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CODEX COMMITTEE ON PESTICIDE RESIDUES

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ACUTE PROBABILISTIC DIETARY EXPOSURE ASSESSMENT FOR PESTICIDES

(Prepared by WHO)

Introduction

This item should be read in conjunction with Agenda Item 9.

1. Background

Some pesticide residues could give rise to acute health effects in relation to short periods of intake and the Joint FAO/WHO Meetings on Pesticide Residues (JMPR) now routinely considers the need to set an acute reference dose (ARfD) for all pesticides it evaluates. In order to characterize the risk for those chemicals for which an ARfD is established, an acute dietary exposure assessment may be performed using deterministic or probabilistic methodologies. At an international level, a deterministic exposure model was developed and implemented by JMPR: The International Estimated Short Term Intake (IESTI). This model, as any model undertaken by international committees, should provide exposure estimates that are conservative and cover all available individual national dietary exposure estimates[1]. Moreover, the risk assessment methodologies should be regularly updated to account for new knowledge and therefore, in 2017, FAO and WHO, following a recommendation of the JMPR, decided to review the IESTI equation. In order to have a realistic reference to compare the various IESTI models, WHO, with the support from Australia, performed a probabilistic exposure assessment based on the best available data for pesticide occurrence and food consumption.

Many countries are regularly monitoring pesticide residues in food. Similarly, national food consumption data recording individual consumptions per day or by eating occasion are available in many countries. WHO collected the 2 kinds of data and hired a consultant to combine them in a probabilistic model. Data description is shown in Annex 1.

The goal of the assessment is to estimates consumer's exposure as well as the probability for exceeding the ARfD established by the JMPR for 47 pesticide active substances in food.

Moreover, the Codex Committee on Pesticide Residues (CCPR) stated that food containing residues at the level of the adopted Codex MRL (CXL) must be safe for the consumers (CX/PR 05/37/4). In other words, the acute exposure resulting of the IESTI equation is implicitly used by risk managers to achieve a level of protection (LoP) for individuals eating a particular commodity with residues at the level of the MRL. According to its definition [European Food Safety Authority - EFSA, 2007] the 'level of protection' of MRL is ***the percentage of person-days with intakes at or below the Acute Reference Dose when the residue occurs at the level of the MRL***. We estimated this LoP for the CXLs established for the 47 pesticides under consideration.

2. Methodology

a. Consumer exposure and probability to exceed the ARfDs

A probabilistic model was developed to estimate acute exposures, combining results from national food consumption surveys with reported concentration distribution of pesticide residues from official monitoring programs. The probabilistic model was used each time for 2 scenarios regarding the level of usage (10 and 100%) and for 2 populations (children and adults). The potential risk posed by each pesticide was estimated by the proportion of individuals with estimated exposures exceeding the relevant ARfD. We also identified the major contributors to the exposure and the percentage of the ARfD reached by them. The approach was applied to data from 8 countries[2]. Data available for the different countries were prepared and gathered in a database. The nomenclatures of the different datasets per country were mapped to make their combination possible. The methodology is detailed in Annex 2.

[1] FAO/WHO (2009) - EHC 240 http://apps.who.int/iris/bitstream/10665/44065/9/WHO_EHC_240_9_eng_Chapter6.pdf

[2] Due to late data submission, results from Brazil should be added at a later stage.

b. Level of protection of MRLs

To assess the LoP we used the same food consumption data than those used to estimate the risk for consumers but combined for each food and each pesticide with the corresponding CXL. We calculated the empirical probability of exceeding the ARfD by the number of individuals with exposure higher than the ARfD divided by the total number of individuals.

3. Results

a. Estimation of exposure and probability to exceed the ARfD

The exposure levels expressed in µg/kg of body weight/day to the different pesticides per country were compared to the respective ARfD. For the majority of pesticides and for both populations and usage scenarios, the exposures between countries were in the same range of values. The exposure to cyfluthrin and beta-cyflythrin, cypermethrin, dichlorvos, imidachloprid, fenpropathrin, phosmet and prothioconazole were higher for the US whatever the studied population and applied usage scenario.

As expected, the scenario using 100% usage lead to higher exposure than the one using 10%. The difference could be 10 times higher for the mean but less for the other percentiles. Except for USA, the median exposure using 10% usage scenario equaled zero for all pesticides and for the different population.

For the two usage scenarios and the adult population, the P99 exposure was below 1% of the ARfD for the majority of pesticides. For the carbofuran, the cyfluthrin and beta cyflythrin, the cypermethrin, the phorate and the prothioconazole, the P99 exposure could reach between 5 and 10% of the ARfD with the 100% usage scenario and maximum 4% of the ARfD with the 10% usage scenario.

For children population, the P99 exposure to a majority of pesticides was below 5% of the ARfD with the 100% usage scenario and 3% with the 10% usage scenario. For the carbofuran, the cyfluthrin and beta cyflythrin, the cypermethrin, the fenpropathrin, the phorate and the prothioconazole, the P99 exposure could reach between 20 to 40% of the ARfD with the 100% usage scenario and between 12 to 20% with the 10% usage scenario.

The food which contributed the most to the exposure to each pesticide regarding the number of runs and % of exposure were displayed in table 13 for the adults and 14 for the children for both usage scenarios. There is a high variability on main food contributors which are different between pesticides, countries and usage scenarios, except for Italia where cattle milk is prevalent. There is lower difference between the adult and children scenarios, for which similar main food contributors were found.

Whatever the usage scenario applied (10% or 100%) and the studied population (adult or children), the probability for dietary exposure to exceed the ARfD was null for the all pesticides and all countries. Results are detailed in Annex 4.

b. Estimation of the Level of Protection of the MRLs

For 30 pesticides over 47, the LoP is 100% meaning that assuming that residues in food are at the level of Codex MRL the probability for exceeding the ARfD considering actual consumption is null for all populations in all countries.

For 10 of the remaining pesticides, the probability to exceed the ARfD is lower than 1% in at least 1 country and for at least 1 population meaning than the LoP is higher than 99%. It should be noted that 9 over these 10 results are related to children in the USA (Annex 5, table 15).

