Cucumber	0.59	0.3	0.2	12.7	7.5	5.9	3.5	11.5	6.8	6.1	3.6	7.1	4.2
MO 0105	Edible offal (mammalian)	0	3.9	0.0	14.4	0.0	5.2	0.0	11.8	0.0	11.7	0.0	7.6	0.0
PE 0112	Eggs	0	2.5	0.0	29.7	0.0	25.1	0.0	24.5	0.0	37.8	0.0	27.4	0.0
VC 0425	Gherkin	0.59	0.3	0.2	12.7	7.5	5.9	3.5	11.5	6.8	6.1	3.6	7.1	4.2
VL 0483	Lettuce. head including leaf	9.9	0.0	0.0	9.2	91.1	1.0	9.9	0.1	1.0	5.4	53.5	18.0	178.2
MM 0095	Meat from mammals other than marine mammals	0	27.7	0.0	116.5	0.0	38.5	0.0	55.1	0.0	90.2	0.0	131.3	0.0
VC 0046	Melons. except watermelon	0.04	3.6	0.1	26.7	1.1	22.6	0.9	11.5	0.5	5.6	0.2	2.0	0.1
ML 0106	Milks (excl processed products)	0	68.8	0.0	190.6	0.0	79.4	0.0	302.6	0.0	179.6	0.0	237.9	0.0
VO 0445	Peppers. sweet (incl. pim(i)ento)	0.265	0.7	0.2	14.9	3.9	8.8	2.3	3.2	0.8	3.1	0.8	2.0	0.5
VR 0589	Potato (incl flour. frozen. starch. tapioca)	0.05	19.1	1.0	160.8	8.0	61.2	3.1	243.6	12.2	230.1	11.5	204.7	10.2
PM 0110	Poultry meat	0	7.1	0.0	58.5	0.0	31.9	0.0	24.0	0.0	61.0	0.0	27.3	0.0
PO 0111	Poultry. edible offal of	0	0.4	0.0	0.4	0.0	1.7	0.0	0.1	0.0	0.6	0.0	0.2	0.0
VR 0494	Radish	0.33	0.0	0.0	1.3	0.4	0.6	0.2	2.0	0.7	1.2	0.4	0.0	0.0
VL 0502	Spinach	11.2	0.0	0.0	5.0	56.0	1.1	12.3	0.1	1.1	2.6	29.1	0.1	1.1
VC 0431	Squash. summer (= courgette)	0.59	0.0	0.0	8.3	4.9	11.4	6.7	7.3	4.3	3.2	1.9	0.3	0.2
VO 0448	Tomato (excluding paste) Note	0.515	9.8	5.0	179.8	92.6	104.0	53.6	56.7	29.2	16.4	8.4	22.9	11.8
	Tomato paste	1.54	0.5	0.8	1.3	2.0	3.5	5.4	1.0	1.5	3.8	5.9	4.5	6.9
VC 0432	Watermelon	0.04	6.1	0.2	43.1	1.7	47.1	1.9	25.8	1.0	4.4	0.2	6.0	0.2
VC 0433	Winter squash (= pumpkin)	0.59	0.0	0.0	0.5	0.3	1.5	0.9	7.3	4.3	0.0	0.0	0.3	0.2
	Total intake (µg/person)=			7.7		277.2		104.2		70.2		119.1		217.9
	Bodyweight per region (kg bw) =			60		60		60		60		60		60
	ADI (µg/person)=			24000		24000		24000		24000		24000		24000
	%ADI=			0.0%		1.2%		0.4%		0.3%		0.5%		0.9%
	Rounded%ADI=			0%		1%		0%		0%		1%		1%

Note: consumption of tomato (excluding paste) was calculated from consumption of tomato (incl juice. paste. peeled) – [4× consumption of tomato paste]

PROPAMOCARB (148) International Estimated Daily Intake (IEDI) ADI = 0 - 0.4 mg/kg bw

Codex		STMR or	Diets: g/person per day Intake = daily intake: µg/person													
		STMR-P	G		H		I		J		K		L		M	
Code	Commodity	mg/kg	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
VB 0404	Cauliflower	0.035	3.2	0.1	0.1	0.0	0.3	0.0	0.1	0.0	0.6	0.0	0.4	0.0	1.4	0.0
VC 0423	Chayote	0.59	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VC 0424	Cucumber	0.59	7.9	4.7	0.6	0.4	0.2	0.1	0.0	0.0	0.4	0.2	5.5	3.2	5.3	3.1

PROPAMOCARB (148) International Estimated Daily Intake (IEDI) ADI = 0 - 0.4 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person G diet	G intake	H diet	H intake	I diet	I intake	J diet	J intake	K diet	K intake	L diet	L intake	M diet	M intake
MO 0105	Edible offal (mammalian)	0	4.8	0.0	10.7	0.0	4.0	0.0	4.0	0.0	6.5	0.0	6.6	0.0	5.6	0.0
PE 0112	Eggs	0	22.1	0.0	71.5	0.0	16.6	0.0	5.1	0.0	17.6	0.0	35.2	0.0	57.4	0.0
VC 0425	Gherkin	0.59	7.9	4.7	0.6	0.4	0.2	0.1	0.0	0.0	0.4	0.2	5.5	3.2	5.3	3.1
VL 0483	Lettuce. head including leaf	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	24.8
MM 0095	Meat from mammals other than marine mammals	0	54.8	0.0	89.4	0.0	30.6	0.0	28.6	0.0	82.1	0.0	61.1	0.0	158.3	0.0
VC 0046	Melons. except watermelon	0.04	7.5	0.3	6.1	0.2	0.7	0.0	1.4	0.1	2.5	0.1	6.9	0.3	12.4	0.5
ML 0106	Milks (excl processed products)	0	66.0	0.0	121.1	0.0	81.6	0.0	102.4	0.0	207.7	0.0	57.0	0.0	287.9	0.0
VO 0445	Peppers. sweet (incl. pim(i)ento)	0.265	0.0	0.0	9.4	2.5	4.2	1.1	4.7	1.2	1.7	0.5	2.6	0.7	4.4	1.2
VR 0589	Potato (incl flour. frozen. starch. tapioca)	0.05	52.7	2.6	57.1	2.9	50.1	2.5	4.3	0.2	54.7	2.7	41.0	2.1	168.0	8.4
PM 0110	Poultry meat	0	17.6	0.0	131.3	0.0	25.1	0.0	4.7	0.0	145.9	0.0	27.7	0.0	115.1	0.0
PO 0111	Poultry. edible offal of	0	0.4	0.0	1.0	0.0	1.9	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.3	0.0
VR 0494	Radish	0.33	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.3	0.1
VL 0502	Spinach	11.2	9.4	105.3	0.4	4.5	0.0	0.0	0.0	0.0	0.2	2.2	4.3	48.2	2.0	22.4
VC 0431	Squash. summer (= courgette)	0.59	2.4	1.4	1.5	0.9	0.0	0.0	0.0	0.0	3.8	2.2	2.2	1.3	2.5	1.5
VO 0448	Tomato (excluding paste)	0.515	23.1	11.9	23.3	12.0	12.6	6.5	14.6	7.5	33.2	17.1	4.3	2.2	98.2	50.6
	Tomato paste	1.54	0.1	0.2	2.1	3.2	0.6	0.9	0.4	0.6	0.6	0.9	1.4	2.2	1.2	1.8
VC 0432	Watermelon	0.04	39.3	1.6	14.0	0.6	2.5	0.1	13.6	0.5	8.4	0.3	14.5	0.6	13.6	0.5
VC 0433	Winter squash (= pumpkin)	0.59	2.4	1.4	1.5	0.9	0.0	0.0	0.0	0.0	1.6	0.9	2.2	1.3	0.7	0.4
	Total intake (µg/person)=			134.1		28.4		11.4		10.2		27.9		65.2		118.5
	Bodyweight per region (kg bw) =			55		60		60		60		60		55		60
	ADI (µg/person)=			22000		24000		24000		24000		24000		22000		24000
	%ADI=			0.6%		0.1%		0.0%		0.0%		0.1%		0.3%		0.5%
	Rounded%ADI=			1%		0%		0%		0%		0%		0%		1%

Note: consumption of tomato (excluding paste) was calculated from consumption of tomato (incl juice. paste. peeled) – [4x consumption of tomato paste]

PROPARGITE (113) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex		STMR or STMR-P	Diets: g/person per day Intake = daily intake: µg/person A	B	C	D	E	F

Annex 3

Code	Commodity	mg/kg	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
TN 0660	Almond	0.05	0.0	0.0	1.9	0.1	1.0	0.1	0.0	0.0	1.0	0.1	0.8	0.0
FP 0226	Apple	0.51	0.3	0.2	56.3	28.7	18.4	9.4	38.3	19.5	40.6	20.7	28.3	14.4
JF 0226	Apple juice	0.03	0.0	0.0	2.8	0.1	0.1	0.0	1.1	0.0	6.8	0.2	7.4	0.2
-	Barley beer	0.02	18.3	0.4	84.1	1.7	4.1	0.1	66.0	1.3	243.1	4.9	161.3	3.2
VD 0071	Beans (dry)	0.1	15.8	1.6	6.1	0.6	1.7	0.2	6.3	0.6	1.8	0.2	5.0	0.5
VD 0523	Broad bean (dry)	0.1	7.3	0.7	2.1	0.2	6.9	0.7	0.0	0.0	0.4	0.0	0.1	0.0
VD 0524	Chick-pea (dry)	0.1	3.3	0.3	5.8	0.6	3.2	0.3	3.1	0.3	0.2	0.0	0.1	0.0
FC 0001	Citrus fruit	0.01	15.7	0.2	96.7	1.0	55.3	0.6	25.3	0.3	23.4	0.2	16.2	0.2
OR 0691	Cotton seed oil, edible	0.02	0.9	0.0	4.9	0.1	1.7	0.0	6.6	0.1	0.0	0.0	0.3	0.0
MO 0105	Edible offal (mammalian)	0.004	3.9	0.0	14.4	0.1	5.2	0.0	11.8	0.0	11.7	0.0	7.6	0.0
PE 0112	Eggs	0	2.5		29.7		25.1		24.5		37.8		27.4	
FB 0269	Grape	0.45	1.9	0.8	0.0	57.8	23.8	10.7	9.8	4.4	0.0	0.0	0.0	0.0
JF 0269	Grape juice	0.05	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	1.4	0.1	1.0	0.1
DF 0269	Grape, dried (= currants, raisins and sultanas)	0.75	0.0	0.0	0.0	2.2	0.4	0.3	0.4	0.3	2.3	1.7	1.7	1.3
DH 1100	Hops, dry	18	0.1	1.8	0.1	1.8	0.1	1.8	0.1	1.8	0.3	5.4	0.1	1.8
VD 0545	Lupin (dry)	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
CF 1255	Maize flour	0.08	68.9	5.5	15.4	1.2	51.3	4.1	16.6	1.3	14.7	1.2	2.0	0.2
GC 0645	Maize (incl germ, incl beer)	0.05	0.0	0.0	63.1	3.2	35.9	1.8	3.5	0.2	0.6	0.0	1.8	0.1
OR 0645	Maize oil, edible	0.26	0.1	0.0	4.0	1.0	2.3	0.6	0.5	0.1	0.9	0.2	0.2	0.1
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.02	5.5	0.1	23.3	0.5	7.7	0.2	11.0	0.2	18.0	0.4	26.3	0.5
ML 0106	Milks (excl processed products)	0.001	68.8	0.1	190.6	0.2	79.4	0.1	302.6	0.3	179.6	0.2	237.9	0.2
JF 0004	Orange juice	0.05	0.0	0.0	2.1	0.1	4.4	0.2	1.4	0.1	16.2	0.8	22.6	1.1
OR 0697	Peanut oil, edible	0.12	1.7	0.2	0.8	0.1	0.5	0.1	0.1	0.0	1.4	0.2	0.4	0.0
SO 0697	Peanut, shelled (incl oil)	0.05	5.4	0.3	3.1	0.2	2.1	0.1	0.7	0.0	4.0	0.2	1.4	0.1
VR 0589	Potato (incl flour, frozen, starch, tapioca)	0.01	19.1	0.2	160.8	1.6	61.2	0.6	243.6	2.4	230.1	2.3	204.7	2.0
PM 0110	Poultry meat	0	7.1	0.0	58.5	0.0	31.9	0.0	24.0	0.0	61.0	0.0	27.3	0.0
PO 0111	Poultry, edible offal of	0	0.4	0.0	0.4	0.0	1.7	0.0	0.1	0.0	0.6	0.0	0.2	0.0
FS 0012	Stone fruit	0.87	0.7	0.6	44.7	38.9	14.1	12.3	26.9	23.4	27.7	24.1	10.0	8.7
DT 1114	Tea, green, black (black, fermented and dried)	1	0.3	0.3	2.4	2.4	2.8	2.8	2.1	2.1	2.0	2.0	0.8	0.8
VO 0448	Tomato (incl juice, paste, peeled)	0.17	11.8	2.0	185.0	31.5	118.0	20.1	60.7	10.3	31.6	5.4	40.9	7.0
TN 0678	Walnut	0.05	0.0	0.0	1.3	0.1	0.0	0.0	0.1	0.0	0.3	0.0	0.1	0.0
-	Wine	0.01	1.3	0.0	76.8	0.8	1.1	0.0	15.4	0.2	68.8	0.7	25.6	0.3
	Total intake (µg/person)=			15.3		180.8		67.0		69.4		71.2		42.8
	Bodyweight per region (kg bw) =			60		60		60		60		60		60
	ADI (µg/person)=			600		600		600		600		600		600
	%ADI=			2.6%		30.1%		11.2%		11.6%		11.9%		7.1%
	Rounded%ADI=			3%		30%		10%		10%		10%		7%

Apple consumption (in diet columns) reduced by subtracting 1.5 X juice consumption

Annex 3

Citrus fruit consumption (in diet columns) reduced by subtracting 1.8 X juice consumption
Grape consumption (in diet columns) reduced by subtracting 1.4 X juice, 1.4 X wine and 4 X dried grape consumption
Maize consumption (in diet columns) reduced by subtracting 1.2 X maize flour and 16.7 X maize oil consumption

PROPARGITE (113) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
TN 0660	Almond	0.05	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0
FP 0226	Apple (incl juice)	0.51	14.3	7.3	9.4	4.8	2.1	1.0	0.0	0.0	8.8	4.5	16.6	8.4	27.8	14.2
JF 0226	Apple juice	0.03	0.1	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.7	0.0	0.9	0.0	5.7	0.2
-	Barley beer	0.02	21.9	0.4	102.7	2.1	29.5	0.6	12.6	0.3	100.9	2.0	82.2	1.6	218.8	4.4
VD 0071	Beans (dry)	0.1	3.4	0.3	25.5	2.6	7.8	0.8	2.1	0.2	44.7	4.5	5.5	0.6	7.3	0.7
VD 0523	Broad bean (dry)	0.1	0.8	0.1	1.2	0.1	0.0	0.0	2.8	0.3	0.3	0.0	0.1	0.0	5.3	0.5
VD 0524	Chick-pea (dry)	0.1	5.0	0.5	0.5	0.1	0.6	0.1	0.2	0.0	0.2	0.0	0.0	0.0	0.6	0.1
FC 0001	Citrus fruit (incl juice)	0.01	16.9	0.2	155.0	1.6	8.6	0.1	42.5	0.4	220.5	2.2	28.9	0.3	30.1	0.3
OR 0691	Cotton seed oil, edible	0.02	1.0	0.0	0.7	0.0	1.0	0.0	1.4	0.0	1.5	0.0	5.5	0.1	1.2	0.0
MO 0105	Edible offal (mammalian)	0.004	4.8	0.0	10.7	0.0	4.0	0.0	4.0	0.0	6.5	0.0	6.6	0.0	5.6	0.0
PE 0112	Eggs	0	22.1		71.5		16.6		5.1		17.6		35.2		57.4	
FB 0269	Grape (incl dried, juice, wine)	0.45	1.2	0.5	2.6	1.2	0.0	0.0	0.2	0.1	0.0	0.0	3.7	1.7	0.0	0.0
JF 0269	Grape juice	0.05	0.0	0.0	0.1	0.0	1.0	0.1	0.0	0.0	0.6	0.0	0.4	0.0	3.6	0.2
DF 0269	Grape, dried (= currants, raisins and sultanas)	0.75	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.3	0.2	0.4	0.3	2.6	2.0
DH 1100	Hops, dry	18	0.0	0.0	0.1	1.8	0.1	1.8	0.1	1.8	0.1	1.8	0.1	1.8	0.6	10.8
VD 0545	Lupin (dry)	0.1	0.0	0.0	0.7	0.1	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
CF 1255	Maize flour	0.08	28.8	2.3	248.8	19.9	206.7	16.5	47.8	3.8	46.2	3.7	10.5	0.8	21.5	1.7
GC 0645	Maize (incl flour, incl germ, incl oil, incl beer)	0.05	0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	7.7	0.4	19.3	1.0	29.6	1.5
OR 0645	Maize oil, edible	0.26	0.1	0.0	0.6	0.2	1.8	0.5	0.0	0.0	1.0	0.3	1.6	0.4	1.8	0.5
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.02	11.0	0.2	17.9	0.4	6.1	0.1	5.7	0.1	16.4	0.3	12.2	0.2	31.7	0.6
ML 0106	Milks (excl processed products)	0.001	66.0	0.1	121.1	0.1	81.6	0.1	102.4	0.1	207.7	0.2	57.0	0.1	287.9	0.3
JF 0004	Orange juice	0.05	0.2	0.0	1.0	0.1	3.5	0.2	0.0	0.0	1.3	0.1	6.4	0.3	56.8	2.8
OR 0697	Peanut oil, edible	0.12	3.0	0.4	0.3	0.0	1.5	0.2	7.9	0.9	0.3	0.0	0.0	0.0	0.4	0.0
SO 0697	Peanut, shelled (incl oil)	0.05	7.6	0.4	2.1	0.1	4.7	0.2	21.8	1.1	0.9	0.0	0.7	0.0	6.9	0.3
VR 0589	Potato (incl flour, frozen, starch, tapioca)	0.01	52.7	0.5	57.1	0.6	50.1	0.5	4.3	0.0	54.7	0.5	41.0	0.4	168.0	1.7

Annex 3

PROPARGITE (113) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person G diet	G intake	H diet	H intake	I diet	I intake	J diet	J intake	K diet	K intake	L diet	L intake	M diet	M intake
PM 0110	Poultry meat	0	17.6	0.0	131.3	0.0	25.1	0.0	4.7	0.0	145.9	0.0	27.7	0.0	115.1	0.0
PO 0111	Poultry, edible offal of	0	0.4	0.0	1.0	0.0	1.9	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.3	0.0
FS 0012	Stone fruit	0.87	7.0	6.1	4.9	4.3	1.4	1.2	0.1	0.1	5.5	4.8	5.5	4.8	19.4	16.9
DT 1114	Tea, green, black (black, fermented and dried)	1	1.3	1.3	0.2	0.2	0.9	0.9	0.6	0.6	0.1	0.1	1.5	1.5	1.0	1.0
VO 0448	Tomato (incl juice, paste, peeled)	0.17	23.5	4.0	31.7	5.4	15.0	2.6	16.2	2.8	35.6	6.1	9.9	1.7	103.0	17.5
TN 0678	Walnut	0.05	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.0
-	Wine	0.01	1.0	0.0	0.9	0.0	6.8	0.1	0.1	0.0	3.4	0.0	3.6	0.0	31.0	0.3
	Total intake (µg/person)=			24.7		45.5		27.7		12.7		31.9		26.2		78.5
	Bodyweight per region (kg bw) =			55		60		60		60		60		55		60
	ADI (µg/person)=			550		600		600		600		600		550		600
	%ADI=			4.5%		7.6%		4.6%		2.1%		5.3%		4.8%		13.1%
	Rounded%ADI=			4%		8%		5%		2%		5%		5%		10%

Apple consumption (in diet columns) reduced by subtracting 1.5 X juice consumption
Citrus fruit consumption (in diet columns) reduced by subtracting 1.8 X juice consumption
Grape consumption (in diet columns) reduced by subtracting 1.4 X juice, 1.4 X wine and 4 X dried grape consumption
Maize consumption (in diet columns) reduced by subtracting 1.2 X maize flour and 16.7 X maize oil consumption

PYRACLOSTROBIN (210) International Estimated Daily Intake (IEDI) ADI = 0 - 0.03 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person A diet	A intake	B diet	B intake	C diet	C intake	D diet	D intake	E diet	E intake	F diet	F intake
TN 0660	Almond	0.02	0.0	0.0	1.9	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.8	0.0
FP 0226	Apple (incl juice)	0.104	0.3	0.0	60.5	6.3	18.5	1.9	39.9	4.1	50.8	5.3	39.4	4.1
FI 0327	Banana	0.02	38.8	0.8	17.4	0.3	16.0	0.3	6.6	0.1	21.5	0.4	33.8	0.7
GC 0640	Barley (incl pot, pearled, flour and grits, beer)	0.03	36.9	1.1	0.0	0.0	93.1	2.8	0.0	0.0	0.0	0.0	3.8	0.1
-	Barley beer	0.025	18.3	0.5	84.1	2.1	4.1	0.1	66.0	1.7	243.1	6.1	161.3	4.0
VD 0071	Beans (dry)	0.02	15.8	0.3	6.1	0.1	1.7	0.0	6.3	0.1	1.8	0.0	5.0	0.1
FB 0020	Blueberries	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.3	0.1	0.8	0.3
VB 0402	Brussels sprouts	0.03	0.0	0.0	0.1	0.0	2.8	0.1	5.5	0.2	1.5	0.0	1.9	0.1
VB 0041	Cabbage, head	0.02	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VB 4179	Cabbage, red	0.02	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-

Annex 3

PYRACLOSTROBIN (210) International Estimated Daily Intake (IEDI) ADI = 0 - 0.03 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person											
			A		B		C		D		E		F	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
VB 0403	Cabbage, Savoy	0.02	0.3	0.0	11.7	0.2	0.0	0.0	5.5	0.1	3.2	0.1	15.0	0.3
VB 4185	Cabbage, white	0.02	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VC 4199	Cantaloupe	0.105	1.8	0.2	13.4	1.4	11.3	1.2	5.8	0.6	2.8	0.3	1.0	0.1
VR 0577	Carrot	0.12	0.6	0.1	15.1	1.8	8.1	1.0	13.9	1.7	27.1	3.3	28.4	3.4
FC 0001	Citrus fruit (incl juice)	0.19	15.7	3.0	100.5	19.1	63.2	12.0	27.8	5.3	52.6	10.0	56.9	10.8
-	Coffee green	0.025	2.6	0.1	6.3	0.2	2.4	0.1	0.2	0.0	0.0	0.0	0.9	0.0
VC 0424	Cucumber	0.08	0.3	0.0	12.7	1.0	5.9	0.5	11.5	0.9	6.1	0.5	7.1	0.6
MO 0105	Edible offal (mammalian)	0.008	3.9	0.0	14.4	0.1	5.2	0.0	11.8	0.1	11.7	0.1	7.6	0.1
VO 0440	Egg plant	0.12	1.7	0.2	17.5	2.1	12.3	1.5	1.7	0.2	0.8	0.1	0.4	0.0
VB 0042	Flowerhead brassicas	0.02	0.2	0.0	11.1	0.2	3.6	0.1	0.4	0.0	7.7	0.2	4.1	0.1
VA 0381	Garlic	0.05	0.4	0.0	3.9	0.2	3.8	0.2	3.7	0.2	1.0	0.1	0.6	0.0
FB 0269	Grape (incl dried, juice, wine)	0.44	1.9	0.8	20.8	9.2	25.4	11.2	11.4	5.0	9.2	4.1	6.8	3.0
JF 0269	Grape juice	0.005	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	1.4	0.0	1.0	0.0
DF 0269	Grape, dried (= currants, raisins and sultanas)	1.36	0.0	0.0	2.9	3.9	0.4	0.5	0.4	0.5	2.3	3.1	1.7	2.3
DH 1100	Hops, dry	4	0.1	0.4	0.1	0.4	0.1	0.4	0.1	0.4	0.3	1.2	0.1	0.4
VL 0480	Kale	0.175	0.0	0.0	0.0	0.0	0.0	0.0	5.5	1.0	0.6	0.1	1.9	0.3
VA 0384	Leek	0.22	0.3	0.1	5.3	1.2	0.0	0.0	0.2	0.0	4.6	1.0	1.5	0.3
VD 0533	Lentil (dry)	0.13	0.9	0.1	5.4	0.7	3.1	0.4	1.3	0.2	0.7	0.1	0.1	0.0
VL 0482	Lettuce, head[5]	0.26	0.2	0.1	23.8	6.2	3.6	0.9	0.6	0.2	11.9	3.1	18.0	4.7
GC 0645	Maize (incl flour, incl germ, incl oil, incl beer)	0.02	82.7	1.7	148.4	3.0	135.9	2.7	31.8	0.6	33.3	0.7	7.5	0.2
MF 0100	Mammalian fats (except milk fats)	0.063	0.8	0.1	10.0	0.6	0.9	0.1	6.6	0.4	11.8	0.7	3.7	0.2
FI 0345	Mango (incl juice, pulp)	0.05	6.3	0.3	1.0	0.1	4.6	0.2	0.2	0.0	0.7	0.0	0.3	0.0
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.009	5.5	0.0	23.3	0.2	7.7	0.1	11.0	0.1	18.0	0.2	26.3	0.2
ML 0106	Milks (excl processed products)	0.01	68.8	0.7	190.6	1.9	79.4	0.8	302.6	3.0	179.6	1.8	237.9	2.4
GC 0647	Oats (incl rolled)	0.17	1.4	0.2	0.6	0.1	0.2	0.0	4.2	0.7	5.7	1.0	8.9	1.5
VA 0385	Onion, bulb (= dry + green onion)	0.02	5.5	0.1	49.5	1.0	33.0	0.7	31.3	0.6	23.2	0.5	14.6	0.3
FI 0350	Papaya	0.05	5.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
SO 0697	Peanut, shelled (incl oil)	0.02	5.4	0.1	3.1	0.1	2.1	0.0	0.7	0.0	4.0	0.1	1.4	0.0
VD 0072	Peas (dry) (= field pea + cowpea)	0.07	6.8	0.5	1.3	0.1	1.0	0.1	2.3	0.2	4.6	0.3	3.4	0.2
VP 0064	Peas, shelled (immature seeds only)	0.02	0.0	0.0	0.9	0.0	6.0	0.1	0.6	0.0	9.7	0.2	3.2	0.1
TN 0672	Pecan	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
VO 0051	Peppers	0.08	1.4	0.1	29.9	2.4	13.0	1.0	6.3	0.5	6.2	0.5	4.0	0.3
TN 0675	Pistachio nut	0.22	0.0	0.0	0.7	0.2	0.5	0.1	0.9	0.2	0.3	0.1	0.0	0.0

Annex 3

PYRACLOSTROBIN (210) International Estimated Daily Intake (IEDI) ADI = 0 - 0.03 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person A diet	A intake	B diet	B intake	C diet	C intake	D diet	D intake	E diet	E intake	F diet	F intake
VR 0589	Potato (incl flour, frozen, starch, tapioca)	0.02	19.1	0.4	160.8	3.2	61.2	1.2	243.6	4.9	230.1	4.6	204.7	4.1
VR 0494	Radish	0.08	0.0	0.0	1.3	0.1	0.6	0.0	2.0	0.2	1.2	0.1	0.0	0.0
FB 0272	Raspberries, red, black	0.78	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.4	0.9	0.7	0.2	0.2
VD 0541	Soya bean (dry, incl oil)	0.02	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
OR 0541	Soya bean oil, refined	0.012	1.6	0.0	6.5	0.1	6.0	0.1	4.0	0.0	6.3	0.1	7.0	0.1
VC 0431	Squash, summer (= courgette)	0.15	0.0	0.0	8.3	1.2	11.4	1.7	7.3	1.1	3.2	0.5	0.3	0.0
FS 0012	Stone fruit	0.43	0.7	0.3	44.7	19.2	14.1	6.1	26.9	11.6	27.7	11.9	10.0	4.3
FB 0275	Strawberry	0.16	0.0	0.0	5.0	0.8	2.0	0.3	1.7	0.3	5.2	0.8	4.1	0.7
VR 0596	Sugar beet	0.04	0.0	0.0	40.7	1.6	0.0	0.0	0.1	0.0	6.0	0.2	0.1	0.0
SO 0702	Sunflower seed (incl oil)	0.055	0.0	0.0	13.1	0.7	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0
OR 0702	Sunflower seed oil, edible	0.00077	0.3	0.0	13.1	0.0	8.6	0.0	12.3	0.0	8.8	0.0	2.2	0.0
VO 0448	Tomato (incl juice, paste, peeled)	0.12	11.8	1.4	185.0	22.2	118.0	14.2	60.7	7.3	31.6	3.8	40.9	4.9
GC 0654	Wheat (incl bulgur wholemeal, flour)	0.02	6.0	0.1	11.1	0.2	0.8	0.0	0.2	0.0	0.2	0.0	0.0	0.0
CF 1211	Wheat flour (incl macaroni, bread, pastry, starch, gluten)	0.012	63.4	0.8	296.3	3.6	327.5	3.9	300.0	3.6	181.6	2.2	166.2	2.0
CF 1210	Wheat germ	0.016	0.0	0.0	1.3	0.0	0.0	0.0	1.3	0.0	0.9	0.0	1.2	0.0
-	Wine	0.04	1.3	0.1	76.8	3.1	1.1	0.0	15.4	0.6	68.8	2.8	25.6	1.0
	Total intake (µg/person)=			14.9		122.5		68.8		60.0		72.9		58.6
	Bodyweight per region (kg bw) =			60		60		60		60		60		60
	ADI (µg/person)=			1800		1800		1800		1800		1800		1800
	%ADI=			0.8%		6.8%		3.8%		3.3%		4.0%		3.3%
	Rounded %ADI=			1%		7%		4%		3%		4%		3%

Notes:

1. Barley consumption was calculated from consumption of barley (incl pot, pearled, flour and grits, beer) minus 0.2×barley beer intake.
2. Grape consumption was calculated from consumption of grape (incl dried, juice, wine) minus 1.4×(wine + grape juice intake) and minus dried grape.
3. Sunflower seed consumption was calculated from consumption of sunflower seed (including oil) minus 2.4 × sunflower seed oil intake.
4. Wheat consumption was calculated from consumption of wheat (including bulgur wholemeal, flour) minus 1.3 × wheat flour intake.
5. Lettuce, head (VL 482) includes chicory leaves (VL 469), cos lettuce (VL 510), endive (VL 476), witloof chicory (sprouts) (VS 469), lettuce, leaf (VL 483) and other varieties not specified (to be consistent with FAO Food Balance Sheet definitions).