For 5 of the remaining pesticides, the probability to exceed the ARfD if residues in food are at MRL level is up to 10% in at least one country meaning than the LoP is higher than 90%.

Finally, for 2 pesticides (carbofuran and phosmet) the LoP is below 90% with a minimum value below 20% for children in France. It can be noted that for carbofuran more than 90% of the contribution is related to the MRL in orange. For phosmet the main contributor is the MRL for apple. Results for pesticides MRLs with LoP below 100% are summarized in Annex 5.

4. Conclusions

The IESTI equation is used as a proxy for estimating the acute dietary exposure at international level. According to the principles for international dietary exposure assessment, the international exposure models should be conservative in order to ensure that actual exposure of consumers in each country is lower than the international estimate and therefore that there is no appreciable risk for the population worldwide. The results of the probabilistic assessment do confirm the conservativeness of the model when compared with national assessments based on accurate data and the absence of appreciable risk for the population.

We noted differences on exposure levels between countries and many of them can be explained by differences in data submitted: Higher exposures among countries can be explained by the difference between the number of food items, the inclusion or not of process food. The higher is the number of food items included in the survey, the higher is the exposure. This is the case of US and Canada, which have more than 100 food items considered. In the opposite, for European data, the processing food were not considered at this stage which could lead to lower exposure. For Italy which also has the lowest number of food items, the exposure was often lower than the other and a low variability on the main food contributor was observed. Despite of these differences the results are very consistent across countries.

The risk assessment of pesticide residues in food is one of the key function of the JMPR. The assessments performed for 8 countries are consistent and robust and the overall exercise confirms that the methodology used by the Meeting to assess the acute risk, including the IESTI equation, is an appropriate model for consumer protection.

The establishment of an appropriate Level of Protection for pesticide MRLs is in the remit of the CCPR as a tool for risk management and risk communication. The scenario used to estimate the LoPs (all pesticide residues occurring at MRL level) are not corresponding to actual exposure of the population. Results demonstrate that the CXLs are providing a high Level of Protection for a vast majority of MRLs. However, as no specific Level of Protection is used explicitly by the CCPR to establish MRLs, it is not surprising to observe a significant variability in the LoPs mainly related to certain pesticides and to a lower degree to certain food commodities.

Annex 1 - Methodology

1. Data mapping

The general framework used to match the data available for each country follows the different steps outlined below:

1- Selection of pesticide residue levels from the monitoring programs and food items with a Codex MRL

The first step is to select the residue levels of the 47 pesticides and the 214 food items for which a Codex MRL has been set for these pesticides. For this purpose, the pesticide residue concentrations of monitoring programs for the relevant country were combined with the Codex MRL dataset. They were combined per food item (entire Codex code) and food group (letters of the Codex code) to capture all monitored foods with MRLs.

2- Conversion of foods "as eaten" to raw commodity ingredients

The recipe table was used to convert dietary survey records of foods "as eaten" into the corresponding consumed weights of their raw commodity ingredients which could then be matched with pesticide residue levels and food items/groups used in the Codex MRL standard. Each food "as eaten" consumed quantity was multiplied by the proportion of each of the different raw commodity ingredients comprised in the food "as eaten" to determine the consumed amount of each raw commodity ingredient by each individual.

3- Selection of food consumption data for which pesticide residue levels and food items with a Codex MRL exist

To match raw commodity ingredients to Codex MRL food group codes, a nomenclature table was used. If this table was not available or required modifications, it was decided to construct or recode it. For each Codex code with monitoring data, it was determined whether it could be matched with a raw commodity ingredient coming from the consumption survey. As monitoring data are rather limited for processed products ("dried, paste, juiced, puree"), it was decided to also link Codex codes to processed products. For example, the Codex food "tomato" was linked to raw entire "tomato", "tomato baby-food" and "dried, paste, juiced, puree" tomato. Unspecified products, such as "fruit juice", were not considered.

Thereafter, the table with Codex codes per consumed raw commodity ingredient at individual level was combined with the pesticide residue level dataset defined in step 1 using the methodology described in section 3.

4- Combining food consumption and socio-demographic data

The table of consumed raw commodity ingredients with their corresponding Codex codes was combined with the socio-demographic data from each national data set to link individual food consumption records to that individual's gender, age and body weight.

2. Probabilistic model

The acute exposure was estimated per geographical area (Canada, USA, Brazil, Australia and Europe) and separately for adults (≥ 16 years old) and children (≤ 6 years old). Pesticide residue monitoring data and results from national food consumption surveys were combined within the same geographical area. Calculations were implemented with the R software (R Core Team, 2017).

Usage scenarios

A high source of uncertainty comes from censored data. In case of censored data, the true value of pesticide residue level is unknown and it is not possible to distinguish censored data from true zeros. To account for a part of this uncertainty, two usage scenarios were tested: 100% and 10% of usage (i.e. 0% and 90% of true zeros). For both scenarios, the censored values were set at the value of the limit of detection (LOD) or quantification (LOQ).

Acute dietary exposure assessment

A probabilistic approach was used to estimate individual's acute dietary exposure, i.e. the exposure during 24 hours, to the different pesticide residues. For that, one individual and one day of consumption for this individual were randomly selected. The individual daily consumption of a raw commodity ingredient denoted $c_{i,a}$ was then calculated by the sum of all the quantities of commodity *a* consumed by the individual *i* during the selected day. For each commodity *a* treated with the pesticide *p*, the daily consumption $c_{i,a}$ was multiplied by a residue level $q_{p,a}$ randomly selected from the residue monitoring dataset and adjusted by the body weight w_i of the consumer *i*. Then, the estimated exposures calculated for each commodity were summed to obtain a total daily exposure in milligrams of the pesticide *p* per kilogram of body weight of the consumer *i* per day (mg/kg bw/d).

$$e_{i,p} = \frac{\sum_{a=1}^{A_p} c_{i,a} \times q_{p,a}}{w_i}$$

A sample of 10 000 individual daily exposures was thus created to account for consumption and residue level variability. Descriptive statistics of exposures were given for consumers only i.e. the individuals who consumed foods which can contain the pesticide. The relative contribution of each food to total acute dietary exposure for each pesticide residue is estimated for each individual by dividing the exposure per food by the total acute exposure for the residue. This process was repeated several times to account for uncertainty (see next paragraph on modelling uncertainty).

Hypothesis related to variation in residues

Two sources of variability could exist for contamination in residue: between lot and between sample variability (EFSA, 2012). The between lot variability is due to the fact that contamination between lots may be different and a consumed portion can be derived from several lots. For that, it is proposed by EFSA to multiply a part of the consumed portion by a variability factor of 3. In this work, the whole consumed quantity was considered to be contaminated at the same value. Indeed, in our case of a high number of censored data the higher probability for the contamination of the second lot is to select a censored value. So considering that the consumed portion is contaminated at the residue level is a conservative assumption.

The between sample variability is due to the fact that the residues data available for use in dietary exposure assessment could be related to composite samples, and not to individual units of commodity. Therefore, the measured values represent the average of a number of units and do not reflect the full range of variation occurring in individual units which are consumed by people. The sample variability is generally accounted for by using a probabilistic approach that selected a concentration level at random from the reported distribution of residue level measurements for that commodity. For US data, these results were compared to the ones based on a selection of US concentration levels in a Lognormal distribution of mean the measured residue level and of variance parametrized such as the $P97.5^{th}$ value equals to 3 times the mean. No significant impact on exposure and risk was observed and thus no between sample variability was included in the whole analyses.

Hypothesis related to processing

Following IESTI method used by the JMPR, diet correction factors (DCFs) corresponding to default dilution or concentration factors were used on the residues to avoid under- or overestimation of dietary exposure. As did in the IESTI method, in case the processed food is a fraction of the raw commodity ingredient (e.g. juice, oil, bran, and flour) no DCFs were used. The impact on exposure using DCFs or not was tested on US data and resulted in higher exposure when using DFCs. Thus, DCFs were used in the whole analyses.

Risk assessment

For each individual, the estimated total dietary acute exposure per pesticide from all foods consumed that could contain the residue was compared to the ARfD established by the JMPR. The potential risk for the population per geographical area was taken to be the proportion of the population of interest with an estimated acute dietary exposure above the ARfD (i.e. number of individuals exposed above the ARfD divided by the total number of individuals (10000). The risk for consumers only was also calculated by dividing the number of individuals with an estimated acute dietary exposure above the ARfD by the number of individuals who reported consuming foods assumed to contain the pesticide.

Modelling uncertainty due to the limited size of residue and food consumption datasets

In order to produce uncertainty intervals showing the uncertainty related to survey datasets and methodology that have been quantified, a two-dimensional Monte Carlo (2D MC) procedure was used. After testing the stability, 100 runs composed of 10 000 individuals were simulated. The multiple output distributions generated by the multiple runs were then used to calculate the estimate and uncertainty intervals of different statistics of the acute dietary exposure. For each run the statistics (mean and percentiles) were calculated. Then the estimate was calculated from the median and the uncertainty intervals from the 2.5^{th} and 97.5^{th} percentiles of the 100 statistics. This procedure also accounts for the uncertainty due to the random sampling of one day of consumption.

Annex 2 – Data description (summary)

Table 1: Description of the **national residues survey** in food after matching with CXLs

Country	National residue survey data after matching with CXLs								
	Years	Number of pesticides	Number of foods	Number of combinations (pest/food)	Number of measurements	% total measurements ≥ LOD**	% total measurements ≥ LOQ**	% total measurements ≥ MRL	% non-censored measurements ≥ MRL
Australia	2011-2017	18	20*	78	235 298	-	2.97%	0.018%	0.6%
Brazil	2010-2015	20	23	190	150 154	3.08%	3.08%	0.14%	4.54%
Canada	2008-2017	38	162	1698	590 550	2.79%	2.33%	0.02%	0.66%
Europe 30 countries	2015	39	150	1503	689 719	-	2.25%	0.02%	0.94%
USA	2010-2015	34	48	513	430 273	3.68%	3.35%	0.03%	0.85%

*Restrained to grain and fruit products

**The LOQ is always higher than the LOD, thus the proportion of measurements higher than the LOD also contains measurements higher than the LOQ.

Table 2. Description **of consumption data** for the different countries and populations (adults ≥ 16 years old, children ≤ 6 years old).

Country	Initial consumption survey		Consumption data after matching with recipes and residues dataset					
	Name	Years	Method	N	Population	Individuals	Observatio ns	Food items
Australia	?	?	2 x 24 h recall	15 435	Adults	12 457	70 540	20
					Children	1 157		
Brazil	-	-	-	-	-	-	-	-
Canada	CCHS	2015	2 x 24 h recall	19 670	Adults	14 377	?	119
					Children	2 046		?
Czech Republic	SISP04	2003-2004	2 x 24 h recall		Adults	1750	21750	62
France	INCA2 Kids	2005–2007	7-days record		Children	242	2312	45
Italy	INRAN SCAI 2005-06	2005-2006	3 x 24 h recall ??		Adults	2 315	6133	11
Netherlands	VCP-Children	2005-2006	2 days dietary		Children	1228	4 308	29
USA	FCID	2009-2010	2 x 24 h recall	9 754	Adults	5 578	245 248	116
					Children	1 438		