Annex 3

PYRACLOSTROBIN (210) International Estimated Daily Intake (IEDI) ADI = 0 - 0.03 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
TN 0660	Almond	0.02	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0
FP 0226	Apple (incl juice)	0.104	14.4	1.5	10.1	1.1	2.2	0.2	0.0	0.0	9.8	1.0	17.9	1.9	36.3	3.8
FI 0327	Banana	0.02	21.4	0.4	36.6	0.7	11.4	0.2	9.2	0.2	70.2	1.4	40.5	0.8	32.6	0.7
GC 0640	Barley (incl pot, pearled, flour and grits, beer)	0.03	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
-	Barley beer	0.025	21.9	0.5	102.7	2.6	29.5	0.7	12.6	0.3	100.9	2.5	82.2	2.1	218.8	5.5
VD 0071	Beans (dry)	0.02	3.4	0.1	25.5	0.5	7.8	0.2	2.1	0.0	44.7	0.9	5.5	0.1	7.3	0.1
FB 0020	Blueberries	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.4
VB 0402	Brussels sprouts	0.03	3.4	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.5	0.0	7.9	0.2	0.3	0.0
VB 0041	Cabbage, head	0.02	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VB 4179	Cabbage, red	0.02	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VB 0403	Cabbage, Savoy	0.02	3.4	0.1	0.4	0.0	2.4	0.0	0.3	0.0	0.4	0.0	7.9	0.2	5.8	0.1
VB 4185	Cabbage, white	0.02	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
VC 4199	Cantaloupe	0.105	3.8	0.4	3.1	0.3	0.4	0.0	0.7	0.1	1.3	0.1	3.5	0.4	6.2	0.7
VR 0577	Carrot	0.12	5.4	0.6	7.9	0.9	2.5	0.3	3.5	0.4	4.1	0.5	8.6	1.0	19.4	2.3
FC 0001	Citrus fruit (incl juice)	0.19	17.3	3.3	156.8	29.8	14.9	2.8	42.5	8.1	222.8	42.3	40.4	7.7	132.3	25.1
-	Coffee green	0.025	0.2	0.0	5.6	0.1	0.3	0.0	0.2	0.0	4.5	0.1	5.1	0.1	5.1	0.1
VC 0424	Cucumber	0.08	7.9	0.6	0.6	0.0	0.2	0.0	0.0	0.0	0.4	0.0	5.5	0.4	5.3	0.4
MO 0105	Edible offal (mammalian)	0.008	4.8	0.0	10.7	0.1	4.0	0.0	4.0	0.0	6.5	0.1	6.6	0.1	5.6	0.0
VO 0440	Egg plant	0.12	20.1	2.4	0.1	0.0	0.6	0.1	6.3	0.8	0.5	0.1	6.3	0.8	0.7	0.1
VB 0042	Flowerhead brassicas	0.02	9.6	0.2	7.9	0.2	0.6	0.0	0.2	0.0	0.9	0.0	1.1	0.0	8.0	0.2
VA 0381	Garlic	0.05	6.4	0.3	1.2	0.1	0.1	0.0	0.3	0.0	1.9	0.1	5.0	0.3	2.5	0.1
FB 0269	Grape (incl dried, juice, wine)	0.44	1.2	0.5	3.4	1.5	0.8	0.3	0.2	0.1	1.2	0.5	5.3	2.3	10.4	4.6
JF 0269	Grape juice	0.005	0.0	0.0	0.1	0.0	1.0	0.0	0.0	0.0	0.6	0.0	0.4	0.0	3.6	0.0
DF 0269	Grape, dried (= currants, raisins and sultanas)	1.36	0.0	0.0	0.2	0.3	0.2	0.3	0.0	0.0	0.3	0.4	0.4	0.5	2.6	3.5
DH 1100	Hops, dry	4	0.0	0.0	0.1	0.4	0.1	0.4	0.1	0.4	0.1	0.4	0.1	0.4	0.6	2.4
VL 0480	Kale	0.175	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.3	0.1
VA 0384	Leek	0.22	0.8	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.0
VD 0533	Lentil (dry)	0.13	1.1	0.1	1.1	0.1	0.1	0.0	0.2	0.0	1.0	0.1	0.0	0.0	1.6	0.2
VL 0482	Lettuce, head[5]	0.26	7.1	1.8	7.0	1.8	0.6	0.2	1.9	0.5	2.0	0.5	7.1	1.8	30.6	8.0
GC 0645	Maize (incl flour, incl germ, incl oil, incl beer)	0.02	35.2	0.7	298.6	6.0	248.1	5.0	57.4	1.1	63.1	1.3	58.6	1.2	85.5	1.7
MF 0100	Mammalian fats (except milk fats)	0.063	2.2	0.1	18.6	1.2	0.5	0.0	0.8	0.1	5.7	0.4	4.5	0.3	18.2	1.1
FI 0345	Mango (incl juice, pulp)	0.05	12.7	0.6	26.2	1.3	6.1	0.3	12.7	0.6	9.2	0.5	8.0	0.4	1.9	0.1

Annex 3

PYRACLOSTROBIN (210) International Estimated Daily Intake (IEDI) ADI = 0 - 0.03 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person G diet	G intake	H diet	H intake	I diet	I intake	J diet	J intake	K diet	K intake	L diet	L intake	M diet	M intake
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.009	11.0	0.1	17.9	0.2	6.1	0.1	5.7	0.1	16.4	0.1	12.2	0.1	31.7	0.3
ML 0106	Milks (excl processed products)	0.01	66.0	0.7	121.1	1.2	81.6	0.8	102.4	1.0	207.7	2.1	57.0	0.6	287.9	2.9
GC 0647	Oats (incl rolled)	0.17	0.2	0.0	2.0	0.3	0.8	0.1	0.0	0.0	3.5	0.6	0.7	0.1	7.6	1.3
VA 0385	Onion, bulb (= dry + green onion)	0.02	17.4	0.3	27.9	0.6	7.3	0.1	16.0	0.3	22.8	0.5	34.5	0.7	30.1	0.6
FI 0350	Papaya	0.05	1.3	0.1	11.5	0.6	1.6	0.1	13.7	0.7	14.5	0.7	1.0	0.1	0.6	0.0
SO 0697	Peanut, shelled (incl oil)	0.02	7.6	0.2	2.1	0.0	4.7	0.1	21.8	0.4	0.9	0.0	0.7	0.0	6.9	0.1
VD 0072	Peas (dry) (= field pea + cowpea)	0.07	1.8	0.1	2.2	0.2	3.2	0.2	26.7	1.9	1.5	0.1	1.8	0.1	1.8	0.1
VP 0064	Peas, shelled (immature seeds only)	0.02	3.9	0.1	1.6	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.0	0.0	0.8	0.0
TN 0672	Pecan	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
VO 0051	Peppers	0.08	8.7	0.7	22.4	1.8	8.4	0.7	9.4	0.8	3.3	0.3	5.3	0.4	8.9	0.7
TN 0675	Pistachio nut	0.22	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
VR 0589	Potato (incl flour, frozen, starch, tapioca)	0.02	52.7	1.1	57.1	1.1	50.1	1.0	4.3	0.1	54.7	1.1	41.0	0.8	168.0	3.4
VR 0494	Radish	0.08	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	0.1	0.0	0.0	0.3	0.0
FB 0272	Raspberries, red, black	0.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.5	0.4
VD 0541	Soya bean (dry, incl oil)	0.02	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
OR 0541	Soya bean oil, refined	0.012	4.3	0.1	10.6	0.1	2.0	0.0	1.4	0.0	19.5	0.2	9.2	0.1	22.0	0.3
VC 0431	Squash, summer (= courgette)	0.15	2.4	0.4	1.5	0.2	0.0	0.0	0.0	0.0	3.8	0.6	2.2	0.3	2.5	0.4
FS 0012	Stone fruit	0.43	7.0	3.0	4.9	2.1	1.4	0.6	0.1	0.0	5.5	2.4	5.5	2.4	19.4	8.3
FB 0275	Strawberry	0.16	0.0	0.0	1.8	0.3	0.1	0.0	0.0	0.0	0.3	0.0	6.2	1.0	5.9	0.9
VR 0596	Sugar beet	0.04	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	14.3	0.6
SO 0702	Sunflower seed (incl oil)	0.055	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.8	0.1
OR 0702	Sunflower seed oil, edible	0.00077	1.1	0.0	3.6	0.0	5.6	0.0	0.1	0.0	1.5	0.0	0.2	0.0	3.6	0.0
VO 0448	Tomato (incl juice, paste, peeled)	0.12	23.5	2.8	31.7	3.8	15.0	1.8	16.2	1.9	35.6	4.3	9.9	1.2	103.0	12.4
GC 0654	Wheat (incl bulgur wholemeal, flour)	0.02	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
CF 1211	Wheat flour (incl macaroni, bread, pastry, starch, gluten)	0.012	133.0	1.6	60.1	0.7	52.4	0.6	32.2	0.4	87.7	1.1	79.6	1.0	180.1	2.2
CF 1210	Wheat germ	0.016	0.1	0.0	48.1	0.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
-	Wine	0.04	1.0	0.0	0.9	0.0	6.8	0.3	0.1	0.0	3.4	0.1	3.6	0.1	31.0	1.2
	Total intake (µg/person)=			26.1		63.3		17.8		20.4		67.7		32.0		97.7
	Bodyweight per region (kg bw) =			55		60		60		60		60		55		60
	ADI (µg/person)=			1650		1800		1800		1800		1800		1650		1800
	%ADI=			1.6%		3.5%		1.0%		1.1%		3.8%		1.9%		5.4%

Annex 3

PYRACLOSTROBIN (210) International Estimated Daily Intake (IEDI) ADI = 0 - 0.03 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person G diet	G intake	H diet	H intake	I diet	I intake	J diet	J intake	K diet	K intake	L diet	L intake	M diet	M intake
	Rounded %ADI=			2%		4%		1%		1%		4%		2%		5%

Notes:
1. Barley consumption was calculated from consumption of barley (incl pot, pearled, flour and grits, beer) minus 0.2×barley beer intake.
2. Grape consumption was calculated from consumption of grape (incl dried, juice, wine) minus 1.4×(wine + grape juice intake) and minus dried grape.
3. Sunflower seed consumption was calculated from consumption of sunflower seed (including oil) minus 2.4 × sunflower seed oil intake.
4. Wheat consumption was calculated from consumption of wheat (including bulgur wholemeal, flour) minus 1.3 × wheat flour intake.
5. Lettuce, head (VL 482) includes chicory leaves (VL 469), cos lettuce (VL 510), endive (VL 476), witloof chicory (sprouts) (VS 469), lettuce, leaf (VL 483) and other varieties not specified (to be consistent with FAO Food Balance Sheet definitions).

QUINOXYFEN (222) International Estimated Daily Intake (IEDI) ADI = 0 - 0.2 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day Intake = daily intake: µg/person A diet	A intake	B diet	B intake	C diet	C intake	D diet	D intake	E diet	E intake	F diet	F intake
GC 0640	Barley (incl pot, pearled, flour and grits,	0.01	40.6	0.4	16.8	0.2	93.9	0.9	13.2	0.1	48.6	0.5	36.1	0.4
FS 0013	Cherries	0.12	0.0	0.0	6.8	0.8	0.9	0.1	6.2	0.7	3.6	0.4	0.4	0.0
PE 0840	Chicken eggs	0.003	2.2	0.0	29.5	0.1	10.6	0.0	24.0	0.1	33.6	0.1	27.4	0.1
FB 0278	Currants, black	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.2	1.6	0.3	1.0	0.2
MO 0105	Edible offal (mammalian)	0.01	3.9	0.0	14.4	0.1	5.2	0.1	11.8	0.1	11.7	0.1	7.6	0.1
-	Eggs, NES	0.003	0.3	0.0	0.2	0.0	14.5	0.0	0.5	0.0	4.2	0.0	0.0	0.0
FB 0269	Grape (incl dried, juice, wine)	0.13	1.9	0.2	9.0	1.2	23.8	3.1	9.8	1.3	0.1	0.0	1.2	0.0
JF 0269	Grape juice	0.009	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	1.4	0.0	1.0	0.0
DF 0269	Grape, dried (= currants, raisins and	0.099	0.0	0.0	2.9	0.3	0.4	0.0	0.4	0.0	2.3	0.2	1.7	0.2
DH 1100	Hops, dry	0.22	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.3	0.1	0.1	0.0
VL 0482	Lettuce, head	1.4	0.2	0.3	14.6	20.4	2.6	3.6	0.5	0.7	6.5	9.1	0.0	0.0
VL 0483	Lettuce, leaf	3.8	0.0	0.0	9.2	35.0	1.0	3.8	0.1	0.4	5.4	20.5	18.0	68.4
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.01	5.5	0.1	23.3	0.2	7.7	0.1	11.0	0.1	18.0	0.2	26.3	0.3

Annex 3

QUINOXYFEN (222) International Estimated Daily Intake (IEDI) ADI = 0 - 0.2 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person											
			A		B		C		D		E		F	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	0.002	22.2	0.0	93.2	0.2	30.8	0.1	44.1	0.1	72.2	0.1	105.0	0.2
VC 0046	Melons, except watermelon	0.01	3.6	0.0	26.7	0.3	22.6	0.2	11.5	0.1	5.6	0.1	2.0	0.0
ML 0106	Milks (excl processed products)	0.002	68.8	0.1	190.6	0.4	79.4	0.2	302.6	0.6	179.6	0.4	237.9	0.5
VO 0051	Peppers	0.15	1.4	0.2	29.9	4.5	13.0	2.0	6.3	0.9	6.2	0.9	4.0	0.6
-	Poultry meat NES: 10% as fat	0.013	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
-	Poultry meat NES: 90% as muscle	0	0.1	0.0	7.2	0.0	0.4	0.0	0.0	0.0	7.0	0.0	0.2	0.0
PO 0111	Poultry, edible offal of	0.009	0.4	0.0	0.4	0.0	1.7	0.0	0.1	0.0	0.6	0.0	0.2	0.0
FB 0275	Strawberry	0.32	0.0	0.0	5.0	1.6	2.0	0.6	1.7	0.5	5.2	1.7	4.1	1.3
VR 0596	Sugar beet	0.01	0.0	0.0	40.7	0.4	0.0	0.0	0.1	0.0	6.0	0.1	0.1	0.0
GC 0654	Wheat (incl bulgur wholemeal, flour)	0.01	88.4	0.9	396.3	4.0	426.5	4.3	390.2	3.9	236.3	2.4	216.0	2.2
-	Wine	0.015	1.3	0.0	76.8	1.2	1.1	0.0	15.4	0.2	68.8	1.0	25.6	0.4
	Total intake (µg/person)=			2.3		69.9		19.2		10.2		38.2		74.8
	Bodyweight per region (kg bw) =			60		60		60		60		60		60
	ADI (µg/person)=			12000		12000		12000		12000		12000		12000
	%ADI=			0.0%		0.6%		0.2%		0.1%		0.3%		0.6%
	Rounded%ADI=			0%		1%		0%		0%		0%		1%

[1]Grape (incl dried, juice, wine) reduced by dried grapes (4 X dried grape consumption), juice (1.4 X juice consumption), and wine (1.4 X wine consumption).

QUINOXYFEN (222) International Estimated Daily Intake (IEDI) ADI = 0 - 0.2 mg/kg bw

Codex	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
GC 0640	Barley (incl pot, pearled, flour and grits, beer)	0.01	5.9	0.1	20.5	0.2	5.9	0.1	2.5	0.0	20.2	0.2	16.8	0.2	43.8	0.4
FS 0013	Cherries	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	2.5	0.3
PE 0840	Chicken eggs	0.003	17.5	0.1	28.0	0.1	6.1	0.0	5.1	0.0	16.9	0.1	33.5	0.1	34.4	0.1
FB 0278	Currants, black	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MO 0105	Edible offal (mammalian)	0.01	4.8	0.0	10.7	0.1	4.0	0.0	4.0	0.0	6.5	0.1	6.6	0.1	5.6	0.1
-	Eggs, NES	0.003	4.6	0.0	43.5	0.1	10.5	0.0	0.0	0.0	0.7	0.0	1.7	0.0	23.0	0.1
FB 0269	Grape (incl dried, juice, wine)	0.13	1.2	0.2	3.3	0.4	1.2	0.2	0.2	0.0	0.0	0.0	3.7	0.5	0.0	0.0
JF 0269	Grape juice	0.009	0.0	0.0	0.1	0.0	1.0	0.0	0.0	0.0	0.6	0.0	0.4	0.0	3.6	0.0

QUINOXYFEN (222) International Estimated Daily Intake (IEDI) ADI = 0 - 0.2 mg/kg bw

Codex	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
DF 0269	Grape, dried (= currants, raisins and sultanas)	0.099	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.4	0.0	2.6	0.3
DH 1100	Hops, dry	0.22	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.6	0.1
VL 0482	Lettuce, head	1.4	7.1	9.9	7.0	9.8	0.6	0.8	1.9	2.7	2.0	2.8	7.1	9.9	28.1	39.3
VL 0483	Lettuce, leaf	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	9.5
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.01	11.0	0.1	17.9	0.2	6.1	0.1	5.7	0.1	16.4	0.2	12.2	0.1	31.7	0.3
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	0.002	43.8	0.1	71.5	0.1	24.5	0.0	22.9	0.0	65.7	0.1	48.9	0.1	126.6	0.3
VC 0046	Melons, except watermelon	0.01	7.5	0.1	6.1	0.1	0.7	0.0	1.4	0.0	2.5	0.0	6.9	0.1	12.4	0.1
ML 0106	Milks (excl processed products)	0.002	66.0	0.1	121.1	0.2	81.6	0.2	102.4	0.2	207.7	0.4	57.0	0.1	287.9	0.6
VO 0051	Peppers	0.15	8.7	1.3	22.4	3.4	8.4	1.3	9.4	1.4	3.3	0.5	5.3	0.8	8.9	1.3
-	Poultry meat NES: 10% as fat	0.013	0.0	0.0	8.5	0.1	0.9	0.0	0.0	0.0	8.1	0.1	0.0	0.0	0.0	0.0
-	Poultry meat NES: 90% as muscle	0	0.0	0.0	76.8	0.0	8.1	0.0	0.1	0.0	72.7	0.0	0.0	0.0	0.0	0.0
PO 0111	Poultry, edible offal of	0.009	0.4	0.0	1.0	0.0	1.9	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.3	0.0
FB 0275	Strawberry	0.32	0.0	0.0	1.8	0.6	0.1	0.0	0.0	0.0	0.3	0.1	6.2	2.0	5.9	1.9
VR 0596	Sugar beet	0.01	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	14.3	0.1
GC 0654	Wheat (incl bulgur wholemeal, flour)	0.01	172.9	1.7	79.0	0.8	68.1	0.7	41.9	0.4	114.1	1.1	103.4	1.0	234.2	2.3
-	Wine	0.015	1.0	0.0	0.9	0.0	6.8	0.1	0.1	0.0	3.4	0.1	3.6	0.1	31.0	0.5
	Total intake (µg/person)=			13.8		16.3		3.5		4.9		5.8		15.1		57.7
	Bodyweight per region (kg bw) =			55		60		60		60		60		55		60
	ADI (µg/person)=			11000		12000		12000		12000		12000		11000		12000
	%ADI=			0.1%		0.1%		0.0%		0.0%		0.0%		0.1%		0.5%
	Rounded%ADI=			0%		0%		0%		0%		0%		0%		0%

[1]Grape (incl dried, juice, wine) reduced by dried grapes (4 X dried grape consumption), juice (1.4 X juice consumption), and wine (1.4 X wine consumption).

THIABENDAZOLE (65) International Estimated Daily Intake (IEDI) ADI = 0 - 0.1 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	diet correction factor	Diets: g/person per day / Intake = daily intake: µg/person											
				A		B		C		D		E		F	
				diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
FI 0326	Avocado	0.9	1	3.7	3.3	1.0	0.9	0.2	0.2	0.0	0.0	0.9	0.8	0.8	0.7
FI 0327	Banana	0.029	0.7	38.8	0.8	17.4	0.4	16.0	0.3	6.6	0.1	21.5	0.4	33.8	0.7

Annex 3

THIABENDAZOLE (65) International Estimated Daily Intake (IEDI) ADI = 0 - 0.1 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	diet correction factor	Diets: g/person per day / Intake = daily intake: µg/person											
				A		B		C		D		E		F	
				diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
MO 1280	Cattle kidney	0.5	1	0.4	0.2	4.4	2.2	0.0	0.0	0.9	0.5	0.0	0.0	0.6	0.3
MO 1281	Cattle liver	0.2	1	0.4	0.1	4.4	0.9	1.7	0.3	0.9	0.2	1.0	0.2	0.6	0.1
MM 0812	Cattle meat (incl calf meat)	0.02	1	13.4	0.3	49.4	1.0	13.6	0.3	35.8	0.7	42.4	0.8	53.9	1.1
ML 0812	Cattle milk (excl processed products)	0.12	1	34.5	4.1	178.5	21.4	52.0	6.2	284.2	34.1	178.6	21.4	237.1	28.5
PE 0840	Chicken eggs	0.1	1	2.2	0.2	29.5	3.0	10.6	1.1	24.0	2.4	33.6	3.4	27.4	2.7
FC 0001	Citrus fruit (incl juice) Note	0.1	1	15.7	1.1	98.7	6.9	55.3	3.9	25.3	1.8	23.4	1.6	16.2	1.1
-	Lettuce and similar (incl witloof chicory sprouts)	0.05	1	0.2	0.0	23.8	1.2	3.6	0.2	0.6	0.0	11.9	0.6	18.0	0.9
FI 0345	Mango (incl juice, pulp)	2.85	1	6.3	18.0	1.0	2.9	4.6	13.1	0.2	0.6	0.7	2.0	0.3	0.9
VC 0046	Melons, except watermelon	0.43	1	3.6	1.5	26.7	11.5	22.6	9.7	11.5	4.9	5.6	2.4	2.0	0.9
FI 0350	Papaya	3.8	1	5.1	19.4	0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0
FP 0009	Pome fruit (incl apple juice)	1.7	1	0.5	0.9	84.1	143.0	21.9	37.2	45.2	76.8	61.7	104.9	46.2	78.5
VR 0589	Potato (incl flour, frozen, starch, tapioca)	5.4	1	19.1	103.1	160.8	868.3	61.2	330.5	243.6	1315.4	230.1	1242.5	204.7	1105.4
PM 0110	Poultry meat	0.05	1	7.1	0.4	58.5	2.9	31.9	1.6	24.0	1.2	61.0	3.1	27.3	1.4
FB 0275	Strawberry	1.6	1	0.0	0.0	5.0	8.0	2.0	3.2	1.7	2.7	5.2	8.3	4.1	6.6
	Total intake (µg/person)=				153.4		1074.7		407.8		1441.5		1392.9		1229.7
	Bodyweight per region (kg bw) =				60		60		60		60		60		60
	ADI (µg/person)=				6000		6000		6000		6000		6000		6000
	%ADI=				2.6%		17.9%		6.8%		24.0%		23.2%		20.5%
	Rounded %ADI=				3%		20%		7%		20%		20%		20%