Annex 3 - Detailed acute exposure assessment per country and age group

Table 3: Australia adults

Table 4: Australia children

Table 5: Canada adults

Table 6: Canada children

Table 7: Czech Republic adults

Table 8: Italy adults

Table 9: Netherlands children

Table 10: France children

Table 11: USA adults

Table 12: USA children

Table 3 Exposure (µg/kg bw/day) of **Australian adult** consumers using **10% and 100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UC]
Buprofezin	500	41%	0.0033 [0.0029-0.0039]	0 [0-0]	0.032 [0.029-0.035]	0.062 [0.049-0.071]	0.03 [0.028-0.031]	0.022 [0.022-0.022]	0.12 [0.11-0.13]	0.17 [0.16-0.2]
Chlorpyrifos-methyl	100	34%	0.0096 [0.0076-0.012]	0 [0-0]	0.089 [0.071-0.11]	0.21 [0.16-0.27]	0.012 [0.01-0.013]	0.0014 [0.0012-0.0016]	0.087 [0.072-0.11]	0.2 [0.16-0.25]
Clothianidin	600	66%	0.01 [0.0092-0.012]	0 [0-0]	0.097 [0.087-0.11]	0.2 [0.17-0.24]	0.043 [0.041-0.045]	0.025 [0.024-0.026]	0.19 [0.17-0.2]	0.29 [0.26-0.32]
Cyfluthrin/beta-cyfluthrin	40	34%	0.0028 [0.0025-0.0033]	0 [0-0]	0.03 [0.027-0.035]	0.056 [0.046-0.069]	0.028 [0.026-0.029]	0.021 [0.02-0.021]	0.11 [0.1-0.13]	0.18 [0.16-0.22]
Cypermethrins	40	85%	0.0061 [0.0051-0.0075]	0 [0-0]	0.039 [0.035-0.044]	0.1 [0.084-0.13]	0.025 [0.024-0.027]	0.013 [0.012-0.014]	0.12 [0.11-0.13]	0.21 [0.18-0.25]
Dichlorvos	100	34%	0.00095 [0.00061-0.0017]	0 [0-0]	0.0063 [0.0052-0.007]	0.012 [0.0099-0.016]	0.0036 [0.0031-0.0045]	0.00099 [0.00092-0.0011]	0.013 [0.012-0.014]	0.023 [0.018-0.029]
Difenoconazole	300	94%	0.0024 [0.0022-0.0027]	0 [0-0]	0.025 [0.024-0.027]	0.048 [0.044-0.056]	0.017 [0.016-0.017]	0.0044 [0.0041-0.0048]	0.089 [0.085-0.095]	0.14 [0.13-0.15]
Diquat	800	56%	0.00044 [0.00033-0.00056]	0 [0-0]	0.0033 [0.0014-0.0053]	0.014 [0.01-0.018]	0.0038 [0.0036-0.004]	0.00015 [0.00012-0.00016]	0.03 [0.028-0.032]	0.045 [0.04-0.051]
Dithianon	100	49%	0.011 [0.0081-0.015]	0 [0-0]	0.07 [0.057-0.088]	0.2 [0.15-0.27]	0.033 [0.03-0.036]	0.02 [0.02-0.021]	0.14 [0.13-0.16]	0.28 [0.23-0.32]
Flutriafol	50	92%	0.0044 [0.0035-0.0053]	0 [0-0]	0.023 [0.021-0.027]	0.075 [0.061-0.091]	0.0081 [0.0074-0.0092]	0.0017 [0.0016-0.0018]	0.045 [0.041-0.05]	0.098 [0.081-0.12]
Imidacloprid	400	94%	0.011 [0.0086-0.014]	0 [0-0]	0.071 [0.063-0.084]	0.19 [0.16-0.23]	0.038 [0.036-0.041]	0.019 [0.018-0.019]	0.17 [0.16-0.18]	0.29 [0.26-0.32]
Indoxacarb	100	54%	0.0085 [0.0071-0.0099]	0 [0-0]	0.074 [0.063-0.081]	0.16 [0.12-0.19]	0.029 [0.027-0.031]	0.02 [0.019-0.02]	0.13 [0.12-0.14]	0.23 [0.19-0.27]
Malathion	2000	75%	0.0037 [0.0033-0.0043]	0 [0-0]	0.04 [0.035-0.044]	0.079 [0.069-0.092]	0.031 [0.03-0.032]	0.018 [0.017-0.019]	0.14 [0.13-0.15]	0.21 [0.19-0.22]

Table 3 Exposure (µg/kg bw/day) of **Australian adult** consumers using **10% and 100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UC]
Methoxyfenozide	900	56%	0.0037 [0.0034-0.0041]	0 [0-0]	0.044 [0.039-0.051]	0.083 [0.074-0.09]	0.036 [0.035-0.037]	0.022 [0.022-0.023]	0.15 [0.14-0.16]	0.22 [0.2-0.24]
Pyraclostrobin	50	43%	0.0038 [0.0033-0.0048]	0 [0-0]	0.039 [0.033-0.044]	0.082 [0.067-0.099]	0.023 [0.022-0.024]	0.017 [0.017-0.018]	0.11 [0.1-0.12]	0.18 [0.16-0.2]
Sulfoxaflor	300	59%	0.0057 [0.0049-0.0065]	0 [0-0]	0.059 [0.05-0.067]	0.11 [0.092-0.13]	0.038 [0.037-0.04]	0.024 [0.023-0.024]	0.16 [0.15-0.17]	0.23 [0.21-0.26]
Tebuconazole	300	74%	0.00068 [0.0006-0.00076]	0 [0-0]	0.0082 [0.0072-0.0092]	0.016 [0.014-0.018]	0.0067 [0.0065-0.007]	0.0034 [0.0032-0.0036]	0.033 [0.03-0.035]	0.047 [0.043-0.05]
Triadimenol	80	57%	0.00046 [0.0004-0.00052]	0 [0-0]	0.0061 [0.0054-0.0069]	0.011 [0.0097-0.012]	0.0046 [0.0044-0.0047]	0.0026 [0.0025-0.0028]	0.019 [0.018-0.021]	0.026 [0.023-0.029]