THIABENDAZOLE (65) International Estimated Daily Intake (IEDI) ADI = 0 - 0.1 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	diet correction factor	Diets: g/person per day Intake = daily intake: µg/person													
				G		H		I		J		K		L		M	
				diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
FI 0326	Avocado	0.9	1	0.2	0.2	13.9	12.5	1.0	0.9	1.7	1.5	3.4	3.1	0.5	0.5	2.1	1.9
FI 0327	Banana	0.029	0.7	21.4	0.4	36.6	0.7	11.4	0.2	9.2	0.2	70.2	1.4	40.5	0.8	32.6	0.7
MO 1280	Cattle kidney	0.5	1	0.0	0.0	0.9	0.5	0.4	0.2	0.2	0.1	0.7	0.4	0.0	0.0	0.0	0.0
MO 1281	Cattle liver	0.2	1	0.0	0.0	0.9	0.2	0.4	0.1	0.2	0.0	0.7	0.1	0.0	0.0	0.4	0.1
MM 0812	Cattle meat (incl calf meat)	0.02	1	6.9	0.1	59.4	1.2	18.0	0.4	10.6	0.2	65.6	1.3	23.9	0.5	126.9	2.5
ML 0812	Cattle milk (excl processed products)	0.12	1	41.9	5.0	119.6	14.4	71.5	8.6	36.6	4.4	205.6	24.7	55.9	6.7	285.4	34.2
PE 0840	Chicken eggs	0.1	1	17.5	1.8	28.0	2.8	6.1	0.6	5.1	0.5	16.9	1.7	33.5	3.4	34.4	3.4
FC 0001	Citrus fruit (incl juice) Note	0.1	1	16.9	1.2	155.0	10.9	8.6	0.6	42.5	3.0	220.5	15.4	28.9	2.0	30.1	2.1
	Lettuce and similar (incl witloof chicory sprouts)	0.05	1	7.1	0.4	7.0	0.4	0.6	0.0	1.9	0.1	2.0	0.1	7.1	0.4	30.6	1.5
FI 0345	Mango (incl juice, pulp)	2.85	1	12.7	36.2	26.2	74.7	6.1	17.4	12.7	36.2	9.2	26.2	8.0	22.8	1.9	5.4
VC 0046	Melons, except watermelon	0.43	1	7.5	3.2	6.1	2.6	0.7	0.3	1.4	0.6	2.5	1.1	6.9	3.0	12.4	5.3
FI 0350	Papaya	3.8	1	1.3	4.9	11.5	43.7	1.6	6.1	13.7	52.1	14.5	55.1	1.0	3.8	0.6	2.3
FP 0009	Pome fruit (incl apple juice)	1.7	1	20.9	35.5	12.3	20.9	3.4	5.8	0.1	0.2	11.7	19.9	24.9	42.3	45.4	77.2
VR 0589	Potato (incl flour, frozen, starch, tapioca)	5.4	1	52.7	284.6	57.1	308.3	50.1	270.5	4.3	23.2	54.7	295.4	41.0	221.4	168.0	907.2
PM 0110	Poultry meat	0.05	1	17.6	0.9	131.3	6.6	25.1	1.3	4.7	0.2	145.9	7.3	27.7	1.4	115.1	5.8
FB 0275	Strawberry	1.6	1	0.0	0.0	1.8	2.9	0.1	0.2	0.0	0.0	0.3	0.5	6.2	9.9	5.9	9.4
	Total intake (µg/person)=				374.4		503.1		313.1		122.5		453.6		318.8		1059.1
	Bodyweight per region (kg bw) =				55		60		60		60		60		55		60
	ADI (µg/person)=				5500		6000		6000		6000		6000		5500		6000
	%ADI=				6.8%		8.4%		5.2%		2.0%		7.6%		5.8%		17.7%
	Rounded %ADI=				7%		8%		5%		2%		8%		6%		20%

Note: Citrus fruit consumption reduced (in diet columns) by subtraction of 1.8 × orange juice consumption.
Correction factor for citrus fruit edible part (0.7) was applied

Annex 3

THIACLOPRID (223) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person											
			A		B		C		D		E		F	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
JF 0226	Apple juice	0.0275	0.0	0.0	2.8	0.1	0.1	0.0	1.1	0.0	6.8	0.2	7.4	0.2
FB 0018	Berries and other small fruits, except grapes Note	0.275	0.1	0.0	17.3	4.8	2.0	0.6	7.9	2.2	10.8	3.0	9.0	2.5
SO 0691	Cotton seed (for oil processing only)	0	5.6	0.0	30.6	0.0	10.6	0.0	41.3	0.0	0.0	0.0	1.9	0.0
OR 0691	Cotton seed oil, edible	0	0.9	0.0	4.9	0.0	1.7	0.0	6.6	0.0	0.0	0.0	0.3	0.0
VC 0424	Cucumber	0.08	0.3	0.0	12.7	1.0	5.9	0.5	11.5	0.9	6.1	0.5	7.1	0.6
MO 0105	Edible offal (mammalian)	0.21	3.9	0.8	14.4	3.0	5.2	1.1	11.8	2.5	11.7	2.5	7.6	1.6
VO 0440	Egg plant	0.185	1.7	0.3	17.5	3.2	12.3	2.3	1.7	0.3	0.8	0.1	0.4	0.1
PE 0112	Eggs	0	2.5		29.7		25.1		24.5		37.8		27.4	
FI 0341	Kiwi fruit	0.02	0.0	0.0	2.9	0.1	0.1	0.0	0.2	0.0	2.7	0.1	1.8	0.0
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.03	5.5	0.2	23.3	0.7	7.7	0.2	11.0	0.3	18.0	0.5	26.3	0.8
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	0.035	22.2	0.8	93.2	3.3	30.8	1.1	44.1	1.5	72.2	2.5	105.0	3.7
VC 0046	Melons, except watermelon	0.02	3.6	0.1	26.7	0.5	22.6	0.5	11.5	0.2	5.6	0.1	2.0	0.0
ML 0106	Milks (excl processed products)	0.03	68.8	2.1	190.6	5.7	79.4	2.4	302.6	9.1	179.6	5.4	237.9	7.1
SO 0090	Mustard seed (incl flour)	0.065	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.4	0.0
VO 0445	Peppers, sweet (incl. pim(i)ento)	0.22	0.7	0.2	14.9	3.3	8.8	1.9	3.2	0.7	3.1	0.7	2.0	0.4
FP 0226	Pome fruit Note	0.11	0.5	0.1	79.9	8.8	21.8	2.4	43.6	4.8	51.5	5.7	35.1	3.9
VR 0589	Potato (incl flour, frozen, starch, tapioca)	0	19.1	0.0	160.8	0.0	61.2	0.0	243.6	0.0	230.1	0.0	204.7	0.0
PM 0110	Poultry meat	0	7.1	0.0	58.5	0.0	31.9	0.0	24.0	0.0	61.0	0.0	27.3	0.0
PO 0111	Poultry, edible offal of	0	0.4	0.0	0.4	0.0	1.7	0.0	0.1	0.0	0.6	0.0	0.2	0.0
SO 0495	Rape seed (incl oil)	0.065	0.9	0.1	1.8	0.1	2.5	0.2	1.9	0.1	35.7	2.3	26.1	1.7
GC 0649	Rice (husked + polished)	0	91.0	0.0	31.6	0.0	94.6	0.0	33.2	0.0	12.7	0.0	12.7	0.0
CM 1206	Rice bran, unprocessed	0	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
-	Rice flour	0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.1	0.0
CM 0649	Rice, husked (incl milled)	0	35.6	0.0	0.2	0.0	2.6	0.0	6.9	0.0	3.3	0.0	0.4	0.0
-	Rice, milled husked	0	0.0	0.0	13.4	0.0	0.0	0.0	3.1	0.0	8.0	0.0	2.5	0.0
CM 1205	Rice, polished (incl flour)	0	29.8	0.0	20.9	0.0	60.8	0.0	16.1	0.0	5.6	0.0	8.1	0.0
VC 0431	Squash, summer (= courgette)	0.08	0.0	0.0	8.3	0.7	11.4	0.9	7.3	0.6	3.2	0.3	0.3	0.0
FS 0012	Stone fruit	0.08	0.7	0.1	44.7	3.6	14.1	1.1	26.9	2.2	27.7	2.2	10.0	0.8
VO 0448	Tomato (excl juice, paste, peeled)	0.165	1.3	0.2	178.4	29.4	102.8	17.0	53.4	8.8	1.6	0.3	0.0	0.0
JF 0448	Tomato juice	0.1	5.2	0.5	0.5	0.1	0.4	0.0	2.1	0.2	6.9	0.7	15.2	1.5
	Tomato paste	0.429	0.5	0.2	1.3	0.6	3.5	1.5	1.0	0.4	3.8	1.6	4.5	1.9

Annex 3

THIACLOPRID (223) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person											
			A		B		C		D		E		F	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
	Tomato, peeled	0.056	0.1	0.0	0.4	0.0	0.5	0.0	0.4	0.0	4.9	0.3	3.2	0.2
TN 0085	Tree nuts	0.01	4.2	0.0	21.5	0.2	3.9	0.0	3.0	0.0	5.5	0.1	10.2	0.1
VC 0432	Watermelon	0.02	6.1	0.1	43.1	0.9	47.1	0.9	25.8	0.5	4.4	0.1	6.0	0.1
GC 0654	Wheat (incl bulgur wholemeal, flour)	0.025	88.4	2.2	396.3	9.9	426.5	10.7	390.2	9.8	236.3	5.9	216.0	5.4
VC 0433	Winter squash (= pumpkin)	0.02	0.0	0.0	0.5	0.0	1.5	0.0	7.3	0.1	0.0	0.0	0.3	0.0
	Total intake (µg/person)=			7.9		79.9		45.3		45.4		35.0		32.7
	Bodyweight per region (kg bw) =			60		60		60		60		60		60
	ADI (µg/person)=			600		600		600		600		600		600
	%ADI=			1.3%		13.3%		7.5%		7.6%		5.8%		5.4%
	Rounded %ADI=			1%		10%		8%		8%		6%		5%

THIACLOPRID (223) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
JF 0226	Apple juice	0.0275	0.1	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.7	0.0	0.9	0.0	5.7	0.2
FB 0018	Berries and other small fruits, except grapes Note	0.275	0.2	0.1	1.8	0.5	0.1	0.0	0.0	0.0	1.8	0.5	6.2	1.7	10.6	2.9
SO 0691	Cotton seed (for oil processing only)	0	6.3	0.0	4.4	0.0	6.3	0.0	8.8	0.0	9.4	0.0	34.4	0.0	7.5	0.0
OR 0691	Cotton seed oil, edible	0	1.0	0.0	0.7	0.0	1.0	0.0	1.4	0.0	1.5	0.0	5.5	0.0	1.2	0.0
VC 0424	Cucumber	0.08	7.9	0.6	0.6	0.0	0.2	0.0	0.0	0.0	0.4	0.0	5.5	0.4	5.3	0.4
MO 0105	Edible offal (mammalian)	0.21	4.8	1.0	10.7	2.2	4.0	0.8	4.0	0.8	6.5	1.4	6.6	1.4	5.6	1.2
VO 0440	Egg plant	0.185	20.1	3.7	0.1	0.0	0.6	0.1	6.3	1.2	0.5	0.1	6.3	1.2	0.7	0.1
PE 0112	Eggs	0	22.1		71.5		16.6		5.1		17.6		35.2		57.4	
FI 0341	Kiwi fruit	0.02	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.6	0.0	1.0	0.0
MM 0095	Meat from mammals other than marine mammals: 20% as fat	0.03	11.0	0.3	17.9	0.5	6.1	0.2	5.7	0.2	16.4	0.5	12.2	0.4	31.7	0.9
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	0.035	43.8	1.5	71.5	2.5	24.5	0.9	22.9	0.8	65.7	2.3	48.9	1.7	126.6	4.4
VC 0046	Melons, except watermelon	0.02	7.5	0.2	6.1	0.1	0.7	0.0	1.4	0.0	2.5	0.1	6.9	0.1	12.4	0.2
ML 0106	Milks (excl processed products)	0.03	66.0	2.0	121.1	3.6	81.6	2.4	102.4	3.1	207.7	6.2	57.0	1.7	287.9	8.6

Annex 3

THIACLOPRID (223) International Estimated Daily Intake (IEDI) ADI = 0 - 0.01 mg/kg bw

Codex Code	Commodity	STMR or STMR-P mg/kg	Diets: g/person per day / Intake = daily intake: µg/person													
			G		H		I		J		K		L		M	
			diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake	diet	intake
SO 0090	Mustard seed (incl flour)	0.065	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.9	0.1
VO 0445	Peppers, sweet (incl. pim(i)ento)	0.22	0.0	0.0	9.4	2.1	4.2	0.9	4.7	1.0	1.7	0.4	2.6	0.6	4.4	1.0
FP 0226	Pome fruit Note	0.11	20.8	2.3	11.6	1.3	3.3	0.4	0.1	0.0	10.7	1.2	23.6	2.6	36.9	4.1
VR 0589	Potato (incl flour, frozen, starch, tapioca)	0	52.7	0.0	57.1	0.0	50.1	0.0	4.3	0.0	54.7	0.0	41.0	0.0	168.0	0.0
PM 0110	Poultry meat	0	17.6	0.0	131.3	0.0	25.1	0.0	4.7	0.0	145.9	0.0	27.7	0.0	115.1	0.0
PO 0111	Poultry, edible offal of	0	0.4	0.0	1.0	0.0	1.9	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.3	0.0
SO 0495	Rape seed (incl oil)	0.065	9.9	0.6	5.9	0.4	0.3	0.0	1.0	0.1	0.0	0.0	15.5	1.0	9.9	0.6
GC 0649	Rice (husked + polished)	0	376.9	0.0	64.3	0.0	38.0	0.0	74.3	0.0	238.4	0.0	381.3	0.0	34.6	0.0
CM 1206	Rice bran, unprocessed	0	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
	Rice flour	0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.1	0.0
CM 0649	Rice, husked (incl milled)	0	1.1	0.0	0.8	0.0	1.8	0.0	22.7	0.0	70.8	0.0	7.0	0.0	0.3	0.0
-	Rice, milled husked	0	0.0	0.0	0.4	0.0	0.8	0.0	0.1	0.0	2.8	0.0	178.1	0.0	0.1	0.0
CM 1205	Rice, polished (incl flour)	0	250.3	0.0	42.2	0.0	23.8	0.0	29.8	0.0	97.6	0.0	248.1	0.0	22.8	0.0
VC 0431	Squash, summer (= courgette)	0.08	2.4	0.2	1.5	0.1	0.0	0.0	0.0	0.0	3.8	0.3	2.2	0.2	2.5	0.2
FS 0012	Stone fruit	0.08	7.0	0.6	4.9	0.4	1.4	0.1	0.1	0.0	5.5	0.4	5.5	0.4	19.4	1.6
VO 0448	Tomato (excl juice, paste, peeled)	0.165	22.8	3.8	4.1	0.7	12.3	2.0	1.8	0.3	32.8	5.4	0.4	0.1	27.3	4.5
JF 0448	Tomato juice	0.1	0.0	0.0	0.8	0.1	0.1	0.0	7.2	0.7	0.0	0.0	2.4	0.2	45.2	4.5
	Tomato paste	0.429	0.1	0.0	2.1	0.9	0.6	0.3	0.4	0.2	0.6	0.3	1.4	0.6	1.2	0.5
	Tomato, peeled	0.056	0.2	0.0	14.5	0.8	0.2	0.0	0.0	0.0	0.3	0.0	0.8	0.0	1.2	0.1
TN 0085	Tree nuts	0.01	16.3	0.2	15.7	0.2	9.7	0.1	1.9	0.0	19.1	0.2	29.0	0.3	5.6	0.1
VC 0432	Watermelon	0.02	39.3	0.8	14.0	0.3	2.5	0.1	13.6	0.3	8.4	0.2	14.5	0.3	13.6	0.3
GC 0654	Wheat (incl bulgur wholemeal, flour)	0.025	172.9	4.3	79.0	2.0	68.1	1.7	41.9	1.0	114.1	2.9	103.4	2.6	234.2	5.9
VC 0433	Winter squash (= pumpkin)	0.02	2.4	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.2	0.0	0.7	0.0
	Total intake (µg/person)=			22.2		18.8		10.1		9.7		22.3		17.6		42.4
	Bodyweight per region (kg bw) =			55		60		60		60		60		55		60
	ADI (µg/person)=			550		600		600		600		600		550		600
	%ADI=			4.0%		3.1%		1.7%		1.6%		3.7%		3.2%		7.1%
	Rounded %ADI=			4%		3%		2%		2%		4%		3%		7%

ANNEX 4: INTERNATIONAL ESTIMATES OF SHORT-TERM DIETARY INTAKES OF PESTICIDE RESIDUES

DISULFOTON (74) International estimate of short term intake (IESTI) for ARfD= 0.003 mg/kg bw (3 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 380%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
VB 0400	Broccoli	-	0.11	USA	65.0	376	608	USA	474	3	2b	1.91	60%
VB 0041	Cabbage, head	-	0.17	SAF	55.7	362	908	USA	717	3	2b	3.32	110%
VB 0404	Cauliflower (head)	-	0.31	UNK	70.1	579	575	USA	224	3	2a	4.54	150%
VL 0482	Lettuce, head	-	1.15	USA	65.0	213	539	USA	512	3	2b	11.28	380%

DISULFOTON (74) International estimate of short term intake (IESTI) for ARfD= 0.003 mg/kg bw (3 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 570%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
VB 0041	Cabbage, head	-	0.17	SAF	14.2	220	908	USA	717	3	2b	7.91	260%
VB 0400	Broccoli	-	0.11	USA	15.0	164	608	USA	474	3	2b	3.61	120%

VB 0404	Cauliflower (head)	-	0.31	NLD	17.0	209	575	USA	224	3	2b	11.45	380%
VL 0482	Lettuce, head	-	1.15	NLD	17.0	84	539	USA	512	3	2b	16.97	570%

ENDOSULFAN (32) International estimate of short term intake (IESTI) for ARfD= 0.02 mg/kg bw (20 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 210%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
FI 0326	Avocado	-	0.35	FRA	62.3	260	201	USA	151	3	2a	3.15	20%
VB 0400	Broccoli	-	2.4	USA	65.0	376	608	USA	474	3	2b	41.69	210%
FM 0812	Cattle milk fat	0.034	-	NLD	63.0	79	-	-	ND	ND	3	0.04	0%
VS 0624	Celery (stalk)	-	5	FRA	62.3	225	40	USA	40	3	2a	24.47	120%
FS 0013	Cherries	-	1.4	FRA	62.3	375	5	JPN	5	1	1	8.43	40%
PE 0840	Chicken eggs	-	0.025	FRA	62.3	219	-	-	ND	ND	1	0.09	0%
SB 0715	Cocoa beans	0.01	-	NLD	63.0	42	-	-	ND	ND	ND	ND	-
SB 0716	Coffee beans	0.02	-	NLD	63.0	66	-	-	ND	ND	3	0.02	0%
SO 0691	Cotton seed	0.02	-	USA	65.0	3	-	-	ND	ND	3	0.00	0%
VC 0424	Cucumber	-	0.64	NLD	63.0	313	301	USA	286	3	2a	8.99	40%
FI 0332	Custard apple	-	0.35	AUS	67.0	654	-	-	ND	ND	ND	ND	-
VO 0440	Egg plant	-	0.06	AUS	67.0	487	548	USA	444	3	2a	1.23	6%
TN 0666	Hazelnut	-	0	AUS	67.0	70	-	-	ND	ND	1	0.00	0%
MO 0098	Kidney of cattle, goats, pigs and sheep	-	0.006	USA	65.0	788	-	-	ND	ND	1	0.07	0%
MO 0099	Liver of cattle, goats, pigs and sheep	-	0.078	USA	65.0	380	-	-	ND	ND	1	0.46	2%
TN 0669	Macadamia nut	-	0	USA	65.0	107	-	-	ND	ND	1	0.00	0%
FI 0345	Mango	-	0.35	FRA	62.3	567	207	USA	139	3	2a	4.74	20%
MM 0095	Meat from mammals other than marine mammals: 20% as fat	-	0.14	AUS	67.0	104	-	-	ND	ND	1	0.22	1%

Annex 4

ENDOSULFAN (32) International estimate of short term intake (IESTI) for **GENERAL POPULATION** ARfD= 0.02 mg/kg bw (20 µg/kg bw)

Maximum%ARfD: 210%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	-	0.0056	AUS	67.0	417	-	-	ND	ND	1	0.03	0%
VC 0046	Melons, except watermelon	-	0.3	USA	65.0	655	1000	USA	630	3	2a	8.84	40%
ML 0106	Milks	0.003	-	USA	65.0	2466	-	-	ND	ND	3	0.11	1%
FI 0350	Papaya	-	0.35	USA	65.0	567	304	USA	204	3	2a	5.25	30%
FI 0352	Persimmon, American	-	1.3	AUS	67.0	672	122	SWE	102	3	2a	17.02	90%
VR 0589	Potato	-	0.05	NLD	63.0	687	122	USA	99	3	2a	0.70	4%
PM 0110	Poultry meat: 10% as fat	-	0.025	AUS	67.0	43	-	-	ND	ND	1	0.02	0%
PM 0110	Poultry meat: 90% as muscle	-	0.025	AUS	67.0	388	-	-	ND	ND	1	0.14	1%
PO 0111	Poultry, edible offal of	-	0.025	USA	65.0	248	-	-	ND	ND	1	0.10	0%
VD 0541	Soya bean (dry)	0.2	-	JPN	52.6	159	-	-	ND	ND	3	0.61	3%
OR 0541	Soya bean oil, refined	0.64	-	USA	65.0	98	-	-	ND	ND	3	0.97	5%
VC 0431	Squash, summer (= courgette)	-	0.23	FRA	62.3	343	196	USA	186	3	2a	2.64	10%
VR 0508	Sweet potato	-	0.05	USA	65.0	536	130	USA	105	3	2a	0.57	3%
VO 0448	Tomato	-	0.85	USA	65.0	391	123	USA	123	3	2a	8.33	40%

ENDOSULFAN (32) International estimate of short term intake (IESTI) for **CHILDREN UP TO 6 YEARS**

ARfD= 0.02 mg/kg bw (20 µg/kg bw)

Maximum%ARfD: 390%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
TN 0666	Hazelnut	-	0	NLD	17.0	11	-	-	ND	ND	1	0.00	0%
FI 0326	Avocado	-	0.35	USA	15.0	131	201	USA	151	3	2b	9.14	50%
VB 0400	Broccoli	-	2.4	USA	15.0	164	608	USA	474	3	2b	78.84	390%
FM 0812	Cattle milk fat	0.034	-	NLD	17.0	35	-	-	ND	ND	3	0.07	0%
VS 0624	Celery (stalk)	-	5	FRA	17.8	111	40	USA	40	3	2a	53.72	270%
FS 0013	Cherries	-	1.4	FRA	17.8	297	5	JPN	5	1	1	23.34	120%
PE 0840	Chicken eggs	-	0.025	FRA	17.8	134	-	-	ND	ND	1	0.19	1%
SB 0715	Cocoa beans	0.01	-	NLD	17.0	21	-	-	ND	ND	ND	ND	-
SB 0716	Coffee beans	0.02	-	NLD	17.0	19	-	-	ND	ND	3	0.02	0%
SO 0691	Cotton seed	0.02	-	USA	15.0	1	-	-	ND	ND	3	0.00	0%
VC 0424	Cucumber	-	0.64	NLD	17.0	162	301	USA	286	3	2b	18.30	90%
FI 0332	Custard apple	-	0.35	-	-	ND	-	-	ND	ND	ND	ND	-
VO 0440	Egg plant	-	0.06	JPN	15.9	219	548	USA	444	3	2b	2.48	10%
MO 0098	Kidney of cattle, goats, pigs and sheep	-	0.006	USA	15.0	187	-	-	ND	ND	1	0.07	0%
MO 0099	Liver of cattle, goats, pigs and sheep	-	0.078	FRA	17.8	203	-	-	ND	ND	1	0.89	4%
TN 0669	Macadamia nut	-	0	-	-	ND	-	-	ND	ND	1	ND	-
FI 0345	Mango	-	0.35	AUS	19.0	207	207	USA	139	3	2a	8.92	40%
MM 0095	Meat from mammals other than marine mammals: 20% as fat	-	0.14	AUS	19.0	52	-	-	ND	ND	1	0.38	2%
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	-	0.0056	AUS	19.0	208	-	-	ND	ND	1	0.06	0%
VC 0046	Melons, except watermelon	-	0.3	AUS	19.0	413	1000	USA	630	3	2b	19.56	100%

Annex 4

ENDOSULFAN (32) International estimate of short term intake (IESTI) for **CHILDREN UP TO 6 YEARS**

ARfD= 0.02 mg/kg bw (20 µg/kg bw)
Maximum%ARfD: 390%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
ML 0106	Milks	0.003	-	USA	15.0	1286	-	-	ND	ND	3	0.26	1%
FI 0350	Papaya	-	0.35	USA	15.0	240	304	USA	204	3	2a	15.11	80%
FI 0352	Persimmon, American	-	1.3	-	-	ND	122	SWE	102	3	ND	ND	-
VR 0589	Potato	-	0.05	SAF	14.2	300	122	USA	99	3	2a	1.75	9%
PM 0110	Poultry meat: 10% as fat	-	0.025	AUS	19.0	22	-	-	ND	ND	1	0.03	0%
PM 0110	Poultry meat: 90% as muscle	-	0.025	AUS	19.0	201	-	-	ND	ND	1	0.26	1%
PO 0111	Poultry, edible offal of	-	0.025	USA	15.0	37	-	-	ND	ND	1	0.06	0%
VD 0541	Soya bean (dry)	0.2	-	JPN	15.9	88	-	-	ND	ND	3	1.11	6%
OR 0541	Soya bean oil, refined	0.64	-	USA	15.0	35	-	-	ND	ND	3	1.51	8%
VC 0431	Squash, summer (= courgette)	-	0.23	AUS	19.0	219	196	USA	186	3	2a	7.16	40%
VR 0508	Sweet potato	-	0.05	USA	15.0	166	130	USA	105	3	2a	1.26	6%
VO 0448	Tomato	-	0.85	USA	15.0	159	123	USA	123	3	2a	22.95	110%

Annex 4

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 40%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
FP 0226	Apple	-	0.91	USA	65.0	1348	110	FRA	100	3	2a	21.68	20%
JF 0226	Apple juice	0.13	-	-	-	ND	-	-	ND	ND	3	ND	-
FS 0240	Apricot	-	2.1	JPN	52.6	292	40	FRA	37	3	2a	14.63	10%
VS 0620	Artichoke globe	-	2.8	FRA	62.3	534	350	BEL	140	3	2a	36.58	40%
VS 0621	Asparagus	-	0	NLD	63.0	398	25	FRA	13	3	2a	0.00	0%
GC 0640	Barley	-	0.05	NLD	63.0	378	-	-	ND	ND	3	ND	-
VP 0061	Beans except broad bean & soya bean (green pods & immature seeds)	-	0.59	FRA	62.3	312	-	-	ND	ND	ND	ND	-
VP 0062	Beans, shelled (immature seeds)	-	0.59	FRA	62.3	312	-	-	ND	ND	ND	ND	-
VR 0574	Beetroot	-	0.02	NLD	63.0	414	44	UNK	35	3	2a	0.15	0%
FB 0264	Blackberries	-	1.5	AUS	67.0	138	-	-	ND	ND	ND	ND	-
FB 0020	Blueberries	-	1.5	AUS	67.0	158	-	-	ND	ND	ND	ND	-
VP 0522	Broad bean (green pods & immature seeds)	-	0.59	-	-	ND	-	-	ND	ND	ND	ND	-
VP 0523	Broad bean, shelled (immature seeds)	-	0.59	NLD	63.0	387	-	-	ND	ND	ND	ND	-
VB 0400	Broccoli	-	0.5	USA	65.0	376	608	USA	474	3	2b	8.69	9%
VB 0401	Broccoli, Chinese	-	0.5	AUS	67.0	231	-	-	ND	ND	ND	ND	-
VB 0402	Brussels sprouts	-	0.5	NLD	63.0	394	7	FRA	5	1	1	3.13	3%
VB 0041	Cabbage, head	-	0.5	SAF	55.7	362	771	UNK	540	3	2b	9.75	10%
VB 4181	Cabbage, oxhead	-	0.5	NLD	63.0	383	-	-	ND	ND	ND	ND	-
VB 4179	Cabbage, red	-	0.5	NLD	63.0	566	-	-	ND	ND	ND	ND	-
VB 0403	Cabbage, Savoy	-	0.5	NLD	63.0	188	-	-	ND	ND	ND	ND	-
VB 4185	Cabbage, white	-	0.5	NLD	63.0	304	-	-	ND	ND	ND	ND	-
VC 4199	Cantaloupe	-	0.44	USA	65.0	606	500	JPN	500	3	2a	10.87	10%
VR 0577	Carrot	-	0.02	NLD	63.0	335	100	FRA	89	3	2a	0.16	0%
VR 0463	Cassava	-	0.02	AUS	67.0	176	-	-	ND	ND	ND	ND	-

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 40%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
-	Cassava tapioca	-	0.02	-	-	ND	-	-	ND	ND	ND	ND	-
VB 0404	Cauliflower (head)	-	0.5	UNK	70.1	579	1500	JPN	1500	3	2b	12.39	10%
VR 0578	Celeriac	-	0.02	FRA	62.3	374	1070	BEL	749	3	2b	0.36	0%
FS 0013	Cherries	-	2.1	FRA	62.3	375	5	UNK	4	1	1	12.64	10%
VR 0469	Chicory, roots	-	0.02	-	-	ND	-	-	ND	ND	ND	ND	-
FB 0265	Cranberries	-	1.5	USA	65.0	229	-	-	ND	ND	ND	ND	-
VC 0424	Cucumber	-	0.44	NLD	63.0	313	400	FRA	360	3	2b	6.56	7%
FB 0021	Currants, red, black, white	-	1.5	FRA	62.3	153	-	-	ND	ND	ND	ND	-
FB 0266	Dewberries, incl boysen- & loganberry	-	1.5	AUS	67.0	152	-	-	ND	ND	ND	ND	-
MO 0105	Edible offal (mammalian)	-	0	FRA	62.3	277	-	-	ND	ND	1	0.00	0%
VO 0440	Egg plant	-	0.22	AUS	67.0	487	548	USA	444	3	2a	4.51	5%
PE 0112	Eggs	-	0	-	-	ND	-	-	ND	ND	1	ND	-
FB 0267	Elderberries	-	1.5	NLD	63.0	21	-	-	ND	ND	ND	ND	-
VB 0042	Flowerhead brassicas	-	0.5	-	-	ND	-	-	ND	ND	ND	ND	-
VA 0381	Garlic	-	0.09	FRA	62.3	22	-	-	ND	ND	ND	ND	-
VC 0425	Gherkin	-	0.44	NLD	63.0	96	116	USA	81	3	2a	1.80	2%
FB 0268	Gooseberries	-	1.5	FRA	62.3	153	-	-	ND	ND	ND	ND	-
FC 0203	Grapefruit	-	0.08	JPN	52.6	947	400	JPN	400	3	2a	2.66	3%
VR 0583	Horseradish	-	0.02	FRA	62.3	493	-	-	ND	ND	ND	ND	-
VR 0585	Jerusalem artichoke	-	0.02	AUS	67.0	10	150	USA	104	3	2b	0.01	0%
VL 0480	Kale	-	0.6	NLD	63.0	337	-	-	ND	ND	ND	ND	-
VB 0405	Kohlrabi	-	0.5	NLD	63.0	283	400	JPN	400	3	2b	6.74	7%
VL 0482	Lettuce, head	-	3	USA	65.0	213	450	JPN	450	3	2b	29.43	30%
VL 0483	Lettuce, leaf	-	3	NLD	63.0	152	160	BEL	144	3	2a	20.94	20%
FC 0205	Lime	-	0.08	AUS	67.0	590	67	USA	56	3	2a	0.84	1%

Annex 4

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 40%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
FP 0228	Loquat	-	0.91	AUS	67.0	64	-	-	ND	ND	ND	ND	-
GC 0645	Maize	-	0.05	FRA	62.3	260	-	-	ND	ND	3	ND	-
FC 0206	Mandarin	-	0.08	JPN	52.6	409	100	FRA	72	3	2a	0.84	1%
MM 0095	Meat from mammals other than marine mammals	-	0	AUS	67.0	521	-	-	ND	ND	1	0.00	0%
VC 0046	Melons, except watermelon	-	0.09	USA	65.0	655	700	JPN	700	3	2b	2.72	3%
ML 0106	Milks	-	0	USA	65.0	2466	-	-	ND	ND	3	ND	-
FS 0245	Nectarine	-	2.1	USA	65.0	590	110	FRA	99	3	2a	25.46	30%
GC 0647	Oats	-	0.05	FRA	62.3	305	-	-	ND	ND	3	ND	-
VO 0442	Okra	-	0.22	USA	65.0	235	10	JPN	10	1	1	0.80	1%
VA 0385	Onion, bulb	-	0.09	FRA	62.3	306	140	FRA	126	3	2a	0.81	1%
FC 0004	Orange, sweet, sour + orange-like hybrid	-	0.08	USA	65.0	564	190	FRA	137	3	2a	1.03	1%
VR 0588	Parsnip	-	0.02	UNK	70.1	202	125	UNK	90	3	2a	0.11	0%
FS 0247	Peach	-	2.1	SAF	55.7	685	150	JPN	150	3	2a	37.14	40%
FP 0230	Pear	-	0.91	USA	65.0	693	100	FRA	89	3	2a	12.19	10%
VP 0063	Peas (green pods & immature seeds)	-	0.59	JPN	52.6	63	-	-	ND	ND	ND	ND	-
VP 0064	Peas, shelled (immature seeds)	-	0.59	UNK	70.1	437	-	-	ND	ND	ND	ND	-
VO 0444	Peppers, chili	-	0.22	USA	65.0	90	45	USA	43	3	2a	0.60	1%
VO 0445	Peppers, sweet (incl. pim(i)ento)	-	0.22	FRA	62.3	207	172	UNK	160	3	2a	1.86	2%
FS 0014	Plum (incl dried)	-	2.1	USA	65.0	413	59	UNK	55	3	2a	16.92	20%
DF 0014	Plum, dried (prunes)	-	0.86	USA	65.0	303	6	FRA	5	1	1	4.01	4%
GC 0656	Popcorn	-	0.05	JPN	52.6	175	-	-	ND	ND	ND	ND	-
VR 0589	Potato	-	0.02	NLD	63.0	687	200	FRA	160	3	2a	0.32	0%
PM 0110	Poultry meat	-	0	AUS	67.0	431	-	-	ND	ND	1	0.00	0%
PO 0111	Poultry, edible offal of	-	0	USA	65.0	248	-	-	ND	ND	1	0.00	0%
VD 0070	Pulses	-	0.15	-	-	ND	-	-	ND	ND	3	ND	-

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 40%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
FP 0231	Quince	-	0.91	AUS	67.0	175	92	USA	56	3	2a	3.90	4%
VR 0494	Radish	-	0.02	FRA	62.3	204	7	FRA	6	1	1	0.07	0%
VR 0590	Radish, black	-	0.02	USA	65.0	46	-	-	ND	ND	ND	ND	-
VR 0591	Radish, Japanese	-	0.02	JPN	52.6	267	1000	JPN	1000	3	2b	0.30	0%
SO 0495	Rape seed	-	0.02	-	-	ND	-	-	ND	ND	3	ND	-
FB 0272	Raspberries, red, black	-	1.5	FRA	62.3	324	-	-	ND	ND	ND	ND	-
FB 0273	Rose hips	-	1.5	NLD	63.0	25	-	-	ND	ND	ND	ND	-
GC 0650	Rye	-	0.05	NLD	63.0	77	-	-	ND	ND	3	ND	-
VR 0498	Salsify	-	0.02	UNK	70.1	334	-	-	ND	ND	ND	ND	-
FC 0005	Shaddock or pomelo + shaddock-like hybrid	-	0.08	USA	65.0	448	210	FRA	126	3	2a	0.86	1%
GC 0651	Sorghum	-	0.05	USA	65.0	18	-	-	ND	ND	3	ND	-
VC 0431	Squash, summer (= courgette)	-	0.44	FRA	62.3	343	300	FRA	270	3	2a	6.23	6%
VR 0596	Sugar beet	-	0.02	-	-	ND	-	-	ND	ND	ND	ND	-
SO 0702	Sunflower seed	-	0.07	USA	65.0	193	-	-	ND	ND	3	ND	-
VR 0497	Swede	-	0.02	FRA	62.3	204	-	-	ND	ND	ND	ND	-
VO 1275	Sweet corn (kernels)	-	0.02	-	-	ND	-	-	ND	ND	ND	ND	-
VR 0508	Sweet potato	-	0.02	USA	65.0	536	250	JPN	250	3	2a	0.32	0%
FC 4031	Tangelo	-	0.08	AUS	67.0	114	-	-	ND	ND	ND	ND	-
VR 0505	Taro	-	0.02	NLD	63.0	37	-	-	ND	ND	ND	ND	-
VO 0448	Tomato	-	0.22	USA	65.0	391	85	UNK	85	3	2a	1.90	2%
JF 0448	Tomato juice	0.07	-	-	-	ND	-	-	ND	ND	3	ND	-
-	Tomato paste	0.16	-	-	-	ND	-	-	ND	ND	ND	ND	-
GC 0653	Triticale	-	0.05	-	-	ND	-	-	ND	ND	3	ND	-
VR 0506	Turnip, garden	-	0.02	USA	65.0	235	200	FRA	154	3	2a	0.17	0%
FB 0019	Vaccinium berries (incl. Bearberry)	-	1.5	-	-	ND	-	-	ND	ND	ND	ND	-

Annex 4

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 40%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
GC 0654	Wheat	-	0.05	USA	65.0	383	-	-	ND	ND	3	ND	-
VC 0433	Winter squash (= pumpkin), stated as pumpkin VC 0429	-	0.44	SAF	55.7	1003	1000	JPN	1000	3	2a	23.72	20%
VR 0600	Yams	-	0.02	-	-	ND	150	USA	129	3	ND	ND	-

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 70%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
FC 0205	Lime	-	0.08	AUS	19.0	26	67	USA	56	3	2b	0.33	0%
FP 0226	Apple	-	0.91	USA	15.0	679	110	FRA	100	3	2a	53.32	50%
JF 0226	Apple juice	0.13	-	-	-	ND	-	-	ND	ND	3	ND	-
FS 0240	Apricot	-	2.1	AUS	19.0	414	40	FRA	37	3	2a	54.03	50%
VS 0620	Artichoke globe	-	2.8	FRA	17.8	89	350	BEL	140	3	2b	42.00	40%
VS 0621	Asparagus	-	0	USA	15.0	178	25	FRA	13	3	2a	0.00	0%
GC 0640	Barley	-	0.05	AUS	19.0	14	-	-	ND	ND	3	ND	-
VP 0061	Beans except broad bean & soya bean (green pods & immature seeds)	-	0.59	FRA	17.8	203	-	-	ND	ND	ND	ND	-
VP 0062	Beans, shelled (immature seeds)	-	0.59	FRA	17.8	198	-	-	ND	ND	ND	ND	-

Annex 4

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 70%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
VR 0574	Beetroot	-	0.02	FRA	17.8	223	44	UNK	35	3	2a	0.33	0%
FB 0264	Blackberries	-	1.5	FRA	17.8	48	-	-	ND	ND	ND	ND	-
FB 0020	Blueberries	-	1.5	FRA	17.8	138	-	-	ND	ND	ND	ND	-
VP 0522	Broad bean (green pods & immature seeds)	-	0.59	-	-	ND	-	-	ND	ND	ND	ND	-
VP 0523	Broad bean, shelled (immature seeds)	-	0.59	-	-	ND	-	-	ND	ND	ND	ND	-
VB 0400	Broccoli	-	0.5	USA	15.0	164	608	USA	474	3	2b	16.43	20%
VB 0401	Broccoli, Chinese	-	0.5	-	-	ND	-	-	ND	ND	ND	ND	-
VB 0402	Brussels sprouts	-	0.5	NLD	17.0	213	7	FRA	5	1	1	6.25	6%
VB 0041	Cabbage, head	-	0.5	SAF	14.2	220	771	UNK	540	3	2b	23.25	20%
VB 4181	Cabbage, oxhead	-	0.5	NLD	17.0	167	-	-	ND	ND	ND	ND	-
VB 4179	Cabbage, red	-	0.5	NLD	17.0	222	-	-	ND	ND	ND	ND	-
VB 0403	Cabbage, Savoy	-	0.5	NLD	17.0	121	-	-	ND	ND	ND	ND	-
VB 4185	Cabbage, white	-	0.5	NLD	17.0	110	-	-	ND	ND	ND	ND	-
VC 4199	Cantaloupe	-	0.44	USA	15.0	270	500	JPN	500	3	2b	23.73	20%
VR 0577	Carrot	-	0.02	FRA	17.8	205	100	FRA	89	3	2a	0.43	0%
VR 0463	Cassava	-	0.02	AUS	19.0	126	-	-	ND	ND	ND	ND	-
-	Cassava tapioca	-	0.02	-	-	ND	-	-	ND	ND	ND	ND	-
VB 0404	Cauliflower (head)	-	0.5	NLD	17.0	209	1500	JPN	1500	3	2b	18.47	20%
VR 0578	Celeriac	-	0.02	FRA	17.8	108	1070	BEL	749	3	2b	0.36	0%
FS 0013	Cherries	-	2.1	FRA	17.8	297	5	UNK	4	1	1	35.01	40%
VR 0469	Chicory, roots	-	0.02	-	-	ND	-	-	ND	ND	ND	ND	-
FB 0265	Cranberries	-	1.5	USA	15.0	102	-	-	ND	ND	ND	ND	-
VC 0424	Cucumber	-	0.44	NLD	17.0	162	400	FRA	360	3	2b	12.58	10%
FB 0021	Currants, red, black, white	-	1.5	AUS	19.0	584	-	-	ND	ND	ND	ND	-
FB 0266	Dewberries, incl boysen- & loganberry	-	1.5	AUS	19.0	76	-	-	ND	ND	ND	ND	-

Annex 4

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 70%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
MO 0105	Edible offal (mammalian)	-	0	FRA	17.8	203	-	-	ND	ND	1	0.00	0%
VO 0440	Egg plant	-	0.22	JPN	15.9	219	548	USA	444	3	2b	9.10	9%
PE 0112	Eggs	-	0	-	-	ND	-	-	ND	ND	1	ND	-
FB 0267	Elderberries	-	1.5	NLD	17.0	9	-	-	ND	ND	ND	ND	-
VB 0042	Flowerhead brassicas	-	0.5	-	-	ND	-	-	ND	ND	ND	ND	-
VA 0381	Garlic	-	0.09	FRA	17.8	30	-	-	ND	ND	ND	ND	-
VC 0425	Gherkin	-	0.44	NLD	17.0	56	116	USA	81	3	2b	4.32	4%
FB 0268	Gooseberries	-	1.5	-	-	ND	-	-	ND	ND	ND	ND	-
FC 0203	Grapefruit	-	0.08	FRA	17.8	381	400	JPN	400	3	2b	5.14	5%
VR 0583	Horseradish	-	0.02	USA	15.0	127	-	-	ND	ND	ND	ND	-
VR 0585	Jerusalem artichoke	-	0.02	-	-	ND	150	USA	104	3	ND	ND	-
VL 0480	Kale	-	0.6	NLD	17.0	149	-	-	ND	ND	ND	ND	-
VB 0405	Kohlrabi	-	0.5	-	-	ND	400	JPN	400	3	ND	ND	-
VL 0482	Lettuce, head	-	3	NLD	17.0	84	450	JPN	450	3	2b	44.28	40%
VL 0483	Lettuce, leaf	-	3	NLD	17.0	102	160	BEL	144	3	2b	54.00	50%
FP 0228	Loquat	-	0.91	-	-	ND	-	-	ND	ND	ND	ND	-
GC 0645	Maize	-	0.05	FRA	17.8	148	-	-	ND	ND	3	ND	-
FC 0206	Mandarin	-	0.08	JPN	15.9	353	100	FRA	72	3	2a	2.50	3%
MM 0095	Meat from mammals other than marine mammals	-	0	AUS	19.0	261	-	-	ND	ND	1	0.00	0%
VC 0046	Melons, except watermelon	-	0.09	AUS	19.0	413	700	JPN	700	3	2b	5.87	6%
ML 0106	Milks	-	0	USA	15.0	1286	-	-	ND	ND	3	ND	-
FS 0245	Nectarine	-	2.1	AUS	19.0	302	110	FRA	99	3	2a	55.27	60%
GC 0647	Oats	-	0.05	USA	15.0	62	-	-	ND	ND	3	ND	-
VO 0442	Okra	-	0.22	USA	15.0	203	10	JPN	10	1	1	2.97	3%
VA 0385	Onion, bulb	-	0.09	FRA	17.8	127	140	FRA	126	3	2a	1.92	2%

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 70%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
FC 0004	Orange, sweet, sour + orange-like hybrid	-	0.08	UNK	14.5	495	190	FRA	137	3	2a	4.24	4%
VR 0588	Parsnip	-	0.02	UNK	14.5	227	125	UNK	90	3	2a	0.56	1%
FS 0247	Peach	-	2.1	AUS	19.0	315	150	JPN	150	3	2a	68.03	70%
FP 0230	Pear	-	0.91	UNK	14.5	279	100	FRA	89	3	2a	28.68	30%
VP 0063	Peas (green pods & immature seeds)	-	0.59	JPN	15.9	48	-	-	ND	ND	ND	ND	-
VP 0064	Peas, shelled (immature seeds)	-	0.59	UNK	14.5	174	-	-	ND	ND	ND	ND	-
VO 0444	Peppers, chili	-	0.22	AUS	19.0	31	45	USA	43	3	2b	1.06	1%
VO 0445	Peppers, sweet (incl. pim(i)ento)	-	0.22	AUS	19.0	60	172	UNK	160	3	2b	2.09	2%
FS 0014	Plum (incl dried)	-	2.1	FRA	17.8	254	59	UNK	55	3	2a	43.10	40%
DF 0014	Plum, dried (prunes)	-	0.86	AUS	19.0	170	6	FRA	5	1	1	7.70	8%
GC 0656	Popcorn	-	0.05	JPN	15.9	53	-	-	ND	ND	ND	ND	-
VR 0589	Potato	-	0.02	SAF	14.2	300	200	FRA	160	3	2a	0.87	1%
PM 0110	Poultry meat	-	0	AUS	19.0	224	-	-	ND	ND	1	0.00	0%
PO 0111	Poultry, edible offal of	-	0	USA	15.0	37	-	-	ND	ND	1	0.00	0%
VD 0070	Pulses	-	0.15	-	-	ND	-	-	ND	ND	3	ND	-
FP 0231	Quince	-	0.91	NLD	17.0	1	92	USA	56	3	2b	0.16	0%
VR 0494	Radish	-	0.02	FRA	17.8	122	7	FRA	6	1	1	0.14	0%
VR 0590	Radish, black	-	0.02	NLD	17.0	2	-	-	ND	ND	ND	ND	-
VR 0591	Radish, Japanese	-	0.02	JPN	15.9	132	1000	JPN	1000	3	2b	0.50	0%
SO 0495	Rape seed	-	0.02	-	-	ND	-	-	ND	ND	3	ND	-
FB 0272	Raspberries, red, black	-	1.5	FRA	17.8	76	-	-	ND	ND	ND	ND	-
FB 0273	Rose hips	-	1.5	NLD	17.0	16	-	-	ND	ND	ND	ND	-
GC 0650	Rye	-	0.05	NLD	17.0	37	-	-	ND	ND	3	ND	-
VR 0498	Salsify	-	0.02	UNK	14.5	125	-	-	ND	ND	ND	ND	-
FC 0005	Shaddock or pomelo + shaddock-like hybrid	-	0.08	FRA	17.8	381	210	FRA	126	3	2a	2.85	3%

Annex 4

PIRIMICARB (101) International estimate of short term intake (IESTI) for ARfD= 0.1 mg/kg bw (100 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 70%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
GC 0651	Sorghum	-	0.05	-	-	ND	-	-	ND	ND	3	ND	-
VC 0431	Squash, summer (= courgette)	-	0.44	AUS	19.0	219	300	FRA	270	3	2b	15.21	20%
VR 0596	Sugar beet	-	0.02	-	-	ND	-	-	ND	ND	ND	ND	-
SO 0702	Sunflower seed	-	0.07	USA	15.0	24	-	-	ND	ND	3	ND	-
VR 0497	Swede	-	0.02	FRA	17.8	122	-	-	ND	ND	ND	ND	-
VO 1275	Sweet corn (kernels)	-	0.02	-	-	ND	-	-	ND	ND	ND	ND	-
VR 0508	Sweet potato	-	0.02	USA	15.0	166	250	JPN	250	3	2b	0.66	1%
FC 4031	Tangelo	-	0.08	-	-	ND	-	-	ND	ND	ND	ND	-
VR 0505	Taro	-	0.02	NLD	17.0	2	-	-	ND	ND	ND	ND	-
VO 0448	Tomato	-	0.22	USA	15.0	159	85	UNK	85	3	2a	4.83	5%
JF 0448	Tomato juice	0.07	-	-	-	ND	-	-	ND	ND	3	ND	-
-	Tomato paste	0.16	-	-	-	ND	-	-	ND	ND	ND	ND	-
GC 0653	Triticale	-	0.05	-	-	ND	-	-	ND	ND	3	ND	-
VR 0506	Turnip, garden	-	0.02	JPN	15.9	77	200	FRA	154	3	2b	0.29	0%
FB 0019	Vaccinium berries (incl. Bearberry)	-	1.5	-	-	ND	-	-	ND	ND	ND	ND	-
GC 0654	Wheat	-	0.05	USA	15.0	151	-	-	ND	ND	3	ND	-
VC 0433	Winter squash (= pumpkin), stated as pumpkin VC 0429	-	0.44	SAF	14.2	224	1000	JPN	1000	3	2b	20.86	20%
VR 0600	Yams	-	0.02	-	-	ND	150	USA	129	3	ND	ND	-

PIRIMIPHOS-METHYL (86) International estimate of short term intake (IESTI) for ARfD= 0.2 mg/kg bw (200 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 10%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
GC 0640	Barley	-	4.5	NLD	63.0	378	-	-	ND	ND	1	27.00	10%
GC 0640	Barley (beer only)	0.01	-	AUS	67.0	528	-	-	ND	ND	3	0.08	0%
PE 0840	Chicken eggs	-	0.01	FRA	62.3	219	-	-	ND	ND	1	0.04	0%
MO 0105	Edible offal (mammalian)	-	0	FRA	62.3	277	-	-	ND	ND	1	0.00	0%
GC 0645	Maize	-	4.5	FRA	62.3	260	-	-	ND	ND	1	18.77	9%
MM 0095	Meat from mammals other than marine mammals: 20% as fat	-	0	AUS	67.0	104	-	-	ND	ND	1	0.00	0%
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	-	0	AUS	67.0	417	-	-	ND	ND	1	0.00	0%
ML 0106	Milks	0.003	-	USA	65.0	2466	-	-	ND	ND	3	0.11	0%
GC 0647	Oats	-	4.5	FRA	62.3	305	-	-	ND	ND	1	22.05	10%
PM 0110	Poultry meat: 10% as fat	-	0	AUS	67.0	43	-	-	ND	ND	1	0.00	0%
PM 0110	Poultry meat: 90% as muscle	-	0	AUS	67.0	388	-	-	ND	ND	1	0.00	0%
PO 0111	Poultry, edible offal of	-	0	USA	65.0	248	-	-	ND	ND	1	0.00	0%
GC 0649	Rice	-	4.5	FRA	62.3	312	-	-	ND	ND	1	22.50	10%
GC 0650	Rye	-	4.5	NLD	63.0	77	-	-	ND	ND	1	5.49	3%
GC 0654	Wheat	-	4.5	USA	65.0	383	-	-	ND	ND	1	26.51	10%
CM 0654	Wheat bran, unprocessed	5.1	-	USA	65.0	80	-	-	ND	ND	3	6.27	3%
CF 1211	Wheat flour	0.39	-	USA	65.0	365	-	-	ND	ND	3	2.19	1%
CF 1212	Wheat wholemeal	1.6	-	USA	65.0	155	-	-	ND	ND	3	3.82	2%
CP 1211	White bread	0.22	-	SAF	55.7	479	-	-	ND	ND	3	1.89	1%
CP 1212	Wholemeal bread	0.83	-	SAF	55.7	395	-	-	ND	ND	3	5.89	3%

Annex 4

PIRIMIPHOS-METHYL (86) International estimate of short term intake (IESTI) for ARfD= 0.2 mg/kg bw (200 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 30%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Varia-bility factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
GC 0640	Barley	-	4.5	AUS	19.0	14	-	-	ND	ND	1	3.29	2%
GC 0640	Barley (beer only)	0.01	-	AUS	19.0	12	-	-	ND	ND	3	0.01	0%
PE 0840	Chicken eggs	-	0.01	FRA	17.8	134	-	-	ND	ND	1	0.08	0%
MO 0105	Edible offal (mammalian)	-	0	FRA	17.8	203	-	-	ND	ND	1	0.00	0%
GC 0645	Maize	-	4.5	FRA	17.8	148	-	-	ND	ND	1	37.49	20%
MM 0095	Meat from mammals other than marine mammals: 20% as fat	-	0	AUS	19.0	52	-	-	ND	ND	1	0.00	0%
MM 0095	Meat from mammals other than marine mammals: 80% as muscle	-	0	AUS	19.0	208	-	-	ND	ND	1	0.00	0%
ML 0106	Milks	0.003	-	USA	15.0	1286	-	-	ND	ND	3	0.26	0%
GC 0647	Oats	-	4.5	USA	15.0	62	-	-	ND	ND	1	18.68	9%
PM 0110	Poultry meat: 10% as fat	-	0	AUS	19.0	22	-	-	ND	ND	1	0.00	0%
PM 0110	Poultry meat: 90% as muscle	-	0	AUS	19.0	201	-	-	ND	ND	1	0.00	0%
PO 0111	Poultry, edible offal of	-	0	USA	15.0	37	-	-	ND	ND	1	0.00	0%
GC 0649	Rice	-	4.5	FRA	17.8	223	-	-	ND	ND	1	56.25	30%
GC 0650	Rye	-	4.5	NLD	17.0	37	-	-	ND	ND	1	9.77	5%
GC 0654	Wheat	-	4.5	USA	15.0	151	-	-	ND	ND	1	45.32	20%
CM 0654	Wheat bran, unprocessed	5.1	-	USA	15.0	30	-	-	ND	ND	3	10.10	5%
CF 1211	Wheat flour	0.39	-	AUS	19.0	194	-	-	ND	ND	3	3.99	2%
CF 1212	Wheat wholemeal	1.6	-	USA	15.0	74	-	-	ND	ND	3	7.86	4%
CP 1211	White bread	0.22	-	SAF	14.2	270	-	-	ND	ND	3	4.18	2%
CP 1212	Wholemeal bread	0.83	-	SAF	14.2	240	-	-	ND	ND	3	14.03	7%

PROPAMOCARB (148) International estimate of short term intake (IESTI) for **GENERAL POPULATION**