Table 4 Exposure (µg/kg bw/day) of **Australian children** consumers using **10% and 100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Children - 10% usage				Children- 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UC]
Buprofezin	500	70%	0.013 [0.012-0.015]	0 [0-0]	0.15 [0.13-0.16]	0.25 [0.2-0.3]	0.12 [0.12-0.12]	0.086 [0.085-0.089]	0.44 [0.42-0.47]	0.63 [0.58-0.67]
Chlorpyrifos-methyl	100	44%	0.043 [0.036-0.052]	0 [0-0]	0.42 [0.35-0.51]	0.87 [0.72-1.1]	0.052 [0.047-0.061]	0.012 [0.011-0.013]	0.42 [0.37-0.5]	0.88 [0.75-1.1]
Clothianidin	600	81%	0.034 [0.031-0.038]	0 [0-0]	0.33 [0.3-0.36]	0.63 [0.55-0.73]	0.16 [0.16-0.16]	0.11 [0.099-0.11]	0.63 [0.58-0.64]	0.81 [0.77-0.83]
Cyfluthrin/beta-cyfluthrin	40	64%	0.011 [0.01-0.012]	0 [0-0]	0.14 [0.12-0.15]	0.24 [0.2-0.27]	0.11 [0.11-0.11]	0.083 [0.082-0.083]	0.43 [0.42-0.47]	0.62 [0.58-0.63]
Cypermethrins	40	93%	0.023 [0.019-0.026]	0 [0-0]	0.16 [0.15-0.18]	0.37 [0.31-0.46]	0.12 [0.11-0.12]	0.074 [0.072-0.076]	0.49 [0.45-0.52]	0.74 [0.65-0.77]
Dichlorvos	100	44%	0.0047 [0.0032-0.0073]	0 [0-0]	0.024 [0.022-0.027]	0.062 [0.043-0.078]	0.016 [0.014-0.018]	0.011 [0.01-0.011]	0.053 [0.045-0.065]	0.068 [0.066-0.076]
Difenoconazole	300	99%	0.012 [0.011-0.013]	0 [0-0]	0.13 [0.11-0.14]	0.21 [0.2-0.24]	0.096 [0.094-0.098]	0.063 [0.061-0.068]	0.41 [0.4-0.43]	0.58 [0.51-0.61]
Diquat	800	69%	0.000077 [0.000064-0.000093]	0 [0-0]	0.00073 [0.00063-0.00091]	0.002 [0.0017-0.0025]	0.00067 [0.00064-0.00071]	0.00016 [0.00015-0.00017]	0.0043 [0.004-0.0046]	0.0061 [0.0056-0.0065]
Dithianon	100	72%	0.048 [0.04-0.058]	0 [0-0]	0.35 [0.3-0.42]	0.98 [0.75-1.2]	0.15 [0.14-0.16]	0.086 [0.085-0.087]	0.61 [0.58-0.63]	1 [0.84-1.2]
Flutriafol	50	97%	0.012 [0.01-0.015]	0 [0-0]	0.063 [0.052-0.071]	0.2 [0.17-0.28]	0.025 [0.023-0.027]	0.009 [0.0086-0.0093]	0.12 [0.11-0.15]	0.25 [0.22-0.33]
Imidacloprid	400	97%	0.034 [0.03-0.039]	0 [0-0]	0.25 [0.22-0.28]	0.57 [0.48-0.68]	0.14 [0.14-0.15]	0.087 [0.084-0.088]	0.58 [0.52-0.63]	0.8 [0.77-0.84]
Indoxacarb	100	75%	0.038 [0.034-0.043]	0 [0-0]	0.34 [0.32-0.38]	0.7 [0.61-0.8]	0.13 [0.13-0.14]	0.087 [0.086-0.088]	0.57 [0.5-0.59]	0.82 [0.73-0.85]

Table 4 Exposure (µg/kg bw/day) of **Australian children** consumers using **10% and 100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Children - 10% usage				Children- 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UC]
Malathion	2000	88%	0.015 [0.013-0.016]	0 [0-0]	0.17 [0.15-0.19]	0.29 [0.25-0.31]	0.13 [0.12-0.13]	0.087 [0.086-0.089]	0.5 [0.49-0.51]	0.66 [0.65-0.7]
Methoxyfenozide	900	75%	0.014 [0.013-0.015]	0 [0-0]	0.17 [0.16-0.19]	0.27 [0.25-0.3]	0.13 [0.13-0.14]	0.09 [0.088-0.09]	0.48 [0.47-0.5]	0.68 [0.63-0.71]
Pyraclostrobin	50	68%	0.019 [0.016-0.02]	0 [0-0]	0.19 [0.19-0.21]	0.37 [0.32-0.41]	0.11 [0.11-0.11]	0.08 [0.078-0.082]	0.47 [0.43-0.47]	0.63 [0.61-0.72]
Sulfoxaflor	300	78%	0.025 [0.021-0.027]	0 [0-0]	0.22 [0.2-0.25]	0.41 [0.37-0.47]	0.15 [0.15-0.15]	0.1 [0.096-0.1]	0.56 [0.5-0.61]	0.76 [0.73-0.77]
Tebuconazole	300	80%	0.0011 [0.001-0.0012]	0 [0-0]	0.016 [0.014-0.018]	0.025 [0.023-0.027]	0.011 [0.011-0.011]	0.006 [0.0057-0.0061]	0.047 [0.04-0.048]	0.073 [0.066-0.073]
Triadimenol	80	65%	0.0012 [0.0011-0.0013]	0 [0-0]	0.018 [0.016-0.019]	0.026 [0.024-0.027]	0.012 [0.012-0.012]	0.0091 [0.0085-0.0092]	0.045 [0.039-0.046]	0.065 [0.055-0.065]