ARfD= 2 mg/kg bw (2000 µg/kg bw)

Maximum%ARfD: 40%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion. g/person	Unit weight. g	Country	Unit weight. edible portion. g				
VB 0404	Cauliflower (head)	-	0.09	UNK	70.1	579	1000	BEL	640	3	2b	2.23	0%
VL 0469	Chicory leaves (head)	-	0.9	FRA	62.3	222	53	USA	47	3	2a	4.58	0%
VC 0424	Cucumber	-	4.8	NLD	63.0	313	400	FRA	360	3	2b	71.57	4%
MO 0105	Edible offal (mammalian)	-	0.01	FRA	62.3	277	-	-	ND	ND	1	0.04	0%
VO 0440	Eggplant	-	0.16	AUS	67.0	487	80	JPN	80	3	2a	1.55	0%
PE 0112	Eggs	-	0.01	-	-	ND	-	-	ND	ND	1	ND	-
VC 0425	Gherkin	-	4.8	NLD	63.0	96	116	USA	81	3	2a	19.67	1%
VL 0482	Lettuce. head	-	86	USA	65.0	213	539	USA	512	3	2b	843.66	40%
VL 0483	Lettuce. leaf	-	86	NLD	63.0	152	160	BEL	144	3	2a	600.40	30%
MM 0095	Meat from mammals other than marine mammals	-	0.01	AUS	67.0	521	-	-	ND	ND	1	0.08	0%
VC 0046	Melons. except watermelon	-	0.53	USA	65.0	655	700	FRA	420	3	2a	12.19	1%
ML 0106	Milks	0	-	USA	65.0	2466	-	-	ND	ND	3	0.00	0%
VO 0445	Peppers. sweet (incl. pim(i)ento)	-	1.8	FRA	62.3	207	172	UNK	160	3	2a	15.24	1%
VR 0589	Potato	-	0.17	NLD	63.0	687	216	UNK	216	3	2a	3.02	0%
PM 0110	Poultry meat	-	0.01	AUS	67.0	431	-	-	ND	ND	1	0.06	0%
PO 0111	Poultry. edible offal of	-	0.01	USA	65.0	248	-	-	ND	ND	1	0.04	0%
VR 0494	Radish	-	0.42	FRA	62.3	204	7	FRA	6	1	1	1.38	0%
VO 0448	Tomato	-	1.4	USA	65.0	391	123	USA	123	3	2a	13.71	1%
-	Tomato paste	1.54	-	-	-	ND	-	-	ND	ND	ND	ND	-
VC 0432	Watermelon	-	0.53	USA	65.0	1939	3000	JPN	3000	3	2b	47.43	2%
VC 0433	Winter squash (= pumpkin)	-	4.8	USA	65.0	729	1000	JPN	1000	3	2b	161.57	8%

PROPAMOCARB (148) International estimate of short term intake (IESTI) for ARfD= 2 mg/kg bw (2000 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 80%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight						
				Country	Body weight (kg)	Large portion. g/person	Unit weight. g	Country	Unit weight. edible portion. g	Varia-bility factor	Case	IESTI µg/kg bw per day	% ARfD rounded
VB 0404	Cauliflower (head)	-	0.09	NLD	17.0	209	1000	BEL	640	3	2b	3.32	0%
VL 0469	Chicory leaves (head)	-	0.9	USA	15.0	19	53	USA	47	3	2b	3.38	0%
VC 0424	Cucumber	-	4.8	NLD	17.0	162	400	FRA	360	3	2b	137.23	7%
MO 0105	Edible offal (mammalian)	-	0.01	FRA	17.8	203	-	-	ND	ND	1	0.11	0%
VO 0440	Egg plant	-	0.16	JPN	15.9	219	80	JPN	80	3	2a	3.82	0%
PE 0112	Eggs	-	0.01	-	-	ND	-	-	ND	ND	1	ND	-
VC 0425	Gherkin	-	4.8	NLD	17.0	56	116	USA	81	3	2b	1269.36	60%
VL 0482	Lettuce. head	-	86	NLD	17.0	84	539	USA	512	3	2b	1548.00	80%
VL 0483	Lettuce. leaf	-	86	NLD	17.0	102	160	BEL	144	3	2b	178.20	9%
MM 0095	Meat from mammals other than marine mammals	-	0.01	AUS	19.0	261	-	-	ND	ND	1	0.14	0%
VC 0046	Melons. except watermelon	-	0.53	AUS	19.0	413	700	FRA	420	3	2b	34.56	2%
ML 0106	Milks	0	-	USA	15.0	1286	-	-	ND	ND	3	0.00	0%
VO 0445	Peppers. sweet (incl. pim(i)ento)	-	1.8	AUS	19.0	60	172	UNK	160	3	2b	17.06	1%
VR 0589	Potato	-	0.17	SAF	14.2	300	216	UNK	216	3	2a	8.76	0%
PM 0110	Poultry meat	-	0.01	AUS	19.0	224	-	-	ND	ND	1	0.12	0%
PO 0111	Poultry. edible offal of	-	0.01	USA	15.0	37	-	-	ND	ND	1	0.02	0%
VR 0494	Radish	-	0.42	FRA	17.8	122	7	FRA	6	1	1	2.87	0%
VO 0448	Tomato	-	1.4	USA	15.0	159	123	USA	123	3	2a	37.80	2%
-	Tomato paste	1.54	-	-	-	ND	-	-	ND	ND	ND	ND	-
VC 0432	Watermelon	-	0.53	AUS	19.0	1473	3000	JPN	3000	3	2b	123.24	6%
VC 0433	Winter squash (= pumpkin)	-	4.8	USA	15.0	169	1000	JPN	1000	3	2b	161.86	8%

PYRACLOSTROBIN (210) International estimate of short term intake (IESTI) for ARfD= 0.05 mg/kg bw (50 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 30%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
TN 0660	Almonds	-	0.02	JPN	52.6	74	-	-	ND	ND	1	0.03	0%
FP 0226	Apple	-	0.29	USA	65.0	1348	110	FRA	100	3	2a	6.91	10%
FS 0240	Apricot	-	0.63	JPN	52.6	292	40	FRA	37	3	2a	4.39	9%
FI 0327	Banana	-	0.02	SAF	55.7	613	900	FRA	612	3	2a	0.66	1%
GC 0640	Barley (fresh, flour, beer)	0.03	-	NLD	63.0	378	-	-	ND	ND	3	0.18	0%
VD 0071	Beans (dry)	-	0.1	FRA	62.3	255	-	-	ND	ND	3	ND	-
FB 0020	Blueberries	0.34	0.57	AUS	67.0	158	-	-	ND	ND	ND	ND	-
-	Brassica vegetables (flowerhead, head & leafy brassicas, kohlrabi)	-	0.04	-	-	ND	-	-	ND	ND	ND	ND	-
VB 0400	Broccoli	-	0.04	USA	65.0	376	150	JPN	150	3	2a	0.42	1%
VB 0402	Brussels sprouts	-	0.14	NLD	63.0	394	7	FRA	5	1	1	0.88	2%
VB 4179	Cabbage, red	-	0.09	NLD	63.0	566	-	-	ND	ND	1	0.81	2%
VB 0403	Cabbage, Savoy	-	0.09	NLD	63.0	188	-	-	ND	ND	1	0.27	1%
VB 4185	Cabbage, white	-	0.09	NLD	63.0	304	-	-	ND	ND	1	0.43	1%
VB 0041	Cabbages, head	-	0.09	SAF	55.7	362	771	UNK	540	3	1	0.59	1%
VC 4199	Cantaloupe	-	0.13	USA	65.0	606	552	USA	276	3	2a	2.32	5%
VR 0577	Carrot	-	0.24	NLD	63.0	335	100	FRA	89	3	2a	1.95	4%
VB 0404	Cauliflower (head)	-	0.04	UNK	70.1	579	575	USA	224	3	2a	0.59	1%
FS 0013	Cherries	-	0.63	FRA	62.3	375	5	FRA	4	1	1	3.79	8%
-	Coffee green	0.02	-	-	-	ND	-	-	ND	ND	3	ND	-
VC 0424	Cucumber	-	0.41	NLD	63.0	313	400	FRA	360	3	2b	6.11	10%
MO 0105	Edible offal (mammalian)	-	0.037	FRA	62.3	277	-	-	ND	ND	1	0.16	0%
VO 0440	Egg plant	-	0.21	AUS	67.0	487	80	JPN	80	3	2a	2.03	4%
VA 0381	Garlic	-	0.05	FRA	62.3	22	-	-	ND	ND	1	0.02	0%
FC 0203	Grapefruit	-	0.51	JPN	52.6	947	400	JPN	400	3	2a	16.94	30%
FB 0269	Grapes (fresh, dried, excluding wine)	0.44	1.38	AUS	67.0	513	125	FRA	118	3	2a	15.41	30%

Annex 4

PYRACLOSTROBIN (210) International estimate of short term intake (IESTI) for ARfD= 0.05 mg/kg bw (50 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 30%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
DF 0269	Grapes, dried (= currants, raisins and sultanas)	-	4.27	FRA	62.3	135	-	-	ND	ND	1	9.27	20%
DH 1100	Hops, dry	3.5	-	USA	65.0	6	-	-	ND	ND	3	0.32	1%
VL 0480	Kale	-	0.61	NLD	63.0	337	-	-	ND	ND	1	3.26	7%
VA 0384	Leek	-	0.42	FRA	62.3	374	100	FRA	50	3	2a	3.19	6%
FC 0204	Lemon	-	0.51	FRA	62.3	115	70	JPN	70	3	2a	2.09	4%
VD 0533	Lentil (dry)	0.13	-	FRA	62.3	435	-	-	ND	ND	3	0.91	2%
VL 0482	Lettuce, head	-	0.81	USA	65.0	213	539	USA	512	3	2b	7.95	20%
GC 0645	Maize (fresh, flour, oil)	0.02	-	FRA	62.3	260	-	-	ND	ND	3	0.08	0%
FC 0206	Mandarin	-	0.51	JPN	52.6	409	100	FRA	72	3	2a	5.36	10%
FI 0345	Mango	-	0.05	FRA	62.3	567	207	USA	139	3	2a	0.68	1%
MM 0095	Meat from mammals other than marine mammals	-	0.044	AUS	67.0	521	-	-	ND	ND	1	0.34	1%
ML 0106	Milks	0.01	-	USA	65.0	2466	-	-	ND	ND	3	0.38	1%
FS 0245	Nectarine	-	0.63	USA	65.0	590	110	FRA	99	3	2a	7.64	20%
GC 0647	Oats	0.17	-	FRA	62.3	305	-	-	ND	ND	3	0.83	2%
VA 0385	Onion, bulb	-	0.09	FRA	62.3	306	140	FRA	126	3	2a	0.81	2%
FC 0004	Oranges, sweet, sour (incl. Orange-like hybrids)	-	0.51	USA	65.0	564	200	JPN	200	3	2a	7.57	20%
FI 0350	Papaya	-	0.05	USA	65.0	567	250	JPN	250	3	2a	0.82	2%
FS 0247	Peach	-	0.63	SAF	55.7	685	110	FRA	99	3	2a	9.99	20%
SO 0697	Peanut	0.02	-	FRA	62.3	161	-	-	ND	ND	3	0.05	0%
VD 0072	Peas (dry)	0.07	-	FRA	62.3	445	-	-	ND	ND	3	0.50	1%
VP 0064	Peas, shelled (immature seeds)	-	0.02	UNK	70.1	437	-	-	ND	ND	1	0.12	0%
TN 0672	Pecan	-	0.02	AUS	67.0	23	-	-	ND	ND	1	0.01	0%
VO 0445	Peppers, sweet (incl. pim(i)ento)	-	0.25	FRA	62.3	207	40	JPN	40	3	2a	1.15	2%
TN 0675	Pistachio nut	-	0.45	AUS	67.0	300	-	-	ND	ND	1	2.02	4%

PYRACLOSTROBIN (210) International estimate of short term intake (IESTI) for ARfD= 0.05 mg/kg bw (50 µg/kg bw)

GENERAL POPULATION Maximum%ARfD: 30%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Varia-bility factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
FS 0014	Plums (fresh, prunes)	-	0.63	USA	65.0	413	66	USA	62	3	2a	5.20	10%
VR 0589	Potato	-	0.02	NLD	63.0	687	200	FRA	160	3	2a	0.32	1%
VR 0494	Radish	-	0.3	FRA	62.3	204	7	FRA	6	1	1	0.98	2%
FB 0272	Raspberries, red, black	-	1.28	FRA	62.3	324	-	-	ND	ND	1	6.66	10%
VD 0541	Soya bean (dry)	0.02	-	JPN	52.6	159	-	-	ND	ND	3	0.06	0%
OR 0541	Soya bean oil, refined	0.016	-	USA	65.0	98	-	-	ND	ND	3	0.02	0%
VC 0431	Squash, summer	-	0.18	FRA	62.3	343	300	FRA	270	3	2a	2.55	5%
FB 0275	Strawberry	-	0.26	FRA	62.3	346	14	FRA	13	1	1	1.44	3%
SO 0702	Sunflower seed	0.055	-	USA	65.0	193	-	-	ND	ND	3	0.16	0%
OR 0702	Sunflower seed oil, edible	0.00054	-	FRA	62.3	61	-	-	ND	ND	3	0.00	0%
FC 4031	Tangelo	-	0.51	AUS	67.0	114	-	-	ND	ND	ND	ND	-
VO 0448	Tomato (fresh, juice, paste, peeled)	-	0.21	USA	65.0	391	105	FRA	102	3	2a	1.92	4%
GC 0654	Wheat	0.02	-	USA	65.0	383	-	-	ND	ND	3	0.12	0%
CF 1211	Wheat flour	0.012	-	USA	65.0	365	-	-	ND	ND	3	0.07	0%
CF 1210	Wheat germ	0.016	-	FRA	62.3	207	-	-	ND	ND	3	0.05	0%
-	Wine only	0.04	-	AUS	67.0	1131	-	-	ND	ND	3	0.68	1%

Annex 4

PYRACLOSTROBIN (210) International estimate of short term intake (IESTI) for ARfD= 0.05 mg/kg bw (50 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 80%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
FC 0204	Lemon	-	0.51	JPN	15.9	88	70	JPN	70	3	2a	7.33	10%
TN 0660	Almonds	-	0.02	FRA	17.8	31	-	-	ND	ND	1	0.04	0%
FP 0226	Apple	-	0.29	USA	15.0	679	110	FRA	100	3	2a	16.99	30%
FS 0240	Apricot	-	0.63	AUS	19.0	414	40	FRA	37	3	2a	16.21	30%
FI 0327	Banana	-	0.02	JPN	15.9	312	900	FRA	612	3	2b	1.18	2%
GC 0640	Barley (fresh, flour, beer)	0.03	-	AUS	19.0	14	-	-	ND	ND	3	0.02	0%
VD 0071	Beans (dry)	-	0.1	FRA	17.8	209	-	-	ND	ND	3	ND	-
FB 0020	Blueberries	0.34	0.57	FRA	17.8	138	-	-	ND	ND	ND	ND	-
-	Brassica vegetables (flowerhead, head & leafy brassicas, kohlrabi)	-	0.04	-	-	ND	-	-	ND	ND	ND	ND	-
VB 0400	Broccoli	-	0.04	USA	15.0	164	150	JPN	150	3	2a	1.24	2%
VB 0402	Brussels sprouts	-	0.14	NLD	17.0	213	7	FRA	5	1	1	1.75	4%
VB 4179	Cabbage, red	-	0.09	NLD	17.0	222	-	-	ND	ND	1	1.18	2%
VB 0403	Cabbage, Savoy	-	0.09	NLD	17.0	121	-	-	ND	ND	1	0.64	1%
VB 4185	Cabbage, white	-	0.09	NLD	17.0	110	-	-	ND	ND	1	0.58	1%
VB 0041	Cabbages, head	-	0.09	SAF	14.2	220	771	UNK	540	3	1	1.40	3%
VC 4199	Cantaloupe	-	0.13	USA	15.0	270	552	USA	276	3	2b	7.01	10%
VR 0577	Carrot	-	0.24	FRA	17.8	205	100	FRA	89	3	2a	5.16	10%
VB 0404	Cauliflower (head)	-	0.04	NLD	17.0	209	575	USA	224	3	2b	1.48	3%
FS 0013	Cherries	-	0.63	FRA	17.8	297	5	FRA	4	1	1	10.50	20%
-	Coffee green	0.02	-	-	-	ND	-	-	ND	ND	3	ND	-
VC 0424	Cucumber	-	0.41	NLD	17.0	162	400	FRA	360	3	2b	11.72	20%
MO 0105	Edible offal (mammalian)	-	0.037	FRA	17.8	203	-	-	ND	ND	1	0.42	1%
VO 0440	Egg plant	-	0.21	JPN	15.9	219	80	JPN	80	3	2a	5.01	10%
VA 0381	Garlic	-	0.05	FRA	17.8	30	-	-	ND	ND	1	0.08	0%

Annex 4

PYRACLOSTROBIN (210) International estimate of short term intake (IESTI) for ARfD= 0.05 mg/kg bw (50 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 80%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Varia-bility factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
FC 0203	Grapefruit	-	0.51	FRA	17.8	381	400	JPN	400	3	2b	32.79	70%
FB 0269	Grapes (fresh, dried, excluding wine)	0.44	1.38	AUS	19.0	342	125	FRA	118	3	2a	41.91	80%
DF 0269	Grapes, dried (= currants, raisins and sultanas)	-	4.27	USA	15.0	59	-	-	ND	ND	1	16.87	30%
DH 1100	Hops, dry	3.5	-	JPN	15.9	0	-	-	ND	ND	3	0.11	0%
VL 0480	Kale	-	0.61	NLD	17.0	149	-	-	ND	ND	1	5.33	10%
VA 0384	Leek	-	0.42	FRA	17.8	121	100	FRA	50	3	2a	5.22	10%
VD 0533	Lentil (dry)	0.13	-	FRA	17.8	127	-	-	ND	ND	3	0.93	2%
VL 0482	Lettuce, head	-	0.81	NLD	17.0	84	539	USA	512	3	2b	11.96	20%
GC 0645	Maize (fresh, flour, oil)	0.02	-	FRA	17.8	148	-	-	ND	ND	3	0.17	0%
FC 0206	Mandarin	-	0.51	JPN	15.9	353	100	FRA	72	3	2a	15.95	30%
FI 0345	Mango	-	0.05	AUS	19.0	207	207	USA	139	3	2a	1.27	3%
MM 0095	Meat from mammals other than marine mammals	-	0.044	AUS	19.0	261	-	-	ND	ND	1	0.60	1%
ML 0106	Milks	0.01	-	USA	15.0	1286	-	-	ND	ND	3	0.86	2%
FS 0245	Nectarine	-	0.63	AUS	19.0	302	110	FRA	99	3	2a	16.58	30%
GC 0647	Oats	0.17	-	USA	15.0	62	-	-	ND	ND	3	0.71	1%
VA 0385	Onion, bulb	-	0.09	FRA	17.8	127	140	FRA	126	3	2a	1.92	4%
FC 0004	Oranges, sweet, sour (incl. Orange-like hybrids)	-	0.51	UNK	14.5	495	200	JPN	200	3	2a	31.48	60%
FI 0350	Papaya	-	0.05	USA	15.0	240	250	JPN	250	3	2b	2.40	5%
FS 0247	Peach	-	0.63	AUS	19.0	315	110	FRA	99	3	2a	17.03	30%
SO 0697	Peanut	0.02	-	USA	15.0	78	-	-	ND	ND	3	0.10	0%
VD 0072	Peas (dry)	0.07	-	FRA	17.8	107	-	-	ND	ND	3	0.42	1%
VP 0064	Peas, shelled (immature seeds)	-	0.02	UNK	14.5	174	-	-	ND	ND	1	0.24	0%
TN 0672	Pecan	-	0.02	AUS	19.0	22	-	-	ND	ND	1	0.02	0%

Annex 4

PYRACLOSTROBIN (210) International estimate of short term intake (IESTI) for ARfD= 0.05 mg/kg bw (50 µg/kg bw)

CHILDREN UP TO 6 YEARS Maximum%ARfD: 80%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet			Unit weight			Varia-bility factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion, g/person	Unit weight, g	Country	Unit weight, edible portion, g				
VO 0445	Peppers, sweet (incl. pim(i)ento)	-	0.25	AUS	19.0	60	40	JPN	40	3	2a	1.84	4%
TN 0675	Pistachio nut	-	0.45	AUS	19.0	63	-	-	ND	ND	1	1.48	3%
FS 0014	Plums (fresh, prunes)	-	0.63	FRA	17.8	254	66	USA	62	3	2a	13.39	30%
VR 0589	Potato	-	0.02	SAF	14.2	300	200	FRA	160	3	2a	0.87	2%
VR 0494	Radish	-	0.3	FRA	17.8	122	7	FRA	6	1	1	2.05	4%
FB 0272	Raspberries, red, black	-	1.28	FRA	17.8	76	-	-	ND	ND	1	5.48	10%
VD 0541	Soya bean (dry)	0.02	-	JPN	15.9	88	-	-	ND	ND	3	0.11	0%
OR 0541	Soya bean oil, refined	0.016	-	USA	15.0	35	-	-	ND	ND	3	0.04	0%
VC 0431	Squash, summer	-	0.18	AUS	19.0	219	300	FRA	270	3	2b	6.22	10%
FB 0275	Strawberry	-	0.26	AUS	19.0	176	14	FRA	13	1	1	2.41	5%
SO 0702	Sunflower seed	0.055	-	USA	15.0	24	-	-	ND	ND	3	0.09	0%
OR 0702	Sunflower seed oil, edible	0.00054	-	FRA	17.8	37	-	-	ND	ND	3	0.00	0%
FC 4031	Tangelo	-	0.51	-	-	ND	-	-	ND	ND	ND	ND	-
VO 0448	Tomato (fresh, juice, paste, peeled)	-	0.21	USA	15.0	159	105	FRA	102	3	2a	5.08	10%
GC 0654	Wheat	0.02	-	USA	15.0	151	-	-	ND	ND	3	0.20	0%
CF 1211	Wheat flour	0.012	-	AUS	19.0	194	-	-	ND	ND	3	0.12	0%
CF 1210	Wheat germ	0.016	-	USA	15.0	8	-	-	ND	ND	3	0.01	0%
-	Wine only	0.04	-	AUS	19.0	4	-	-	ND	ND	3	0.01	0%

THIABENDAZOLE (65) International estimate of short term intake (IESTI) for ARfD for general population= 1 mg/kg bw (1000 µg/kg bw)

Annex 4

CHILDREN UP TO 6 YEARS

Maximum%ARfD: 60%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet				Unit weight				Varia-bility factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion g/kg bw per day	Large portion, g/person	Unit weight, g	Countr y	% edible por-tion	Unit weight, edible portion, g				
FC 0206	Mandarin	-	0.84	JPN	15.9	22.22	353	100	FRA	72%	72	3	2a	26.27	3%
FP 0226	Apple	-	2	USA	15.0	45.25	679	110	FRA	91%	100	3	2a	117.19	10%
JF 0226	Apple juice	0.8	-	-	-	ND	ND	-	-	-	ND	ND	3	ND	-
FI 0326	Avocado	-	1.8	USA	15.0	8.70	131	230	BEL	70%	161	3	2b	46.98	5%
MM 0812	Cattle meat	-	0.02	AUS	19.0	12.52	238	-	-	-	ND	ND	1	0.25	0%
ML 0812	Cattle milk	0.12	-	AUS	19.0	76.33	1450	-	-	-	ND	ND	3	9.16	1%
MO 1280	Cattle, kidney	-	0.6	USA	15.0	12.44	187	-	-	-	ND	ND	1	7.46	1%
MO 1281	Cattle, liver	-	0.21	FRA	17.8	11.39	203	-	-	-	ND	ND	1	2.39	0%
FI 0345	Mango	-	4.6	AUS	19.0	10.90	207	339	SWE	69%	234	3	2b	150.42	20%
VC 0046	Melons, except watermelon	-	0.82	AUS	19.0	21.74	413	700	FRA	60%	420	3	2b	53.47	5%
JF 0004	Orange juice	0.11	-	-	-	ND	ND	-	-	-	ND	ND	3	ND	-
FC 0004	Orange, sweet, sour + orange-like hybrid	-	0.84	UNK	14.5	34.14	495	190	FRA	72%	137	3	2a	44.53	4%
FI 0350	Papaya	-	5.1	USA	15.0	16.01	240	250	JPN	100%	250	3	2b	244.95	20%
FP 0230	Pear	-	2	UNK	14.5	19.24	279	180	JPN	100%	180	3	2a	88.14	9%
VR 0589	Potato	-	11	SAF	14.2	21.10	300	216	UNK	100%	216	3	2a	566.75	60%
FB 0275	Strawberry	-	2.7	AUS	19.0	9.28	176	14	FRA	96%	13	1	1	25.06	3%

Annex 4

THIABENDAZOLE (65) International estimate of short term intake (IESTI) for **GENERAL POPULATION**

ARfD for general population= 1 mg/kg bw (1000 µg/kg bw)

Maximum%ARfD: 20%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet				Unit weight				Varia-bility factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion g/kg bw per day	Large portion, g/person	Unit weight, g	Country	% edible portion	Unit weight, edible portion, g				
FP 0226	Apple	-	2	USA	65.0	20.74	1348	155	BEL	90%	140	3	2a	50.06	5%
JF 0226	Apple juice	0.8	-	-	-	ND	ND	-	-	-	ND	ND	3	ND	-
FI 0326	Avocado	-	1.8	FRA	62.3	4.17	260	300	FRA	60%	180	3	2a	17.91	2%
MM 0812	Cattle meat	-	0.02	AUS	67.0	6.97	467	-	-	-	ND	ND	1	0.14	0%
ML 0812	Cattle milk	0.12	-	NLD	63.0	39.92	2515	-	-	-	ND	ND	3	4.79	0%
MO 1280	Cattle, kidney	-	0.6	USA	65.0	12.12	788	-	-	-	ND	ND	1	7.27	1%
MO 1281	Cattle, liver	-	0.21	USA	65.0	7.16	465	-	-	-	ND	ND	1	1.50	0%
FC 0206	Mandarin	-	0.84	JPN	52.6	7.77	409	100	FRA	72%	72	3	2a	8.83	1%
FI 0345	Mango	-	4.6	FRA	62.3	9.10	567	339	SWE	69%	234	3	2a	76.40	8%
VC 0046	Melons, except watermelon	-	0.82	USA	65.0	10.08	655	700	FRA	60%	420	3	2a	18.86	2%
JF 0004	Orange juice	0.11	-	-	-	ND	ND	-	-	-	ND	ND	3	ND	-
FC 0004	Orange, sweet, sour + orange-like hybrid	-	0.84	USA	65.0	8.68	564	190	FRA	72%	137	3	2a	10.83	1%
FI 0350	Papaya	-	5.1	USA	65.0	8.72	567	250	JPN	100%	250	3	2a	83.70	8%
FP 0230	Pear	-	2	USA	65.0	10.66	693	100	FRA	89%	89	3	2a	26.80	3%
VR 0589	Potato	-	11	NLD	63.0	10.90	687	200	FRA	80%	160	3	2a	175.77	20%
FB 0275	Strawberry	-	2.7	FRA	62.3	5.55	346	16	BEL	94%	15	1	1	14.99	1%