Table 5 Exposure (µg/kg bw/day) of **Canadian adult** consumers using **10% usage** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Buprofezin	500	96%	0.0057 [0.0052-0.0061]	0 [0-0]	0.046 [0.043-0.05]	0.077 [0.07-0.085]	0.047 [0.047-0.048]	0.035 [0.035-0.036]	0.17 [0.16-0.17]	0.21 [0.2-0.22]
Carbofuran	1	87%	0.0021 [0.002-0.0023]	0 [0-0]	0.024 [0.022-0.027]	0.039 [0.036-0.042]	0.021 [0.021-0.022]	0.015 [0.014-0.015]	0.084 [0.08-0.089]	0.11 [0.11-0.12]
Cyromazine	100	84%	0.0078 [0.007-0.0088]	0 [0-0]	0.079 [0.068-0.088]	0.17 [0.14-0.2]	0.072 [0.07-0.075]	0.028 [0.027-0.03]	0.4 [0.38-0.42]	0.57 [0.54-0.62]
Dichlorvos	100	99%	0.006 [0.0057-0.0063]	0 [0-0]	0.05 [0.048-0.054]	0.078 [0.072-0.083]	0.06 [0.059-0.06]	0.049 [0.048-0.05]	0.18 [0.17-0.18]	0.22 [0.21-0.23]
Etofenprox	1000	77%	0.0018 [0.0016-0.002]	0 [0-0]	0.022 [0.02-0.024]	0.035 [0.032-0.038]	0.017 [0.017-0.018]	0.0094 [0.009-0.0098]	0.074 [0.071-0.078]	0.1 [0.094-0.11]
Flutriafol	50	95%	0.0031 [0.0029-0.0034]	0 [0-0]	0.028 [0.026-0.029]	0.045 [0.041-0.05]	0.027 [0.026-0.027]	0.018 [0.018-0.019]	0.098 [0.095-0.1]	0.14 [0.13-0.14]
Indoxacarb	100	98%	0.0058 [0.0053-0.0067]	0 [0-0]	0.042 [0.039-0.045]	0.069 [0.063-0.077]	0.043 [0.042-0.044]	0.032 [0.031-0.033]	0.14 [0.14-0.15]	0.19 [0.18-0.2]
Malathion	2000	99%	0.0095 [0.0087-0.011]	0 [0-0]	0.065 [0.058-0.073]	0.13 [0.11-0.15]	0.051 [0.049-0.052]	0.04 [0.039-0.04]	0.16 [0.15-0.17]	0.22 [0.2-0.23]
Phorate	3	93%	0.0032 [0.003-0.0035]	0 [0-0]	0.032 [0.03-0.034]	0.052 [0.048-0.057]	0.032 [0.032-0.033]	0.024 [0.023-0.024]	0.12 [0.11-0.12]	0.15 [0.15-0.16]
Phosmet	200	80%	0.013 [0.011-0.016]	0 [0-0]	0.11 [0.095-0.13]	0.24 [0.2-0.28]	0.036 [0.034-0.039]	0.019 [0.018-0.019]	0.17 [0.16-0.18]	0.28 [0.25-0.32]
Profenofos	1000	96%	0.0028 [0.0026-0.003]	0 [0-0]	0.026 [0.024-0.028]	0.043 [0.039-0.046]	0.028 [0.027-0.029]	0.02 [0.02-0.02]	0.11 [0.1-0.12]	0.17 [0.16-0.18]

Table 6 Exposure (µg/kg bw/day) of **Canadian children** consumers using 10**% usage** and **100% usage**
F: Consumption data with a coefficient of variation (CV) greater than 33.3% was suppressed due to extreme sampling variability

Pesticides	ARfD	% of consumers = exposed individuals	Children - 10% usage				Children - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Buprofezin	500	98%	0.024 [0.022-0.026]	0 [0-0]	0.18 [0.17-0.19]	0.3 [0.27-0.34]	0.19 [0.19-0.2]	0.15 [0.15-0.16]	0.62 [0.59-0.64]	0.8 [0.74-0.84]
Carbofuran	1	87%	0.0069 [0.0064-0.0075]	0 [0-0]	0.078 [0.071-0.084]	0.13 [0.11-0.14]	0.069 [0.068-0.071]	0.046 [0.045-0.048]	0.27 [0.25-0.28]	0.36 [0.34-0.38]
Cyromazine	100	77%	0.026 [0.023-0.03]	0 [0-0]	0.26 [0.23-0.32]	0.62 [0.53-0.71]	0.24 [0.24-0.26]	0.075 [0.071-0.08]	1.4 [1.4-1.5]	2 [1.8-2.2]
Dichlorvos	100	99%	0.017 [0.016-0.018]	0 [0-0]	0.13 [0.12-0.13]	0.2 [0.18-0.21]	0.17 [0.16-0.17]	0.14 [0.14-0.14]	0.49 [0.48-0.52]	0.65 [0.61-0.67]
Etofenprox	1000	87%	0.0094 [0.0086-0.011]	0 [0-0]	0.11 [0.092-0.11]	0.18 [0.17-0.2]	0.091 [0.089-0.094]	0.058 [0.057-0.06]	0.36 [0.35-0.39]	0.49 [0.45-0.54]
Flutriafol	50	97%	0.017 [0.016-0.018]	0 [0-0]	0.15 [0.14-0.16]	0.26 [0.24-0.29]	0.13 [0.13-0.14]	0.098 [0.095-0.1]	0.48 [0.46-0.51]	0.64 [0.6-0.67]
Indoxacarb	100	98%	0.027 [0.024-0.033]	0 [0-0]	0.19 [0.18-0.21]	0.35 [0.31-0.4]	0.17 [0.16-0.18]	0.12 [0.12-0.12]	0.6 [0.56-0.62]	0.79 [0.76-0.84]
Malathion	2000	100%	0.05 [0.045-0.056]	F [F-F]	0.36 [0.32-0.4]	0.7 [0.63-0.81]	0.22 [0.22-0.23]	0.18 [0.18-0.18]	0.65 [0.63-0.68]	0.95 [0.87-1]
Phorate	3	92%	0.008 [0.0074-0.0087]	0 [0-0]	0.077 [0.072-0.084]	0.14 [0.12-0.15]	0.08 [0.079-0.082]	0.054 [0.053-0.055]	0.32 [0.3-0.35]	0.42 [0.4-0.5]
Phosmet	200	89%	0.084 [0.073-0.099]	0 [0-0]	0.68 [0.63-0.77]	1.5 [1.3-1.7]	0.18 [0.17-0.2]	0.091 [0.088-0.093]	0.84 [0.78-0.93]	1.6 [1.4-1.9]
Profenofos	1000	91%	0.0068 [0.0063-0.0074]	0 [0-0]	0.068 [0.064-0.074]	0.11 [0.1-0.13]	0.069 [0.067-0.07]	0.047 [0.046-0.048]	0.26 [0.24-0.28]	0.37 [0.37-0.4]

Table 7 Exposure (µg/kg bw/day) of **Czech Republic adult** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Buprofezin	500	92%	0.0072 [0.0066-0.0079]	0 [0-0]	0.066 [0.059-0.072]	0.12 [0.11-0.14]	0.047 [0.046-0.048]	0.032 [0.031-0.033]	0.18 [0.18-0.2]	0.26 [0.24-0.28]
Carbofuran	1	26%	0.0022 [0.0017-0.0033]	0 [0-0]	0.021 [0.018-0.024]	0.033 [0.028-0.045]	0.023 [0.021-0.025]	0.015 [0.015-0.016]	0.078 [0.073-0.085]	0.11 [0.098-0.13]
Chlorpyrifos-methyl	100	97%	0.0058 [0.0053-0.0063]	0 [0-0]	0.044 [0.041-0.048]	0.079 [0.072-0.09]	0.043 [0.042-0.044]	0.033 [0.032-0.034]	0.15 [0.14-0.15]	0.21 [0.19-0.22]
Clothianidin	600	98%	0.0055 [0.0052-0.0057]	0 [0-0]	0.045 [0.043-0.048]	0.065 [0.061-0.071]	0.054 [0.053-0.055]	0.045 [0.044-0.046]	0.16 [0.16-0.16]	0.2 [0.19-0.2]
Cyfluthrin/beta-cyfluthrin	40	96%	0.0055 [0.0051-0.006]	0 [0-0]	0.05 [0.046-0.054]	0.079 [0.073-0.089]	0.055 [0.054-0.056]	0.039 [0.038-0.04]	0.22 [0.21-0.24]	0.31 [0.29-0.33]
Cypermethrins	40	100%	0.011 [0.0096-0.012]	0 [0-0]	0.08 [0.073-0.087]	0.14 [0.13-0.16]	0.087 [0.085-0.09]	0.058 [0.057-0.06]	0.31 [0.3-0.33]	0.5 [0.45-0.57]
Cyproconazole	60	86%	0.0018 [0.0016-0.002]	0 [0-0]	0.019 [0.017-0.021]	0.038 [0.033-0.044]	0.018 [0.017-0.018]	0.0097 [0.0094-0.01]	0.083 [0.079-0.088]	0.11 [0.11-0.12]
Cyromazine	100	82%	0.0021 [0.0019-0.0025]	0 [0-0]	0.021 [0.019-0.024]	0.043 [0.037-0.05]	0.02 [0.019-0.021]	0.0077 [0.0074-0.0081]	0.11 [0.11-0.12]	0.16 [0.15-0.17]
Dichlorvos	100	85%	0.0016 [0.0014-0.0017]	0 [0-0]	0.017 [0.015-0.019]	0.036 [0.031-0.039]	0.016 [0.015-0.016]	0.0087 [0.0085-0.0089]	0.076 [0.072-0.079]	0.1 [0.098-0.11]
Difenoconazole	300	100%	0.009 [0.0085-0.011]	0.00022 [0.00012-0.00038]	0.064 [0.06-0.069]	0.11 [0.099-0.12]	0.066 [0.065-0.067]	0.051 [0.05-0.052]	0.22 [0.21-0.23]	0.28 [0.26-0.29]
Dimethomorph	600	98%	0.0065 [0.0056-0.0081]	0 [0-0]	0.043 [0.041-0.046]	0.076 [0.068-0.084]	0.041 [0.04-0.043]	0.031 [0.03-0.031]	0.14 [0.13-0.14]	0.18 [0.17-0.18]
Diquat	800	88%	0.0085 [0.0081-0.009]	0 [0-0]	0.073 [0.069-0.077]	0.11 [0.099-0.12]	0.057 [0.056-0.058]	0.039 [0.038-0.04]	0.21 [0.2-0.21]	0.27 [0.25-0.28]
Dithianon	100	88%	0.032 [0.028-0.037]	0 [0-0]	0.25 [0.21-0.29]	0.63 [0.52-0.77]	0.059 [0.053-0.064]	0.021 [0.021-0.022]	0.3 [0.26-0.35]	0.7 [0.58-0.86]
Emamectinbenzoate	20	87%	0.0032 [0.0029-0.0033]	0 [0-0]	0.033 [0.031-0.036]	0.052 [0.047-0.058]	0.031 [0.031-0.032]	0.023 [0.022-0.023]	0.11 [0.11-0.12]	0.14 [0.14-0.15]