THIABENDAZOLE (65) International estimate of short term intake (IESTI) for **WOMEN OF CHILD- BEARING AGE**

ARfD for women of child- bearing age (300 µg/kg bw) = 0.3 mg/kg bw

Maximum%ARfD: 70%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet				Unit weight				Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
				Country	Body weight (kg)	Large portion g/kg bw per day	Large portion, g/person	Unit weight, g	Country	% edible portion	Unit weight, edible portion, g				
FP 0226	Apple	-	2	USA	65.0	20.74	1348	155	BEL	90%	140	3	2a	50.06	20%
JF 0226	Apple juice	0.8	-	-	-	ND	ND	-	-	-	ND	ND	3	ND	-
FI 0326	Avocado	-	1.8	FRA	62.3	4.17	260	300	FRA	60%	180	3	2a	17.91	6%
MM 0812	Cattle meat	-	0.02	AUS	67.0	6.97	467	-	-	-	ND	ND	1	0.14	0%
ML 0812	Cattle milk	0.12	-	NLD	63.0	39.92	2515	-	-	-	ND	ND	3	4.79	2%
MO 1280	Cattle, kidney	-	0.6	USA	65.0	12.12	788	-	-	-	ND	ND	1	7.27	2%
MO 1281	Cattle, liver	-	0.21	USA	65.0	7.16	465	-	-	-	ND	ND	1	1.50	1%
FC 0206	Mandarin	-	0.84	JPN	52.6	7.77	409	100	FRA	72%	72	3	2a	8.83	3%
FI 0345	Mango	-	4.6	FRA	62.3	9.10	567	339	SWE	69%	234	3	2a	76.40	30%
VC 0046	Melons, except watermelon	-	0.82	USA	65.0	10.08	655	700	JPN	100%	700	3	2b	24.80	8%
VC 0046	Melons, except watermelon	-	0.82	USA	65.0	10.08	655	720	BEL	75%	540	3	2a	21.89	7%
JF 0004	Orange juice	0.11	-	-	-	ND	ND	-	-	-	ND	ND	3	ND	-
FC 0004	Orange, sweet, sour + orange-like hybrid	-	0.84	USA	65.0	8.68	564	190	FRA	72%	137	3	2a	10.83	4%
FI 0350	Papaya	-	5.1	USA	65.0	8.72	567	250	JPN	100%	250	3	2a	83.70	30%
FP 0230	Pear	-	2	USA	65.0	10.66	693	180	JPN	100%	180	3	2a	32.40	10%
VR 0589	Potato	-	11	NLD	63.0	10.90	687	216	UNK	100%	216	3	2a	195.33	70%
FB 0275	Strawberry	-	2.7	FRA	62.3	5.55	346	14	FRA	96%	13	1	1	14.99	5%

Annex 4

THIACLOPRID (223) International estimate of short term intake (IESTI) for **CHILDREN UP TO 6 YEARS**

ARfD= 0.03 mg/kg bw (30 µg/kg bw)
Maximum %ARfD: 90%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet Country	Body weight (kg)	Large portion, g/person	Unit weight Unit weight, g	Country	Unit weight, edible portion, g	Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
TN 0660	Almonds	-	0.01	FRA	17.8	31	-	-	ND	ND	1	0.02	0%
FP 0226	Apple	-	0.38	USA	15.0	679	200	JPN	200	3	2a	27.33	90%
JF 0226	Apple juice	0.0275	-	-	-	ND	-	-	ND	ND	3	ND	-
DF 0226	Apple, dried	0.055	-	AUS	19.0	4	-	-	ND	ND	3	0.01	0%
FS 0240	Apricot	-	0.4	AUS	19.0	414	41	UNK	38	3	2a	10.31	30%
FB 0018	Berries and other small fruits	-	0.62	AUS	19.0	221	-	-	ND	ND	ND	ND	-
FB 0264	Blackberries	-	0.62	FRA	17.8	48	-	-	ND	ND	1	1.66	6%
FB 0020	Blueberries	-	0.62	FRA	17.8	138	-	-	ND	ND	1	4.82	20%
FB 4079	Boysenberry	-	0.62	USA	15.0	2	-	-	ND	ND	1	0.07	0%
TN 0662	Brazil nut	-	0.01	-	-	ND	-	-	ND	ND	1	ND	-
TN 0295	Cashew nut	-	0.01	AUS	19.0	36	-	-	ND	ND	1	0.02	0%
MF 0812	Cattle fat	-	0.04	USA	15.0	27	-	-	ND	ND	1	0.07	0%
FS 0013	Cherries	-	0.4	FRA	17.8	297	5	JPN	5	1	1	6.67	20%
TN 0664	Chestnuts	-	0.01	-	-	ND	-	-	ND	ND	1	ND	-
TN 0665	Coconut	-	0.01	NLD	17.0	17	-	-	ND	ND	1	0.01	0%
OR 0665	Coconut oil, refined	0.01	-	-	-	ND	-	-	ND	ND	3	ND	-
SO 0691	Cotton seed	0	-	USA	15.0	1	-	-	ND	ND	3	0.00	0%
OR 0691	Cotton seed oil, edible	0	-	USA	15.0	6	-	-	ND	ND	3	0.00	0%
FB 0265	Cranberries	-	0.62	USA	15.0	102	-	-	ND	ND	1	4.20	10%
VC 0424	Cucumber	-	0.18	NLD	17.0	162	410	BEL	385	3	2b	5.15	20%
FB 0278	Currant, black	-	0.62	UNK	14.5	1054	-	-	ND	ND	ND	ND	-
FB 0279	Currant, red, white	-	0.62	-	-	ND	-	-	ND	ND	ND	ND	-
FB 0021	Currants, red, black, white	-	0.62	AUS	19.0	584	-	-	ND	ND	1	19.07	60%
FB 0266	Dewberries, incl boysen- & loganberry	-	0.62	AUS	19.0	76	-	-	ND	ND	1	2.48	8%
MO 0105	Edible offal (mammalian)	-	0.34	FRA	17.8	203	-	-	ND	ND	1	3.87	10%

Annex 4

THIACLOPRID (223) International estimate of short term intake (IESTI) for **CHILDREN UP TO 6 YEARS**

ARfD= 0.03 mg/kg bw (30 µg/kg bw)
Maximum %ARfD: 90%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet Country	Body weight (kg)	Large portion, g/person	Unit weight Unit weight, g	Country	Unit weight, edible portion, g	Varia-bility factor	Case	IESTI µg/kg bw per day	% ARfD rounded
VO 0440	Egg plant	-	0.38	JPN	15.9	219	330	BEL	281	3	2b	15.72	50%
PE 0112	Eggs	-	0	-	-	ND	-	-	ND	ND	1	ND	-
FB 0267	Elderberries	-	0.62	NLD	17.0	9	-	-	ND	ND	1	0.32	1%
MF 0814	Goat fat	-	0.04	USA	15.0	3	-	-	ND	ND	1	0.01	0%
FB 0268	Gooseberries	-	0.62	-	-	ND	-	-	ND	ND	1	ND	-
TN 0666	Hazelnut	-	0.01	NLD	17.0	11	-	-	ND	ND	1	0.01	0%
MF 0816	Horse fat	-	0.04	-	-	ND	-	-	ND	ND	1	ND	-
FI 0341	Kiwi fruit	-	0.1	JPN	15.9	162	120	JPN	120	3	2a	2.53	8%
FA 0818	Lard (of pigs)	-	0.04	-	-	ND	-	-	ND	ND	1	ND	-
FP 0228	Loquat	-	0.38	-	-	ND	-	-	ND	ND	1	ND	-
TN 0669	Macadamia nut	-	0.01	-	-	ND	-	-	ND	ND	1	ND	-
MM 0095	Meat from mammals other than marine mammals	-	0.06	AUS	19.0	261	-	-	ND	ND	1	0.82	3%
VC 0046	Melons, except watermelon	-	0.02	AUS	19.0	413	700	JPN	700	3	2b	1.30	4%
ML 0106	Milks	0.03	-	USA	15.0	1286	-	-	ND	ND	3	2.57	9%
SO 0090	Mustard seed, stated as mustard seed SO 0485	0.065	-	AUS	19.0	13	-	-	ND	ND	3	0.05	0%
FS 0245	Nectarine	-	0.4	AUS	19.0	302	136	USA	125	3	2a	11.63	40%
FS 0247	Peach	-	0.4	AUS	19.0	315	150	JPN	150	3	2a	12.96	40%
FP 0230	Pear	-	0.38	UNK	14.5	279	180	JPN	180	3	2a	16.75	60%
-d	Pear, dried	0.055	-	AUS	19.0	8	-	-	ND	ND	3	0.02	0%
TN 0672	Pecan	-	0.01	AUS	19.0	22	-	-	ND	ND	1	0.01	0%
VO 0445	Peppers, sweet (incl. pim(i)ento)	-	0.38	AUS	19.0	60	185	BEL	148	3	2b	3.60	10%
MF 0818	Pig fat	-	0.04	FRA	17.8	85	-	-	ND	ND	1	0.19	1%
TN 0673	Pine nut	-	0.01	AUS	19.0	18	-	-	ND	ND	1	0.01	0%
TN 0675	Pistachio nut	-	0.01	AUS	19.0	63	-	-	ND	ND	1	0.03	0%
FS 0014	Plum (incl dried)	-	0.4	FRA	17.8	254	40	JPN	40	3	2a	7.51	30%

Annex 4

THIACLOPRID (223) International estimate of short term intake (IESTI) for **CHILDREN UP TO 6 YEARS** ARfD= 0.03 mg/kg bw (30 µg/kg bw) Maximum %ARfD: 90%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet Country	Body weight (kg)	Large portion, g/person	Unit weight Unit weight, g	Country	Unit weight, edible portion, g	Varia-bility factor	Case	IESTI µg/kg bw per day	% ARfD rounded
VR 0589	Potato	-	0	SAF	14.2	300	216	UNK	216	3	2a	0.00	0%
PM 0110	Poultry meat	-	0	AUS	19.0	224	-	-	ND	ND	1	0.00	0%
PO 0111	Poultry, edible offal of	-	0	USA	15.0	37	-	-	ND	ND	1	0.00	0%
PF 0111	Poultry, fats	-	0	FRA	17.8	20	-	-	ND	ND	1	0.00	0%
FP 0231	Quince	-	0.38	NLD	17.0	1	92	USA	56	3	2b	0.07	0%
SO 0495	Rape seed	0.065	-	-	-	ND	-	-	ND	ND	3	ND	-
OR 0495	Rape seed oil, edible	0.065	-	AUS	19.0	18	-	-	ND	ND	3	0.06	0%
FB 0272	Raspberries, red, black	-	0.62	FRA	17.8	76	-	-	ND	ND	1	2.65	9%
GC 0649	Rice	0	-	FRA	17.8	223	-	-	ND	ND	3	0.00	0%
CM 1206	Rice bran, unprocessed	0	-	USA	15.0	3	-	-	ND	ND	3	0.00	0%
-	Rice flour	0	-	-	-	ND	-	-	ND	ND	3	ND	-
CM 0649	Rice, husked	0	-	FRA	17.8	223	-	-	ND	ND	3	0.00	0%
-	Rice, milled husked	0	-	-	-	ND	-	-	ND	ND	3	ND	-
CM 1205	Rice, polished	0	-	JPN	15.9	199	-	-	ND	ND	3	0.00	0%
FB 0273	Rose hips	-	0.62	NLD	17.0	16	-	-	ND	ND	1	0.57	2%
MF 0822	Sheep fat	-	0.04	USA	15.0	28	-	-	ND	ND	1	0.07	0%
VC 0431	Squash, summer (= courgette)	-	0.18	AUS	19.0	219	300	FRA	270	3	2b	6.22	20%
FB 0275	Strawberry	-	0.62	AUS	19.0	176	13	UNK	12	1	1	5.75	20%
VO 0448	Tomato	-	0.29	USA	15.0	159	150	BEL	143	3	2a	8.58	30%
JF 0448	Tomato juice	0.1	-	-	-	ND	-	-	ND	ND	3	ND	-
-	Tomato paste	0.429	-	-	-	ND	-	-	ND	ND	3	ND	-
-	Tomatoes peeled	0.056	-	-	-	ND	-	-	ND	ND	3	ND	-
TN 0085	Tree nuts	-	0.01	AUS	19.0	28	-	-	ND	ND	1	0.01	0%
FB 0019	Vaccinium berries (incl. Bearberry)	-	0.62	-	-	ND	-	-	ND	ND	ND	ND	-
TN 0678	Walnut	-	0.01	USA	15.0	6	-	-	ND	ND	1	0.00	0%
VC 0432	Watermelon	-	0.02	AUS	19.0	1473	3000	JPN	3000	3	2b	4.65	20%
GC 0654	Wheat	0.025	-	USA	15.0	151	-	-	ND	ND	3	0.25	1%

Annex 4

THIACLOPRID (223) International estimate of short term intake (IESTI) for **CHILDREN UP TO 6 YEARS** ARfD= 0.03 mg/kg bw (30 µg/kg bw)
Maximum %ARfD: 90%

Codex Code	Commodity	STMR or STMR-P mg/kg	HR or HR-P mg/kg	Large portion diet Country	Body weight (kg)	Large portion, g/person	Unit weight Unit weight, g	Country	Unit weight, edible portion, g	Variability factor	Case	IESTI µg/kg bw per day	% ARfD rounded
GC 0655	Wild rice	0	-	AUS	19.0	34	-	-	ND	ND	3	0.00	0%
VC 0433	Winter squash (= pumpkin)	-	0.02	USA	15.0	169	1000	JPN	1000	3	2b	0.67	2%
VC 0433	Winter squash (= pumpkin), stated as pumpkin VC 0429	-	0.02	SAF	14.2	224	1000	JPN	1000	3	2b	0.95	3%

ANNEX 5: REPORTS AND OTHER DOCUMENTS RESULTING FROM PREVIOUS JOINT MEETINGS OF THE FAO PANEL OF EXPERTS ON PESTICIDE RESIDUES IN FOOD AND THE ENVIRONMENT AND THE WHO EXPERT GROUPS ON PESTICIDE RESIDUES

1. Principles governing consumer safety in relation to pesticide residues. Report of a meeting of a WHO Expert Committee on Pesticide Residues held jointly with the FAO Panel of Experts on the Use of Pesticides in Agriculture. FAO Plant Production and Protection Division Report, No. PL/1961/11; WHO Technical Report Series, No. 240, 1962.

2. Evaluation of the toxicity of pesticide residues in food. Report of a Joint Meeting of the FAO Committee on Pesticides in Agriculture and the WHO Expert Committee on Pesticide Residues. FAO Meeting Report, No. PL/1963/13; WHO/Food Add./23, 1964.

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5. Evaluation of the hazards to consumers resulting from the use of fumigants in the protection of food. FAO Meeting Report, No. PL/1965/10/2; WHO/Food Add./28.65, 1965.

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ANNEX 6: OECD feedstuffs derived from field crops

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						CATTLE					
						BEEF			DAIRY		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**500**	**500**	**400**	**600**	**650**	**600**
Daily intake (DM in kg)						**9.1**	**12**	**9.1**	**24**	**25**	**18**
Forages											
Alfalfa	forage	2-00-196	R	HR	35	60	70	100	40	40	60
Alfalfa	hay	1-00-054	R	HR	89	60	*	80	40	40	60
Alfalfa	meal	1-00-023	R	HR	89	25	25	40	40	40	40
Alfalfa	silage	3-08-150	R	HR	40	60	25	100	40	40	40
Barley	forage	2-00-511	R	HR	30	30	30	50	40	30	50
Barley	hay	1-00-495	R	HR	88	25	*	100	40	*	50
Barley	straw	1-00-498	R	HR	89	10	30	100	10	30	20
Barley	silage	NA	R	HR	40	*	30	100	*	30	50
Bean	vines	2-14-388	R	HR	35	30	*	60	20	20	70
Beet, mangel	fodder	2-00-632	R	HR	15	*	30	*	*	25	*
Beet, sugar	tops	2-00-649	R	HR	23	*	20	*	*	30	*
Cabbage	heads, leaves	2-01-046	R	HR	15	*	20	*	*	20	*
Clover	forage	2-01-434	R	HR	30	30	30	100	40	40	60
Clover	hay	1-01-415	R	HR	89	30	30	100	40	40	60
Clover	silage	3-01-441	R	HR	30	30	25	100	40	40	60
Forages											
Corn, field	forage/silage	3-28-345	R	HR	40	40	80	80	50	60	80
Corn, field	stover	3-28-251	R	HR	83	25	25	40	15	20	40
Corn, pop	stover	2-02-963	R	HR	85	25	25	20	15	20	20
Corn, sweet	forage	1-08-407	R	HR	48	40	*	80	50	*	40
Corn, sweet	stover	NA	R	HR	83	25	*	40	15	*	20

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						CATTLE					
						BEEF			DAIRY		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**500**	**500**	**400**	**600**	**650**	**600**
Daily intake (DM in kg)						**9.1**	**12**	**9.1**	**24**	**25**	**18**
Cowpea	forage	2-01-655	R	HR	30	20	35	100	20	35	60
Cowpea	hay	1-01-645	R	HR	86	20	35	100	20	35	60
Crown vetch	forage	2-19-834	R	HR	30	20	*	100	40	*	100
Crown vetch	hay	1-20-803	R	HR	90	20	*	100	40	*	100
Grass	forage (fresh)	2-02-260	R	HR	25	60	50	100	40	60	100
Grass	hay	1-02-250	R	HR	88	60	50	100	40	60	60
Grass	silage	3-02-222	R	HR	40	60	50	100	40	60	60
Kale	leaves	2-02-446	R	HR	15	*	20	*	*	20	40
Lespedeza	forage	2-07-058	R	HR	22	20	*	20	40	*	60
Lespedeza	hay	1-02-522	R	HR	88	20	*	20	40	*	60
Millet	forage	2-03-801	R	HR	30	25	*	100	40	30	50
Millet	hay	1-03-119	R	HR	85	10	*	100	40	*	50
Millet	straw	1-23-802	R	HR	90	10	10	80	10	*	50
Forages											
Oat	forage	2-03-292	R	HR	30	25	20	100	40	20	90
Oat	hay	1-03-280	R	HR	90	25	20	100	40	20	90
Oat	straw	1-03-283	R	HR	90	10	20	80	10	20	60
Oat	silage	3-03-298	R	HR	35	*	*	100	*	*	40
Pea	vines	3-03-596	R	HR	25	20	20	60	20	20	40
Pea	hay	1-03-572	R	HR	88	20	25	100	20	30	70
Pea	silage	3-03-590	R	HR	40	20	25	100	20	30	40
Peanut	hay	1-03-619	R	HR	85	25	*	60	20	*	60
Rape	forage	2-03-867	R	HR	30	20	10	100	20	10	40
Rice	straw	1-03-925	R	HR	90	10	10	60	10	5	20
Rye	forage	2-04-018	R	HR	30	20	20	100	20	20	20
Rye	straw	1-04-007	R	HR	88	10	20	20	10	20	20
Sorghum,forage	see Grasses										

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						CATTLE					
						BEEF			DAIRY		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**500**	**500**	**400**	**600**	**650**	**600**
Daily intake (DM in kg)						**9.1**	**12**	**9.1**	**24**	**25**	**18**
Sorghum, grain	forage	2-04-317	R	HR	35	40	20	70	40	20	70
Sorghum, grain	stover	1-07-960	R	HR	88	20	15	70	15	15	70
Soybean	forage	2-04-574	R	HR	56	30	*	100	30	*	40
Soybean	hay	1-04-558	R	HR	85	30	*	80	30	*	40
Soybean	silage	3-04-581	R	HR	30	30	*	80	30	*	40
Sugarcane	tops	2-04-692	R	HR	25	*	*	50	*	*	25
Forages											
Trefoil	forage	2-20-786	R	HR	30	20	20	100	40	40	40
Trefoil	hay	1-05-044	R	HR	85	20	20	90	40	40	40
Triticale	forage	2-02-647	R	HR	30	20	20	100	40	20	70
Triticale	hay	NA	R	HR	88	25	20	100	40	20	70
Triticale	straw	NA	R	HR	90	10	20	50	10	20	70
Triticale	silage	3-26-208	R	HR	35	30	*	90	40	*	50
Turnip	tops (leaves)	2-05-063	R	HR	30	50	40	80	30	20	*
Vetch	forage	2-05-112	R	HR	30	20	25	90	40	25	35
Vetch	hay	1-05-122	R	HR	85	20	25	90	40	25	35
Vetch	silage	3-26-357	R	HR	30	35	*	90	40	*	50
Wheat	forage	2-08-078	R	HR	25	25	20	100	40	20	60
Wheat	hay	1-05-172	R	HR	88	25	20	100	40	20	20
Wheat	straw	1-05-175	R	HR	88	10	20	80	10	20	20
Wheat	silage	3-05-186	R	HR	30	30	*	90	40	*	50
Roots & Tubers											
Carrot	culls	2-01-146	R	HR	12	10	15	5	10	15	5
Cassava/tapioca	roots	2-01-156	R	HR	37	*	20	*	*	15	*
Potato	culls	4-03-787	R	HR	20	30	30	10	10	30	10
Swede	roots	4-04-001	R	HR	10	*	40	10	*	20	10
Turnip	roots	4-05-067	R	HR	15	10	20	10	10	20	10

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						CATTLE					
						BEEF			DAIRY		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**500**	**500**	**400**	**600**	**650**	**600**
Daily intake (DM in kg)						**9.1**	**12**	**9.1**	**24**	**25**	**18**
Cereal Grains/Crops Seeds											
Barley	grain	4-00-549	CC	STMR	88	50	70	80	45	40	40
Bean	seed	4-00-515	PC	STMR	88	15	20	50	15	20	15
Corn, field	grain	4-20-698	CC	STMR	88	80	80	80	45	30	20
Corn, pop	grain	4-02-964	CC	STMR	88	80	*	80	45	30	20
Cowpea	seed	5-01-661	PC	STMR	88	*	20	20	*	20	20
Lupin	seed	5-02-707	PC	STMR	88	*	20	40	*	20	20
Millet	grain	4-03-120	CC	STMR	88	50	40	50	40	40	50
Oat	grain	4-03-309	CC	STMR	89	*	40	80	*	40	10
Pea	seed	5-03-600	PC	STMR	90	*	20	40	*	20	20
Rice	grain	4-03-939	CC	STMR	88	20	*	40	20	*	20
Rye	grain	4-04-047	CC	STMR	88	20	40	80	20	40	*
Sorghum, grain	grain	4-04-383	CC	STMR	86	40	40	80	40	40	50
Soybean	seed	5-64-610	PC	STMR	89	15	10	20	15	10	20
Triticale	grain	4-20-362	CC	STMR	89	20	40	80	20	40	30
Vetch	seed	5-26-351	PC	STMR	89	*	*	20	*	*	20
Wheat	grain	4-05-211	CC	STMR	89	20	40	80	20	40	20
By-products											
Almond	hulls	4-00-359	R	STMR	90	10	*	10	10	*	10
Apple	pomace, wet	4-00-419	CC	STMR	40	20	20	20	10	10	10
Beet, sugar	dried pulp	4-29-307	R	STMR	88	20	20	*	20	20	*
Beet, sugar	ensiled pulp	4-00-662	R	STMR	15	*	25	*	*	40	*
Beet, sugar	molasses	4-30-289	CC	STMR	75	10	10	*	10	10	*
Brewer's grain	dried	5-00-516	CC	STMR	92	50	10	50	30	15	20
Canola	meal	5-08-136	PC	STMR	88	15	*	20	15	10	15
Citrus	dried pulp	4-01-237	R	STMR	91	10	5	30	10	20	30
Coconut	meal	5-01-572	PC	STMR	91	*	20	30	*	10	*

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						CATTLE					
						BEEF			DAIRY		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**500**	**500**	**400**	**600**	**650**	**600**
Daily intake (DM in kg)						**9.1**	**12**	**9.1**	**24**	**25**	**18**
Corn, field	asp gr fn	4-02-880	CC	STMR	85	5	*	*	*	*	*
Corn, field	milled bypdts	5-28-235	CC	STMR	85	50	30	15	25	30	15
Corn, field	hominy meal	4-03-010	CC	STMR	88	50	*	40	60	*	40
Corn, sweet	cannery waste	2-02-875	CC	STMR	30	10	*	30	10	*	10
Corn gluten	feed	5-28-243	CC	STMR	40	75	30	20	50	30	*
Corn gluten	meal	5-28-242	CC	STMR	40	75	15	20	50	20	*
Cotton	meal	5-01-617	PC	STMR	89	15	5	30	15	5	15
Cotton	undelinted seed	5-01-614	PC	STMR	88	25	*	30	25	10	20
Cotton	hulls	1-01-599	R	STMR	90	20	*	20	15	*	10
Cotton	gin byproducts	1-08-413	R	STMR	90	5	*	*	*	*	*
Distiller's grain	dried	5-00-518	CC	STMR	92	50	10	50	25	10	*
Flaxseed/linseed	meal	5-02-043	PC	STMR	88	10	10	10	10	15	10
Grape	pomace, wet	2-02-206	CC	STMR	15	*	*	20	*	*	20
Lupin seed	meal	NA	PC	STMR	85	*	20	15	*	20	15
Palm	kernel meal	5-03-486	PC	STMR	90	*	*	20	*	25	10
Peanut	meal	5-03-649	PC	STMR	85	15	20	10	15	10	15
Pineapple	process waste	NA	R	STMR	25	10	*	60	10	*	30
Potato	process waste	4-03-777	CC	STMR	12	30	40	5	10	30	*
Potato	dried pulp	4-03-775	CC	STMR	88	*	10	5	*	10	5
Rape	meal	5-26-093	PC	STMR	88	15	20	15	15	10	15
Rice	hulls	1-08-075	R	STMR	90	10	*	5	10	*	10
Rice	bran/pollard	4-03-928	R	STMR	90	15	*	40	15	20	40
Safflower	meal	5-26-095	PC	STMR	91	10	20	20	10	10	15
Sorghum, grain	asp gr fn	NA	CC	STMR	85	5	*	20	*	*	*
Soybean	asp gr fn	NA	CC	STMR	85	5	*	*	*	*	*
Soybean	meal	5-20-638	PC	STMR	92	15	20	10	15	25	15

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						CATTLE					
						BEEF			DAIRY		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**500**	**500**	**400**	**600**	**650**	**600**
Daily intake (DM in kg)						**9.1**	**12**	**9.1**	**24**	**25**	**18**
Soybean	hulls	1-04-560	R	STMR	90	20	10	*	20	10	*
Soybean	pollard	NA	R	STMR	?	*	*	15	*	*	*
Sugarcane	molasses	4-13-251	CC	STMR	75	10	10	30	10	10	25
Sugarcane	bagasse	1-04-686	R	STMR	32	*	*	20	*	*	25
Sunflower	meal	5-26-098	PC	STMR	92	15	20	30	15	10	15
Wheat	asp gr fn	NA	CC	STMR	85	5	*	*	*	*	*
Wheat gluten	meal	5-05-221	CC	STMR	40	10	15	*	10	20	*
Wheat	milled bypdts	4-06-749	CC	STMR	88	40	30	40	40	30	40

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						SHEEP					
						RAM/EWE			LAMB		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**85**	**75**	**85**	**40**	**40**	**40**
Daily intake (DM in kg)						**2**	**2.5**	**2**	**1.5**	**1.7**	**1.5**
Forages											
Alfalfa	forage	2-00-196	R	HR	35	90	40	100	90	40	90
Alfalfa	hay	1-00-054	R	HR	89	70	40	70	70	40	35
Alfalfa	meal	1-00-023	R	HR	89	20	20	*	20	20	*
Alfalfa	silage	3-08-150	R	HR	40	75	40	75	75	40	75
Barley	forage	2-00-511	R	HR	30	70	50	100	30	50	100
Barley	hay	1-00-495	R	HR	88	65	*	70	65	*	25
Barley	straw	1-00-498	R	HR	89	25	60	30	25	60	30
Barley	silage	NA	R	HR	40	*	50	*	*	50	*
Bean	vines	2-14-388	R	HR	35	30	30	*	30	30	*
Beet, mangel	fodder	2-00-632	R	HR	15	*	10	*	*	10	*
Beet, sugar	tops	2-00-649	R	HR	23	15	20	*	20	20	*
Cabbage	heads, leaves	2-01-046	R	HR	15	*	10	*	*	10	*
Clover	forage	2-01-434	R	HR	30	85	85	100	30	30	100
Clover	hay	1-01-415	R	HR	89	80	80	75	20	20	35
Clover	silage	3-01-441	R	HR	30	85	85	75	30	30	75
Forages											
Corn, field	forage/silage	3-28-345	R	HR	40	70	*	80	30	30	60
Corn, field	stover	3-28-251	R	HR	83	50	*	*	25	*	*
Corn, pop	stover	2-02-963	R	HR	85	25	*	*	25	*	*
Corn, sweet	forage	1-08-407	R	HR	48	75	*	25	25	*	*
Corn, sweet	stover	NA	R	HR	83	70	*	30	30	*	*
Cowpea	forage	2-01-655	R	HR	30	75	35	100	30	35	100
Cowpea	hay	1-01-645	R	HR	86	50	35	65	20	35	35
Crown vetch	forage	2-19-834	R	HR	30	80	*	95	30	*	95

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						SHEEP					
						RAM/EWE			LAMB		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**85**	**75**	**85**	**40**	**40**	**40**
Daily intake (DM in kg)						**2**	**2.5**	**2**	**1.5**	**1.7**	**1.5**
Crown vetch	hay	1-20-803	R	HR	90	65	*	70	20	*	35
Grass	forage (fresh)	2-02-260	R	HR	25	95	95	100	25	50	100
Grass	hay	1-02-250	R	HR	88	90	90	70	15	30	25
Grass	silage	3-02-222	R	HR	40	90	90	75	20	50	50
Kale	leaves	2-02-446	R	HR	15	*	10	*	*	10	*
Lespedeza	forage	2-07-058	R	HR	22	80	*	*	30	*	*
Lespedeza	hay	1-02-522	R	HR	88	70	*	20	20	*	*
Millet	forage	2-03-801	R	HR	30	80	*	100	35	*	60
Millet	hay	1-03-119	R	HR	85	75	*	65	20	*	20
Millet	straw	1-23-802	R	HR	90	50	*	35	15	*	15
Forages											
Oat	forage	2-03-292	R	HR	30	25	40	100	35	40	100
Oat	hay	1-03-280	R	HR	90	80	40	65	20	40	20
Oat	straw	1-03-283	R	HR	90	10	40	35	20	40	15
Oat	silage	3-03-298	R	HR	35	*	*	*	*	*	*
Pea	vines	3-03-596	R	HR	25	75	20	90	35	20	90
Pea	hay	1-03-572	R	HR	88	75	20	70	25	20	30
Pea	silage	3-03-590	R	HR	40	73	20	75	35	20	70
Peanut	hay	1-03-619	R	HR	85	79	*	25	25	*	*
Rape	forage	2-03-867	R	HR	30	50	40	90	30	40	90
Rice	straw	1-03-925	R	HR	90	10	10	20	10	10	15
Rye	forage	2-04-018	R	HR	30	75	40	100	30	40	100
Rye	straw	1-04-007	R	HR	88	25	40	20	10	40	20
Sorghum,forage	see Grasses										
Sorghum, grain	forage	2-04-317	R	HR	35	30	20	100	30	20	65
Sorghum, grain	stover	1-07-960	R	HR	88	30	20	*	20	20	*
Soybean	forage	2-04-574	R	HR	56	80	*	90	35	*	80

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						SHEEP					
						RAM/EWE			LAMB		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**85**	**75**	**85**	**40**	**40**	**40**
Daily intake (DM in kg)						**2**	**2.5**	**2**	**1.5**	**1.7**	**1.5**
Soybean	hay	1-04-558	R	HR	85	65	*	70	20	*	25
Soybean	silage	3-04-581	R	HR	30	70	*	75	40	*	65
Sugarcane	tops	2-04-692	R	HR	25	*	*	*	*	*	*
Forages											
Trefoil	forage	2-20-786	R	HR	30	75	40	90	35	20	90
Trefoil	hay	1-05-044	R	HR	85	60	40	70	25	20	70
Triticale	forage	2-02-647	R	HR	30	60	40	100	30	30	100
Triticale	hay	NA	R	HR	88	80	40	70	20	20	25
Triticale	straw	NA	R	HR	90	10	40	20	10	10	15
Triticale	silage	3-26-208	R	HR	35	30	*	*	25	*	*
Turnip	tops (leaves)	2-05-063	R	HR	30	65	30	75	20	30	75
Vetch	forage	2-05-112	R	HR	30	80	30	100	30	20	100
Vetch	hay	1-05-122	R	HR	85	75	30	75	20	20	30
Vetch	silage	3-26-357	R	HR	30	80	*	*	30	*	*
Wheat	forage	2-08-078	R	HR	25	75	40	100	30	30	100
Wheat	hay	1-05-172	R	HR	88	80	40	65	20	20	25
Wheat	straw	1-05-175	R	HR	88	25	40	20	10	40	15
Wheat	silage	3-05-186	R	HR	30	30	*	*	25	*	*
Roots & Tubers											
Carrot	culls	2-01-146	R	HR	12	20	20	*	40	20	*
Cassava/tapioca	roots	2-01-156	R	HR	37	*	20	*	*	20	*
Potato	culls	4-03-787	R	HR	20	50	30	*	40	20	*
Swede	roots	4-04-001	R	HR	10	*	30	80	*	30	80
Turnip	roots	4-05-067	R	HR	15	75	30	80	75	30	80
Cereal Grains/Crops Seeds											
Barley	grain	4-00-549	CC	STMR	88	40	40	85	40	60	85

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						SHEEP					
						RAM/EWE			LAMB		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**85**	**75**	**85**	**40**	**40**	**40**
Daily intake (DM in kg)						**2**	**2.5**	**2**	**1.5**	**1.7**	**1.5**
Bean	seed	4-00-515	PC	STMR	88	20	20	85	20	20	85
Corn, field	grain	4-20-698	CC	STMR	88	50	30	85	50	30	85
Corn, pop	grain	4-02-964	CC	STMR	88	50	30	85	50	30	85
Cowpea	seed	5-01-661	PC	STMR	88	*	20	75	*	20	75
Lupin	seed	5-02-707	PC	STMR	88	*	10	100	*	10	100
Millet	grain	4-03-120	CC	STMR	88	40	30	*	40	30	*
Oat	grain	4-03-309	CC	STMR	89	*	40	90	*	60	90
Pea	seed	5-03-600	PC	STMR	90	20	20	*	20	20	*
Rice	grain	4-03-939	CC	STMR	88	20	*	*	20	*	*
Rye	grain	4-04-047	CC	STMR	88	20	40	*	20	45	*
Sorghum, grain	grain	4-04-383	CC	STMR	86	40	40	80	50	40	80
Soybean	seed	5-64-610	PC	STMR	89	25	10	40	15	20	40
Triticale	grain	4-20-362	CC	STMR	89	20	30	85	20	40	85
Vetch	seed	5-26-351	PC	STMR	89	*	*	*	*	*	*
Wheat	grain	4-05-211	CC	STMR	89	20	40	80	20	60	80
By-products											
Almond	hulls	4-00-359	R	STMR	90	*	*	*	*	*	*
Apple	pomace, wet	4-00-419	CC	STMR	40	10	10	*	10	10	*
Beet, sugar	dried pulp	4-29-307	R	STMR	88	15	40	*	20	40	*
Beet, sugar	ensiled pulp	4-00-662	R	STMR	15	*	*	*	*	*	*
Beet, sugar	molasses	4-30-289	CC	STMR	75	15	5	*	10	5	*
Brewer's grain	dried	5-00-516	CC	STMR	92	70	30	*	40	10	*
Canola	meal	5-08-136	PC	STMR	88	15	*	35	15	*	35
Citrus	dried pulp	4-01-237	R	STMR	91	20	*	*	15	*	*
Coconut	meal	5-01-572	PC	STMR	91	*	20	35	*	20	35
Corn, field	asp gr fn	4-02-880	CC	STMR	85	*	*	*	*	*	*
Corn, field	milled bypdts	5-28-235	CC	STMR	85	35	30	*	50	30	*

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						SHEEP					
						RAM/EWE			LAMB		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**85**	**75**	**85**	**40**	**40**	**40**
Daily intake (DM in kg)						**2**	**2.5**	**2**	**1.5**	**1.7**	**1.5**
Corn, field	hominy meal	4-03-010	CC	STMR	88	50	*	*	50	*	*
Corn, sweet	cannery waste	2-02-875	CC	STMR	30	30	*	*	20	*	*
Corn gluten	feed	5-28-243	CC	STMR	40	35	30	80	50	30	80
Corn gluten	meal	5-28-242	CC	STMR	40	35	30	*	50	30	*
Cotton	meal	5-01-617	PC	STMR	89	15	15	45	10	10	45
Cotton	undelinted seed	5-01-614	PC	STMR	88	25	*	25	25	*	25
Cotton	hulls	1-01-599	R	STMR	90	15	*	20	20	*	20
Cotton	gin byproducts	1-08-413	R	STMR	90	*	*	*	*	*	*
Distiller's grain	dried	5-00-518	CC	STMR	92	35	10	*	25	10	*
Flaxseed/linseed	meal	5-02-043	PC	STMR	88	15	20	*	20	10	*
Grape	pomace, wet	2-02-206	CC	STMR	15	*	*	*	*	*	*
Lupin seed	meal	NA	PC	STMR	85	*	25	*	*	20	*
Palm	kernel meal	5-03-486	PC	STMR	90	*	*	*	*	*	*
Peanut	meal	5-03-649	PC	STMR	85	20	20	*	15	20	*
Pineapple	process waste	NA	R	STMR	25	*	*	*	*	*	*
Potato	process waste	4-03-777	CC	STMR	12	50	40	*	25	20	*
Potato	dried pulp	4-03-775	CC	STMR	88	*	40	*	*	20	*
Rape	meal	5-26-093	PC	STMR	88	15	15	*	15	15	*
Rice	hulls	1-08-075	R	STMR	90	20	*	20	10	*	15
Rice	bran/pollard	4-03-928	R	STMR	90	*	30	*	*	30	*
Safflower	meal	5-26-095	PC	STMR	91	15	*	*	15	*	*
Sorghum, grain	asp gr fn	NA	CC	STMR	85	*	*	*	*	*	*
Soybean	asp gr fn	NA	CC	STMR	85	*	*	*	*	*	*
Soybean	meal	5-20-638	PC	STMR	92	25	25	35	15	25	35
Soybean	hulls	1-04-560	R	STMR	90	50	*	20	20	*	20
Soybean	pollard	NA	R	STMR	?	*	*	*	*	*	*
Sugarcane	molasses	4-13-251	CC	STMR	75	10	5	10	10	5	10

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						SHEEP					
						RAM/EWE			LAMB		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**85**	**75**	**85**	**40**	**40**	**40**
Daily intake (DM in kg)						**2**	**2.5**	**2**	**1.5**	**1.7**	**1.5**
Sugarcane	bagasse	1-04-686	R	STMR	32	*	*	10	*	*	*
Sunflower	meal	5-26-098	PC	STMR	92	20	20	40	20	20	40
Wheat	asp gr fn	NA	CC	STMR	85	*	*	*	*	*	*
Wheat gluten	meal	5-05-221	CC	STMR	40	10	30	*	10	30	*
Wheat	milled bypdts	4-06-749	CC	STMR	88	40	40	*	50	50	*

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
						SWINE					
						BREEDING			FINISHING		
						US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN		
Body weight (kg)						**270**	**260**	**270**	**100**	**100**	**100**
Daily intake (DM in kg)						**2**	**6**	**2**	**3.1**	**3**	**3.1**
Forages											
Alfalfa	forage	2-00-196	R	HR	35	*	*	*	*	*	*
Alfalfa	hay	1-00-054	R	HR	89	*	*	10	*	*	10
Alfalfa	meal	1-00-023	R	HR	89	20	10	10	10	10	10
Alfalfa	silage	3-08-150	R	HR	40	*	*	*	*	*	*
Barley	forage	2-00-511	R	HR	30	*	*	*	*	*	*
Barley	hay	1-00-495	R	HR	88	*	*	10	*	*	5
Barley	straw	1-00-498	R	HR	89	*	*	10	*	*	10
Barley	silage	NA	R	HR	40	*	*	*	*	*	*
Bean	vines	2-14-388	R	HR	35	*	*	*	*	*	*

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
Beet, mangel	fodder	2-00-632	R	HR	15	*	15	*	*	*	*
Beet, sugar	tops	2-00-649	R	HR	23	*	10	*	*	*	*
Cabbage	heads, leaves	2-01-046	R	HR	15	*	10	*	*	*	*
Clover	forage	2-01-434	R	HR	30	*	20	*	*	*	*
Clover	hay	1-01-415	R	HR	89	*	20	10	*	*	10
Clover	silage	3-01-441	R	HR	30	*	20	*	*	*	*
Forages											
Corn, field	forage/silage	3-28-345	R	HR	40	*	20	*	*	*	*
Corn, field	stover	3-28-251	R	HR	83	*	20	*	*	*	*
Corn, pop	stover	2-02-963	R	HR	85	15	20	*	*	*	*
Corn, sweet	forage	1-08-407	R	HR	48	15	*	*	*	*	*
Corn, sweet	stover	NA	R	HR	83	*	*	*	*	*	*
Cowpea	forage	2-01-655	R	HR	30	*	20	*	*	*	*
Cowpea	hay	1-01-645	R	HR	86	*	20	10	*	*	10
Crown vetch	forage	2-19-834	R	HR	30	*	*	*	*	*	*
Crown vetch	hay	1-20-803	R	HR	90	*	*	*	*	*	*
Grass	forage (fresh)	2-02-260	R	HR	25	*	20	*	*	*	*
Grass	hay	1-02-250	R	HR	88	*	20	10	*	*	10
Grass	silage	3-02-222	R	HR	40	*	20	*	*	*	*
Kale	leaves	2-02-446	R	HR	15	*	10	*	*	*	*
Lespedeza	forage	2-07-058	R	HR	22	*	*	*	*	10	*
Lespedeza	hay	1-02-522	R	HR	88	*	*	*	*	10	*
Millet	forage	2-03-801	R	HR	30	*	*	*	*	*	*
Millet	hay	1-03-119	R	HR	85	*	*	10	*	*	10
Millet	straw	1-23-802	R	HR	90	*	*	10	*	*	10
Forages											
Oat	forage	2-03-292	R	HR	30	*	20	*	*	*	*
Oat	hay	1-03-280	R	HR	90	*	20	10	*	*	10
Oat	straw	1-03-283	R	HR	90	*	*	10	*	*	10
Oat	silage	3-03-298	R	HR	35	*	*	*	*	*	*
Pea	vines	3-03-596	R	HR	25	*	20	*	*	*	*
Pea	hay	1-03-572	R	HR	88	*	20	15	*	*	10
Pea	silage	3-03-590	R	HR	40	*	20	*	*	*	*
Peanut	hay	1-03-619	R	HR	85	10	*	*	*	*	*
Rape	forage	2-03-867	R	HR	30	*	20	*	*	*	*

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
Rice	straw	1-03-925	R	HR	90	*	*	10	*	*	10
Rye	forage	2-04-018	R	HR	30	*	20	*	*	*	*
Rye	straw	1-04-007	R	HR	88	*	*	*	*	*	*
Sorghum,forage	see Grasses										
Sorghum, grain	forage	2-04-317	R	HR	35	*	20	10	*	*	*
Sorghum, grain	stover	1-07-960	R	HR	88	*	20	*	*	*	*
Soybean	forage	2-04-574	R	HR	56	10	*	*	*	*	*
Soybean	hay	1-04-558	R	HR	85	*	*	*	*	*	*
Soybean	silage	3-04-581	R	HR	30	20	*	*	*	*	*
Sugarcane	tops	2-04-692	R	HR	25	*	*	*	*	*	*
Forages											
Trefoil	forage	2-20-786	R	HR	30	*	20	*	*	*	*
Trefoil	hay	1-05-044	R	HR	85	*	20	15	*	*	10
Triticale	forage	2-02-647	R	HR	30	15	20	*	*	*	*
Triticale	hay	NA	R	HR	88	*	20	10	*	*	10
Triticale	straw	NA	R	HR	90	*	*	10	*	*	10
Triticale	silage	3-26-208	R	HR	35	*	*	*	*	*	*
Turnip	tops (leaves)	2-05-063	R	HR	30	*	*	*	*	*	*
Vetch	forage	2-05-112	R	HR	30	*	*	10	*	*	*
Vetch	hay	1-05-122	R	HR	85	*	*	10	*	*	10
Vetch	silage	3-26-357	R	HR	30	*	*	*	*	*	*
Wheat	forage	2-08-078	R	HR	25	15	20	10	*	*	*
Wheat	hay	1-05-172	R	HR	88	*	20	10	*	*	10
Wheat	straw	1-05-175	R	HR	88	*	*	10	*	*	10
Wheat	silage	3-05-186	R	HR	30	*	*	*	*	*	*
Roots & Tubers											
Carrot	culls	2-01-146	R	HR	12	*	25	10	*	25	5
Cassava/tapioca	roots	2-01-156	R	HR	37	*	40	*	*	40	*
Potato	culls	4-03-787	R	HR	20	*	50	10	*	50	*
Swede	roots	4-04-001	R	HR	10	*	40	5	*	40	*
Turnip	roots	4-05-067	R	HR	15	*	40	5	*	40	5
Cereal Grains/Crops Seeds											
Barley	grain	4-00-549	CC	STMR	88	20	80	85	20	80	80
Bean	seed	4-00-515	PC	STMR	88	20	20	20	20	20	20

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
Corn, field	grain	4-20-698	CC	STMR	88	80	70	80	80	70	80
Corn, pop	grain	4-02-964	CC	STMR	88	*	*	*	*	*	*
Cowpea	seed	5-01-661	PC	STMR	88	10	10	10	10	20	10
Lupin	seed	5-02-707	PC	STMR	88	*	15	25	*	20	25
Millet	grain	4-03-120	CC	STMR	88	20	70	70	20	70	70
Oat	grain	4-03-309	CC	STMR	89	*	70	80	*	70	80
Pea	seed	5-03-600	PC	STMR	90	20	20	40	20	20	40
Rice	grain	4-03-939	CC	STMR	88	20	*	60	20	*	65
Rye	grain	4-04-047	CC	STMR	88	*	70	80	*	70	70
Sorghum, grain	grain	4-04-383	CC	STMR	86	80	70	80	80	70	80
Soybean	seed	5-64-610	PC	STMR	89	25	10	10	25	20	10
Triticale	grain	4-20-362	CC	STMR	89	*	60	80	*	60	80
Vetch	seed	5-26-351	PC	STMR	89	*	*	10	*	*	10
Wheat	grain	4-05-211	CC	STMR	89	*	70	80	*	70	80
By-products											
Almond	hulls	4-00-359	R	STMR	90	10	*	*	*	*	*
Apple	pomace, wet	4-00-419	CC	STMR	40	25	*	*	*	*	*
Beet, sugar	dried pulp	4-29-307	R	STMR	88	15	20	*	*	20	*
Beet, sugar	ensiled pulp	4-00-662	R	STMR	15	*	*	*	*	*	*
Beet, sugar	molasses	4-30-289	CC	STMR	75	*	5	*	*	5	*
Brewer's grain	dried	5-00-516	CC	STMR	92	*	10	10	*	10	10
Canola	meal	5-08-136	PC	STMR	88	15	20	20	15	20	20
Citrus	dried pulp	4-01-237	R	STMR	91	10	15	10	*	*	10
Coconut	meal	5-01-572	PC	STMR	91	*	*	10	*	*	10
Corn, field	asp gr fn	4-02-880	CC	STMR	85	*	*	*	*	*	*
Corn, field	milled bypdts	5-28-235	CC	STMR	85	60	75	70	60	75	70
Corn, field	hominy meal	4-03-010	CC	STMR	88	20	*	40	20	*	40
Corn, sweet	cannery waste	2-02-875	CC	STMR	30	*	*	*	*	*	*
Corn gluten	feed	5-28-243	CC	STMR	40	20	20	20	25	20	20
Corn gluten	meal	5-28-242	CC	STMR	40	20	10	25	25	10	25
Cotton	meal	5-01-617	PC	STMR	89	15	10	10	15	5	10
Cotton	undelinted seed	5-01-614	PC	STMR	88	*	*	*	*	*	*
Cotton	hulls	1-01-599	R	STMR	90	*	*	*	*	*	*
Cotton	gin byproducts	1-08-413	R	STMR	90	*	*	*	*	*	*
Distiller's grain	dried	5-00-518	CC	STMR	92	*	20	20	*	20	20

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET					
Flaxseed/linseed	meal	5-02-043	PC	STMR	88	20	20	10	10	20	10
Grape	pomace, wet	2-02-206	CC	STMR	15	*	*	10	*	*	10
Lupin seed	meal	NA	PC	STMR	85	*	10	25	*	10	25
Palm	kernel meal	5-03-486	PC	STMR	90	*	10	10	*	10	10
Peanut	meal	5-03-649	PC	STMR	85	20	20	10	15	20	10
Pineapple	process waste	NA	R	STMR	25	*	*	*	*	*	*
Potato	process waste	4-03-777	CC	STMR	12	*	20	*	*	*	*
Potato	dried pulp	4-03-775	CC	STMR	88	*	10	*	*	20	*
Rape	meal	5-26-093	PC	STMR	88	20	10	15	15	20	15
Rice	hulls	1-08-075	R	STMR	90	10	*	10	*	0	10
Rice	bran/pollard	4-03-928	R	STMR	90	*	10	30	15	0	20
Safflower	meal	5-26-095	PC	STMR	91	25	*	20	20	*	20
Sorghum, grain	asp gr fn	NA	CC	STMR	85	*	*	*	*	*	*
Soybean	asp gr fn	NA	CC	STMR	85	*	*	*	*	*	*
Soybean	meal	5-20-638	PC	STMR	92	20	30	30	20	30	30
Soybean	hulls	1-04-560	R	STMR	90	*	*	10	*	*	10
Soybean	pollard	NA	R	STMR	?	*	*	*	*	*	*
Sugarcane	molasses	4-13-251	CC	STMR	75	*	*	*	*	*	*
Sugarcane	bagasse	1-04-686	R	STMR	32	*	*	*	*	*	*
Sunflower	meal	5-26-098	PC	STMR	92	10	10	30	20	10	30
Wheat	asp gr fn	NA	CC	STMR	85	*	*	*	*	*	*
Wheat gluten	meal	5-05-221	CC	STMR	40	10	10	25	10	10	25
Wheat	milled bypdts	4-06-749	CC	STMR	88	70	50	40	50	50	40

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET								
						POULTRY								
						BROILER			LAYER			TURKEY		
						US	EU	AU	US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN			CAN		
Body weight (kg)						**2**	**1.7**	**2**	**1.9**	**1.9**	**1.9**	**8**	**7**	**8**
Daily intake (DM in kg)						**0.16**	**0.12**	**0.16**	**0.12**	**0.13**	**0.12**	**0.5**	**0.5**	**0.5**
Forages														
Alfalfa	forage	2-00-196	R	HR	35	*	*	*	*	*	*	*	*	*
Alfalfa	hay	1-00-054	R	HR	89	*	*	*	*	*	*	*	*	*
Alfalfa	meal	1-00-023	R	HR	89	10	5	10	10	10	10	10	5	10
Alfalfa	silage	3-08-150	R	HR	40	*	*	*	*	*	*	*	*	*
Barley	forage	2-00-511	R	HR	30	*	*	*	*	*	*	*	*	*
Barley	hay	1-00-495	R	HR	88	*	*	*	*	*	*	*	*	*
Barley	straw	1-00-498	R	HR	89	*	*	*	*	5	*	*	*	*
Barley	silage	NA	R	HR	40	*	*	*	*	*	*	*	*	*
Bean	vines	2-14-388	R	HR	35	*	*	*	*	*	*	*	*	*
Beet, mangel	fodder	2-00-632	R	HR	15	*	*	*	*	*	*	*	*	*
Beet, sugar	tops	2-00-649	R	HR	23	*	*	*	*	5	*	*	*	*
Cabbage	heads, leaves	2-01-046	R	HR	15	*	*	*	*	5	*	*	*	*
Clover	forage	2-01-434	R	HR	30	*	*	*	*	10	*	*	*	*
Clover	hay	1-01-415	R	HR	89	*	*	*	*	10	*	*	*	*
Clover	silage	3-01-441	R	HR	30	*	*	*	*	10	*	*	*	*
Forages														
Corn, field	forage/silage	3-28-345	R	HR	40	*	*	*	*	10	*	*	*	*
Corn, field	stover	3-28-251	R	HR	83	*	*	*	*	10	*	*	*	*
Corn, pop	stover	2-02-963	R	HR	85	*	*	*	*	10	*	*	*	*
Corn, sweet	forage	1-08-407	R	HR	48	*	*	*	*	*	*	*	*	*
Corn, sweet	stover	NA	R	HR	83	*	*	*	*	*	*	*	*	*
Cowpea	forage	2-01-655	R	HR	30	*	*	*	*	10	*	*	*	*

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET								
						POULTRY								
						BROILER			LAYER			TURKEY		
						US	EU	AU	US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN			CAN		
Body weight (kg)						**2**	**1.7**	**2**	**1.9**	**1.9**	**1.9**	**8**	**7**	**8**
Daily intake (DM in kg)						**0.16**	**0.12**	**0.16**	**0.12**	**0.13**	**0.12**	**0.5**	**0.5**	**0.5**
Cowpea	hay	1-01-645	R	HR	86	*	*	*	*	10	*	*	*	*
Crown vetch	forage	2-19-834	R	HR	30	*	*	*	*	10	*	*	*	*
Crown vetch	hay	1-20-803	R	HR	90	*	*	*	*	10	*	*	*	*
Grass	forage (fresh)	2-02-260	R	HR	25	*	*	*	*	10	*	*	*	*
Grass	hay	1-02-250	R	HR	88	*	*	*	*	10	*	*	*	*
Grass	silage	3-02-222	R	HR	40	*	*	*	*	10	*	*	*	*
Kale	leaves	2-02-446	R	HR	15	*	*	*	*	5	*	*	*	*
Lespedeza	forage	2-07-058	R	HR	22	*	*	*	*	10	*	*	*	*
Lespedeza	hay	1-02-522	R	HR	88	*	*	*	*	10	*	*	*	*
Millet	forage	2-03-801	R	HR	30	*	*	*	*	10	*	*	*	*
Millet	hay	1-03-119	R	HR	85	*	*	*	*	10	*	*	*	*
Millet	straw	1-23-802	R	HR	90	*	*	*	*	*	*	*	*	*
Forages														
Oat	forage	2-03-292	R	HR	30	*	*	*	*	10	*	*	*	*
Oat	hay	1-03-280	R	HR	90	*	*	*	*	10	*	*	*	*
Oat	straw	1-03-283	R	HR	90	*	*	*	*	*	*	*	*	*
Oat	silage	3-03-298	R	HR	35	*	*	*	*	*	*	*	*	*
Pea	vines	3-03-596	R	HR	25	*	*	*	*	10	*	*	*	*
Pea	hay	1-03-572	R	HR	88	*	*	*	*	10	*	*	*	*
Pea	silage	3-03-590	R	HR	40	*	*	*	*	10	*	*	*	*
Peanut	hay	1-03-619	R	HR	85	*	*	*	*	*	*	*	*	*
Rape	forage	2-03-867	R	HR	30	*	*	*	*	10	*	*	*	*
Rice	straw	1-03-925	R	HR	90	*	*	*	*	*	*	*	*	*
Rye	forage	2-04-018	R	HR	30	*	*	*	*	10	*	*	*	*
Rye	straw	1-04-007	R	HR	88	*	*	*	*	*	*	*	*	*
Sorghum,forage	see Grasses													
Sorghum, grain	forage	2-04-317	R	HR	35	*	*	*	*	10	*	*	*	*

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET								
						POULTRY								
						BROILER			LAYER			TURKEY		
						US	EU	AU	US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN			CAN		
Body weight (kg)						**2**	**1.7**	**2**	**1.9**	**1.9**	**1.9**	**8**	**7**	**8**
Daily intake (DM in kg)						**0.16**	**0.12**	**0.16**	**0.12**	**0.13**	**0.12**	**0.5**	**0.5**	**0.5**
Sorghum, grain	stover	1-07-960	R	HR	88	*	*	*	*	10	*	*	*	*
Soybean	forage	2-04-574	R	HR	56	*	*	*	*	10	*	*	*	*
Soybean	hay	1-04-558	R	HR	85	*	*	*	*	10	*	*	*	*
Soybean	silage	3-04-581	R	HR	30	*	*	*	*	10	*	*	*	*
Sugarcane	tops	2-04-692	R	HR	25	*	*	*	*	*	*	*	*	*
Forages														
Trefoil	forage	2-20-786	R	HR	30	*	*	*	*	10	*	*	*	*
Trefoil	hay	1-05-044	R	HR	85	*	*	*	*	10	*	*	*	*
Triticale	forage	2-02-647	R	HR	30	*	*	*	*	*	*	*	*	*
Triticale	hay	NA	R	HR	88	*	*	*	*	*	*	*	*	*
Triticale	straw	NA	R	HR	90	*	*	*	*	*	*	*	*	*
Triticale	silage	3-26-208	R	HR	35	*	*	*	*	*	*	*	*	*
Turnip	tops (leaves)	2-05-063	R	HR	30	*	*	*	*	*	*	*	*	*
Vetch	forage	2-05-112	R	HR	30	*	*	*	*	10	*	*	*	*
Vetch	hay	1-05-122	R	HR	85	*	*	*	*	10	*	*	*	*
Vetch	silage	3-26-357	R	HR	30	*	*	*	*	*	*	*	*	*
Wheat	forage	2-08-078	R	HR	25	*	*	*	*	10	*	*	*	*
Wheat	hay	1-05-172	R	HR	88	*	*	*	*	10	*	*	*	*
Wheat	straw	1-05-175	R	HR	88	*	*	*	*	10	*	*	*	*
Wheat	silage	3-05-186	R	HR	30	*	*	*	*	*	*	*	*	*
Roots & Tubers														
Carrot	culls	2-01-146	R	HR	12	*	10	*	*	10	*	*	10	*
Cassava/tapioca	roots	2-01-156	R	HR	37	*	20	*	*	15	*	*	5	*
Potato	culls	4-03-787	R	HR	20	*	10	*	*	10	*	*	20	*
Swede	roots	4-04-001	R	HR	10	*	10	*	*	10	*	*	10	*
Turnip	roots	4-05-067	R	HR	15	*	10	*	*	10	*	*	10	*
Cereal Grains/Crops Seeds														

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET								
						POULTRY								
						BROILER			LAYER			TURKEY		
						US	EU	AU	US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN			CAN		
Body weight (kg)						**2**	**1.7**	**2**	**1.9**	**1.9**	**1.9**	**8**	**7**	**8**
Daily intake (DM in kg)						**0.16**	**0.12**	**0.16**	**0.12**	**0.13**	**0.12**	**0.5**	**0.5**	**0.5**
Barley	grain	4-00-549	CC	STMR	88	75	70	15	70	100	15	50	50	15
Bean	seed	4-00-515	PC	STMR	88	20	20	70	20	20	70	20	20	70
Corn, field	grain	4-20-698	CC	STMR	88	80	70	*	70	70	*	70	50	*
Corn, pop	grain	4-02-964	CC	STMR	88	80	*	*	70	*	*	*	*	*
Cowpea	seed	5-01-661	PC	STMR	88	10	5	5	10	10	5	10	5	10
Lupin	seed	5-02-707	PC	STMR	88	15	15	15	10	10	10	10	10	50
Millet	grain	4-03-120	CC	STMR	88	70	70	70	60	70	60	50	50	15
Oat	grain	4-03-309	CC	STMR	89	80	70	15	70	70	15	65	50	5
Pea	seed	5-03-600	PC	STMR	90	20	20	5	20	20	5	10	20	40
Rice	grain	4-03-939	CC	STMR	88	20	*	50	20	*	50	40	*	60
Rye	grain	4-04-047	CC	STMR	88	50	70	50	35	35	35	60	60	60
Sorghum, grain	grain	4-04-383	CC	STMR	86	80	70	70	80	70	70	60	50	15
Soybean	seed	5-64-610	PC	STMR	89	20	20	15	20	15	15	15	15	15
Triticale	grain	4-20-362	CC	STMR	89	80	15	*	80	15	*	80	15	60
Vetch	seed	5-26-351	PC	STMR	89	*	*	*	*	*	*	*	*	*
Wheat	grain	4-05-211	CC	STMR	89	80	70	70	70	70	55	70	50	*
By-products														
Almond	hulls	4-00-359	R	STMR	90	*	*	*	*	*	*	*	*	*
Apple	pomace, wet	4-00-419	CC	STMR	40	*	*	*	*	*	*	*	*	*
Beet, sugar	dried pulp	4-29-307	R	STMR	88	*	*	*	*	*	*	*	*	*
Beet, sugar	ensiled pulp	4-00-662	R	STMR	15	*	*	*	*	*	*	*	*	*
Beet, sugar	molasses	4-30-289	CC	STMR	75	*	*	*	*	*	*	*	*	*
Brewer's grain	dried	5-00-516	CC	STMR	92	*	10	*	*	10	*	*	10	5
Canola	meal	5-08-136	PC	STMR	88	15	18	5	15	10	5	15	20	*
Citrus	dried pulp	4-01-237	R	STMR	91	*	*	*	*	*	*	*	*	*
Coconut	meal	5-01-572	PC	STMR	91	*	*	*	*	*	*	*	*	*
Corn, field	asp gr fn	4-02-880	CC	STMR	85	*	*	*	*	*	*	*	*	*

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET								
						POULTRY								
						BROILER			LAYER			TURKEY		
						US	EU	AU	US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN			CAN		
Body weight (kg)						**2**	**1.7**	**2**	**1.9**	**1.9**	**1.9**	**8**	**7**	**8**
Daily intake (DM in kg)						**0.16**	**0.12**	**0.16**	**0.12**	**0.13**	**0.12**	**0.5**	**0.5**	**0.5**
Corn, field	milled bypdts	5-28-235	CC	STMR	85	60	60	*	50	50	*	50	50	20
Corn, field	hominy meal	4-03-010	CC	STMR	88	20	*	20	20	20	20	20	20	*
Corn, sweet	cannery waste	2-02-875	CC	STMR	30	*	*	*	*	*	*	*	*	*
Corn gluten	feed	5-28-243	CC	STMR	40	*	10	*	*	*	*	*	*	*
Corn gluten	meal	5-28-242	CC	STMR	40	*	10	*	*	10	*	*	10	10
Cotton	meal	5-01-617	PC	STMR	89	20	5	10	20	5	10	15	10	*
Cotton	undelinted seed	5-01-614	PC	STMR	88	*	*	*	*	*	*	*	*	*
Cotton	hulls	1-01-599	R	STMR	90	*	*	*	*	*	*	*	*	*
Cotton	gin byproducts	1-08-413	R	STMR	90	*	*	*	*	*	*	*	*	*
Distiller's grain	dried	5-00-518	CC	STMR	92	*	10	*	*	10	*	*	10	*
Flaxseed/linseed	meal	5-02-043	PC	STMR	88	30	10	*	30	10	*	15	10	*
Grape	pomace, wet	2-02-206	CC	STMR	15	b	*	*	*	*	*	*	*	20
Lupin seed	meal	NA	PC	STMR	85	*	10	20	*	10	20	*	10	*
Palm	kernel meal	5-03-486	PC	STMR	90	*	*	*	*	*	*	*	5	10
Peanut	meal	5-03-649	PC	STMR	85	25	10	10	25	10	10	25	10	*
Pineapple	process waste	NA	R	STMR	25	*	*	*	*	*	*	*	*	*
Potato	process waste	4-03-777	CC	STMR	12	*	*	*	*	*	*	*	*	*
Potato	dried pulp	4-03-775	CC	STMR	88	*	20	*	*	15	*	*	*	5
Rape	meal	5-26-093	PC	STMR	88	15	*	5	15	10	5	10	20	*
Rice	hulls	1-08-075	R	STMR	90	*	*	*	*	*	*	*	*	20
Rice	bran/pollard	4-03-928	R	STMR	90	25	10	20	25	5	20	25	*	15
Safflower	meal	5-26-095	PC	STMR	91	25	10	15	25	5	15	10	5	*
Sorghum, grain	asp gr fn	NA	CC	STMR	85	*	*	*	*	*	*	*	*	*
Soybean	asp gr fn	NA	CC	STMR	85	*	*	*	*	*	*	*	*	25
Soybean	meal	5-20-638	PC	STMR	92	40	40	25	35	25	25	45	45	*
Soybean	hulls	1-04-560	R	STMR	90	20	10	5	10	5	5	2	*	*
Soybean	pollard	NA	R	STMR	?	*	*	*	*	*	*	*	*	*

Annex 6

OECD FEEDSTUFFS DERIVED FROM FIELD CROPS						PERCENT OF LIVESTOCK DIET								
						POULTRY								
						BROILER			LAYER			TURKEY		
						US	EU	AU	US	EU	AU	US	EU	AU
CROP	FEEDSTUFF	IFN Code	Class.	Residue Level	DM	CAN			CAN			CAN		
Body weight (kg)						**2**	**1.7**	**2**	**1.9**	**1.9**	**1.9**	**8**	**7**	**8**
Daily intake (DM in kg)						**0.16**	**0.12**	**0.16**	**0.12**	**0.13**	**0.12**	**0.5**	**0.5**	**0.5**
Sugarcane	molasses	4-13-251	CC	STMR	75	*	*	*	*	*	*	*	*	*
Sugarcane	bagasse	1-04-686	R	STMR	32	*	*	*	*	*	*	*	*	15
Sunflower	meal	5-26-098	PC	STMR	92	30	10	15	25	10	15	15	10	*
Wheat	asp gr fn	NA	CC	STMR	85	*	*	*	*	*	*	*	*	20
Wheat gluten	meal	5-05-221	CC	STMR	40	*	10	*	*	10	*	*	10	10
Wheat	milled bypdts	4-06-749	CC	STMR	88	50	20	20	50	20	20	60	20	20

OECD Feedstuffs Derived from Field Crops Table Continued

OECD Feedstuffs Table/Endnotes. (Based on US data).

Percent of Livestock Diet. Maximum percent of diet, on a dry weight basis for beef and dairy cattle, sheep, and on an as-fed basis for poultry and finishing swine. US/CAN values for beef (finishing), dairy, swine (finishing), and broiler have been refined based upon other data and US production. Values for all other livestock (rams/lambs; breeding swine; poultry layer; turkey) were extracted directly from EPA data and have not be refined. EU and AU values are estimates and have not been refined.

The following reference animals were used:

United States/Canada

Beef: Finishing, body weight of 500 kg, consuming 9.1 kg of daily dry matter feed. *Dairy:* mature cows, body weight of 600 kg, producing 23 kg of milk a day, consuming 18.2 kg of daily dry matter feed. *Ram/Ewe*: breeding, body weight of 85 kg, consuming 2.0 kg of daily dry matter feed. *Fattened Lamb*, finishing, body weight of 40 kg, consuming 1.5 kg of daily dry matter feed. *Boar/Sow*, breeding, body weight of 270 kg, consuming 2.0 kg of daily dry matter feed. *Finishing Hog*, body weight of 100 kg, consuming 3.1 kg of daily dry matter feed. *Broiler*, body weight of 2.5 kg, consuming 0.16 kg of daily dry matter feed. *Layer:* body weight of 3.2 kg, consuming 0.12 kg of daily dry matter feed.

Turkey: body weight of 12 kg, consuming 0.5 kg of daily dry matter feed.

European Union

Beef: Finishing, body weight of 500 kg, consuming 10 kg of daily dry matter feed. *Dairy:* mature cows, body weight of 650 kg, producing 40 kg of milk a day, consuming 25 kg of daily dry matter feed. *Ram/Ewe:* breeding, body weight of 75 kg, consuming 2.5 kg of daily dry matter feed. *Fattened Lamb*, finishing, body weight of 40 kg, consuming 1.7 kg of daily dry matter feed. *Boar/Sow*, breeding, body weight of 260 kg, consuming 2.0 kg of daily dry matter feed. *Finishing Hog*, body weight of 100 kg, consuming 3 kg of daily dry matter feed. *Broiler*, body weight of 1.7 kg, consuming 0.12 kg of daily dry matter feed. *Layer:* body weight of 1.9 kg, consuming 0.13 kg of daily dry matter feed. *Turkey:* body weight of 20 kg, consuming 0.7 kg of daily dry matter feed.

Australia

Beef: Finishing, body weight of 400 kg, consuming 9.1 kg of daily dry matter feed. *Dairy:* mature cows, body weight of 600 kg, producing 23 kg of milk a day, consuming 18.2 kg of daily dry matter feed. *Ram/Ewe*: breeding, body weight of 85 kg, consuming 2.0 kg of daily dry matter feed. *Fattened Lamb*, finishing, body weight of 40 kg, consuming 1.5 kg of daily dry matter feed. *Boar/Sow*, breeding, body weight of 270 kg, consuming 2.0 kg of daily dry matter feed. *Finishing Hog*, body weight of 100 kg, consuming 3.1 kg of daily dry matter feed. *Broiler*, body weight of 2.5 kg, consuming 0.16 kg of daily dry matter feed. *Layer:* body weight of 3.2 kg, consuming 0.12 kg of daily dry matter feed.

Turkey: body weight of 12 kg, consuming 0.5 kg of daily dry matter feed.

Percent DM. **(**Percent dry matter) for beef, dairy, and sheep feedstuffs, the percent moisture should be reported for representative samples of raw agricultural and processed commodities.

***** US/CAN/AU columns: Not used or a minor feedstuff (less than 10 percent of livestock diet). EU column: Not used or a minor feedstuff (less than 5 percent of livestock diet). .

Roughages

Alfalfa. Residue data are needed from a minimum of three cuttings, unless climatic conditions restrict the number of cuttings. Cut sample at late bud to early bloom stage (first cut), and/or at early (one-tenth) bloom stage (later cuts).

Alfalfa meal. Residue data are not needed for meal; however, the meal should be included in the livestock diet, using the hay residue level. *Alfalfa hay* should be field-dried to a moisture content of 10 to 20 percent. *Alfalfa silage.* Residue data on silage are optional, but are desirable for assessment of dietary exposure. Cut at late bud to one-tenth bloom stage for alfalfa, allow to wilt to approximately 60 percent moisture, then chop fine, pack tight, and allow to ferment for three weeks maximum in an air-tight environment until it reaches pH 4. This applies to both silage and haylage. In the absence of silage data, residues in forage will be used for silage, with correction for dry matter.

Barley hay. Cut when the grain is in the milk to soft dough stage. Hay should be field-dried to a moisture content of 10 to 20 percent. *Barley straw.* Plant residue (dried stalks or stems with leaves) left after the grain has been harvested (threshed).

Bean vines. Fresh forage remaining after harvest of bean.

Beet, mangel. Tops with crown, fresh.

Beet, sugar, tops. Based on current agricultural practices in US, tops are fed rarely in small amounts only to grazing beef cattle and sheep. EU feeds on a regular basis.

Cabbage. Heads, fresh.

Clover forage. Cut sample at the 4-8 inch to pre-bloom stage, at approximately 30 percent DM. Clover hay. Cut at early to full bloom stage. Hay should be field-dried to a moisture content of 10 to 20 percent. Residue data for clover seeds are not needed. *Clover silage***.** Residue data on silage are optional, but are desirable for assessment of dietary exposure. Cut sample at early to one-fourth bloom stage for clover, allow to wilt to approximately 60 percent moisture, then chop fine, pack tight, and allow to ferment for three weeks maximum in an air-tight environment until it reaches pH 4. This applies to both silage and haylage. In the absence of silage data, residues in forage will be used for silage, with correction for dry matter**.** IFNs are listed for most commonly used clover, i.e., Red Clover. Other clovers would be fed at identical levels for all animal species.

Corn forage (field and pop). Cut sample (whole aerial portion of the plant) at late dough/early dent stage (black ring/layer stage for corn only). *Corn stover (field and pop)***.** Mature dried stalks from which the grain or whole ear (cob + grain) have been removed; contains 80 to 85 percent DM.

Corn, Sweet , forage. Samples should be taken when sweet corn is normally harvested for fresh market, and may or may not include the ears. The petitioner may analyze the freshly cut samples, or may analyze the ensiled samples after ensiling for three weeks maximum, and reaching pH 5 or less, with correction for percent dry matter.

Cowpea forage. Cut sample at 6 inch to pre-bloom stage, at approximately 30 percent DM. *Cowpea hay***.** Cut when pods are one-half to fully mature. Hay should be field-dried to a moisture content of 10 to 20 percent.

Crownvetch forage. Cut sample at 6 inch to pre-bloom stage, at approximately 30 percent DM. *Crownvetch hay***.** Cut at full bloom stage. Hay should be field-dried to a moisture content of 10 to 20 percent.

Grass. Zero day crop field residue data for grasses cut for forage should be provided unless it is not feasible, e.g., pre-plant/pre-emergent pesticide uses. A reasonable interval before cutting for hay is allowed. *Grass forage.* Cut sample at 6-8 inch to boot stage, at approximately 25 percent DM.

Grass hay. Cut in boot to early head stage. Hay should be field-dried to a moisture content of 10 to 20 percent. Grasses include barnyardgrass, bentgrass, bermudagrass, Kentucky bluegrass, big bluestem, smooth bromegrass, buffalograss, reed canarygrass, crabgrass, cupgrass, dallisgrass, sand dropseed, meadow foxtail, eastern gramagrass, side-oats grama, guineagrass, Indiangrass, Johnsongrass, lovegrass, napiergrass, oatgrass, orchardgrass, pangolagrass, redtop, Italian ryegrass, sprangletop, squirreltailgrass, stargrass, switchgrass, timothy, crested wheatgrass, and wild ryegrass. Also included are sudangrass and sorghum forages and their hybrids. For grass grown for seed only, PGIs (pre-grazing interval) and PHIs (pre-harvest interval) are acceptable. Residue data may be based on the regrowth after harvesting the seed. *Grass silage***.** Residue data on silage are optional, but are desirable for assessment of dietary exposure. Cut sample at boot to early head stage, allow to wilt to 55 to 65 percent moisture, then chop fine, pack tight, and allow to ferment for three weeks maximum in an air-tight environment until it reaches pH 4. In the absence of silage data, residues in forage will be used for silage, with correction for dry matter.

Kale Leaves, fresh.

Lespedeza forage. Cut sample at 4-6 inch to pre-bloom stage, at 20 to 25 percent DM. *Lespedeza hay.* Annual/Korean. Cut at early blossom to full bloom stage. Sericea. Cut when 12-15 inches tall. Hay should be field-dried to a moisture content of 10 to 20 percent.

Millet forage. Cut sample at 10 inch to early boot stage, at approximately 30 percent DM. *Millet hay.*

Cut at early boot stage or approximately 40 inches tall, whichever is reached first. Hay should be field-dried to a moisture content of 10 to 20 percent. Millet includes pearl millet. *Millet straw.* Data are required for Proso millet only: *Proso millet straw*. Plant residue (dried stalks or stems with leaves) left after the grain has been harvested.

Oats forage. Cut sample between tillering to stem elongation (jointing) stage. *Oats hay.* Cut sample from early flower to soft dough stage. Hay should be field-dried to a moisture content of 10 to 20 percent. *Oats straw.* Cut plant residue (dried stalks or stems with leaves) left after the grain has been harvested (threshed).

Pea, field. Does not include the canning field pea cultivars used for human food. Includes cultivars grown for livestock feeding only such as `Austrian winter pea'. *Field pea vines.* Cut sample anytime after pods begin to form, at approximately 25 percent DM. *Field pea hay***.** Succulent plant cut from full bloom thru pod formation. Hay should be field-dried to a moisture content of 10 to 20 percent. *Pea, field, silage.* Use field pea vine residue data for field pea silage, with correction for dry matter.

Peanut hay. Peanut hay consists of the dried vines and leaves left after the mechanical harvesting of peanuts from vines that have been sun-dried to a moisture content of 10 to 20 percent.

Rice straw. Stubble (basal portion of the stems) left standing after harvesting the grain.

Rye forage. Cut sample at 6-8 inch stage to stem elongation (jointing) stage, at approximately 30 percent DM. *Rye straw.* Cut plant residue (dried stalks or stems with leaves) left after the grain has been harvested (threshed).

*Sorghum forage***.** Cut sample (whole aerial portion of the plant) at soft dough to hard dough stage. Forage samples should be analyzed as is, or may be analyzed after ensiling for three weeks maximum, and reaching pH 5 or less, with correction for dry matter. *Sorghum stover.* Mature dried stalks from which the grain have been removed; contains approximately 85 percent DM.

*Soybean forage***.** Cut samples at 6-8 inches tall (sixth node) to beginning pod formation, at approximately 35 percent DM. *Soybean hay.* Cut samples at mid-to-full bloom and before bottom leaves begin to fall or when pods are approximately 50 percent developed. Hay should be field-dried to a moisture content of 10 to 20 percent. *Soybean silage***.** Residue data on silage are optional. Harvest

sample when pods are one-half to fully mature (full pod stage). In the absence of silage data, residues in forage will be used for silage, with correction for dry matter.

*Trefoil forage***.** Cut sample at 5-10 inch or early bloom stage, at approximately 30 percent DM. *Trefoil hay***.** Cut at first flower to full bloom. Hay should be field-dried to a moisture content of 10 to 20 percent.

Triticale. A small grain cross between wheat and rye. The grain is used mainly for feeding and the foliage as a forage crop. Wheat data can be used to support use on triticale.

*Vetch forage***.** Cut sample at 6 inch to pre-bloom stage, at approximately 30 percent DM. *Vetch hay.* Cut at early bloom stage to when seeds in the lower half of the plant are approximately 50 percent developed. Hay should be field-dried to a moisture content of 10 to 20 percent. Vetch does not include crownvetch.

Wheat. Includes emmer wheat and triticale. No processing study is needed for a specific residue level on emmer wheat. *Wheat forage.* Cut sample at 6-8 inch stage to stem elongation (jointing) stage, at approximately 25 percent DM. *Wheat hay***.** Cut samples at early flower (boot) to soft dough stage. Hay should be field-dried to a moisture content of 10 to 20 percent. *Wheat straw.* Cut plant residue (dried stalks or stems with leaves) left after the grain has been harvested (threshed).

Roots and Tubers

Carrot culls. Residue data for the raw agricultural commodity will cover residues on culls.

Cassava. Also called tapioca plant or manioc.

Cereal Grains/Crop Seeds

Barley grain, oat grain, or rice grain. Residue data are needed for kernel (caryopsis) with hull (lemma and palea).

Bean, dry. Includes adzuki bean, mung bean, and broad bean).

Millet grain. Kernel plus hull (lemma and palea). Pearl millet grain.

Kernel with hull (lemma and palea) removed

Pea, seed. Includes field pea, chickpea, and pigeon pea.

Rye grain or wheat grain. Kernel (caryopsis) with hull (lemma and palea) removed.

Byproducts

Aspirated grain fractions ("grain dust"). Dust collected at grain elevators during the moving/handling of grains/oilseeds for environmental and safety reasons. *Residue data should be provided for any post-harvest use on corn, sorghum, soybeans or wheat***.** For a pre-harvest use after the reproduction stage begins and seed heads are formed, data are needed unless residues in the grain are less than the limit of quantitation of the analytical method. For a pre-harvest use during the vegetative stage (before the reproduction stage begins), data will not normally be needed unless the plant metabolism or processing study shows a concentration of residues of regulatory concern in an outer seed coat (e.g., wheat bran, soybean hulls). A residue level, if needed, should be set at the higher of the residues found in the aspirated grain fraction of corn, sorghum, soybean, or wheat.

Corn milled byproducts. (Dry milled: grits, meal, flour and refined oil). A residue level for corn dry-milled processed commodities, if needed, should be set at the highest concentration for grits, meal, and flour.

Corn, sweet. Residue data on early sampled field corn should suffice to provide residue data on sweet corn, provided the residue data are generated at the milk stage on kernel plus cob with husk

removed and there are adequate numbers of trials and geographical representation from the sweet corn growing regions. *Sweet corn cannery waste.* Includes husks, leaves, cobs, and kernels. Residue data for forage will be used for sweet corn cannery waste.

Cotton gin byproducts (commonly called gin trash). Include the plant residues from ginning cotton, and consist of burrs, leaves, stems, lint, immature seeds, and sand and/or dirt. Cotton must be harvested by commercial equipment (stripper and mechanical picker) to provide an adequate representation of plant residue for the ginning process. At least three field trials for each type of harvesting (stripper and picker) are needed, for a total of six field trials.

Pineapple process residue (also known as wet bran). A wet waste byproduct from the fresh-cut product line that includes pineapple tops (minus crown), bottoms, peels, any trimmings with peel cut up, and the pulp (left after squeezing for juice); it can include culls.

Processed potato waste. (Can include wet and dry peel, raw chip, french fries, and cooked potatoes). Residue levels for wet peel should be used for dietary burden calculations. Residue data may be provided from actual processed potato waste generated using a pilot or commercial scale process that gives the highest percentage of wet peel in the waste.

Rapeseed meal. Residue data are not needed for rapeseed oil since it is produced for industrial uses and is not an edible oil. The edible oil is only produced from canola.

Sugarcane. US information indicates that sugarcane bagasse is mainly used for fuel in the US and has decided residue data will not be needed at this time, but may be needed at a later date. *Sugarcane molasses.* Residue data are needed for blackstrap molasses.

Wheat milled byproducts. A residue level, if needed, should be set at the highest value for wheat middlings, bran and shorts.

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