Table 7 Exposure (µg/kg bw/day) of **Czech Republic adult** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Etofenprox	1000	91%	0.0049 [0.0041-0.0057]	0 [0-0]	0.042 [0.037-0.046]	0.083 [0.071-0.095]	0.031 [0.03-0.032]	0.02 [0.019-0.02]	0.12 [0.12-0.13]	0.16 [0.15-0.17]
Fenbuconazole	200	94%	0.0037 [0.0034-0.004]	0 [0-0]	0.033 [0.03-0.035]	0.054 [0.051-0.061]	0.033 [0.033-0.034]	0.024 [0.023-0.024]	0.13 [0.12-0.13]	0.17 [0.16-0.19]
Fenpropathrin	30	90%	0.0025 [0.0023-0.003]	0 [0-0]	0.025 [0.022-0.027]	0.042 [0.038-0.048]	0.025 [0.024-0.026]	0.015 [0.015-0.016]	0.1 [0.097-0.11]	0.15 [0.14-0.16]
Fluopyram	500	99%	0.0082 [0.0074-0.0095]	0 [0-0]	0.055 [0.051-0.06]	0.11 [0.099-0.14]	0.038 [0.037-0.04]	0.029 [0.029-0.03]	0.12 [0.12-0.13]	0.17 [0.16-0.19]
Flutriafol	50	93%	0.0047 [0.0044-0.0051]	0 [0-0]	0.043 [0.039-0.046]	0.068 [0.062-0.077]	0.043 [0.042-0.044]	0.032 [0.031-0.032]	0.15 [0.15-0.16]	0.2 [0.19-0.21]
Fluxapyroxad	300	100%	0.0043 [0.0041-0.0044]	0 [0-0]	0.034 [0.033-0.036]	0.048 [0.046-0.051]	0.042 [0.042-0.043]	0.036 [0.035-0.037]	0.12 [0.12-0.12]	0.15 [0.14-0.15]
Imidacloprid	400	100%	0.0093 [0.0084-0.011]	0 [0-0]	0.063 [0.059-0.067]	0.1 [0.096-0.12]	0.062 [0.06-0.064]	0.05 [0.049-0.051]	0.18 [0.18-0.19]	0.24 [0.23-0.25]
Indoxacarb	100	95%	0.0067 [0.0063-0.0074]	0 [0-0]	0.056 [0.052-0.059]	0.091 [0.082-0.098]	0.06 [0.058-0.061]	0.044 [0.043-0.045]	0.2 [0.2-0.21]	0.27 [0.26-0.29]
Malathion	2000	92%	0.0022 [0.0021-0.0024]	0 [0-0]	0.024 [0.023-0.026]	0.037 [0.034-0.042]	0.022 [0.021-0.022]	0.015 [0.015-0.016]	0.084 [0.081-0.088]	0.11 [0.11-0.12]
Methoxyfenozide	900	96%	0.0053 [0.0049-0.0058]	0 [0-0]	0.045 [0.043-0.048]	0.076 [0.069-0.084]	0.04 [0.039-0.041]	0.03 [0.029-0.031]	0.14 [0.13-0.14]	0.17 [0.16-0.18]
Phorate	3	88%	0.0036 [0.0033-0.0039]	0 [0-0]	0.038 [0.036-0.041]	0.064 [0.057-0.07]	0.036 [0.035-0.037]	0.026 [0.025-0.026]	0.14 [0.14-0.15]	0.18 [0.17-0.19]
Phosmet	200	92%	0.0063 [0.0056-0.007]	0 [0-0]	0.052 [0.048-0.058]	0.1 [0.092-0.12]	0.046 [0.045-0.047]	0.032 [0.031-0.033]	0.18 [0.17-0.18]	0.24 [0.22-0.25]
Profenofos	1000	86%	0.0018 [0.0015-0.0022]	0 [0-0]	0.015 [0.014-0.016]	0.033 [0.029-0.038]	0.018 [0.017-0.02]	0.0072 [0.007-0.0075]	0.096 [0.088-0.11]	0.18 [0.16-0.22]
Prothioconazole	10	86%	0.0041 [0.0036-0.0045]	0 [0-0]	0.039 [0.037-0.042]	0.07 [0.061-0.077]	0.041 [0.039-0.042]	0.026 [0.026-0.027]	0.19 [0.17-0.2]	0.29 [0.27-0.32]
Pyraclostrobin	50	100%	0.012 [0.011-0.013]	0 [0-0]	0.089 [0.081-0.097]	0.15 [0.14-0.17]	0.063 [0.062-0.064]	0.05 [0.049-0.051]	0.19 [0.19-0.2]	0.25 [0.24-0.27]

Table 7 Exposure (µg/kg bw/day) of **Czech Republic adult** consumers using **10%** and **100% usage**

Pesticides	**ARfD**	**% of consumers = exposed individuals**	**Adults - 10% usage**				**Adults - 100% usage**			
			Mean [95%UI]	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**	**Mean [95%UI]**	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**
Tebuconazole	300	99%	0.01 [0.0089-0.012]	0 [0-0]	0.071 [0.065-0.078]	0.14 [0.13-0.16]	0.052 [0.05-0.053]	0.035 [0.035-0.036]	0.19 [0.18-0.19]	0.25 [0.24-0.28]
Thiamethoxam	1000	98%	0.0065 [0.0062-0.0071]	0 [0-0]	0.049 [0.046-0.052]	0.077 [0.07-0.085]	0.058 [0.057-0.059]	0.046 [0.046-0.047]	0.18 [0.17-0.18]	0.23 [0.22-0.24]
Triadimenol	80	94%	0.0048 [0.0043-0.0053]	0 [0-0]	0.041 [0.037-0.044]	0.073 [0.064-0.082]	0.04 [0.039-0.041]	0.027 [0.026-0.028]	0.16 [0.15-0.16]	0.22 [0.2-0.24]
Triflumizole	300	75%	0.0021 [0.0019-0.0023]	0 [0-0]	0.027 [0.023-0.031]	0.049 [0.044-0.056]	0.02 [0.02-0.021]	0.01 [0.01-0.011]	0.095 [0.091-0.097]	0.12 [0.11-0.13]

Table 8 Exposure (µg/kg bw/day) of **Italian adult** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Buprofezin	500	98%	0.003 [0.0028-0.0033]	0 [0-0]	0.036 [0.035-0.038]	0.052 [0.048-0.057]	0.03 [0.03-0.031]	0.026 [0.025-0.026]	0.1 [0.097-0.1]	0.13 [0.12-0.14]
Carbofuran	1	0%	0.00017 [0-0.0026]	0 [0-0]	0.0011 [0-0.026]	0.0012 [0-0.037]	0.004 [0.0023-0.0096]	0.0021 [0.0011-0.0057]	0.011 [0.0057-0.044]	0.011 [0.0057-0.044]
Chlorpyrifos-methyl	100	96%	0.0013 [0.0011-0.0015]	0 [0-0]	0.015 [0.013-0.017]	0.029 [0.025-0.033]	0.013 [0.013-0.014]	0.0066 [0.0064-0.0068]	0.056 [0.053-0.063]	0.12 [0.1-0.14]
Clothianidin	600	99%	0.0027 [0.0025-0.0029]	0 [0-0]	0.035 [0.033-0.036]	0.045 [0.042-0.047]	0.027 [0.027-0.027]	0.025 [0.025-0.025]	0.071 [0.069-0.074]	0.09 [0.086-0.096]
Cyfluthrin/beta-cyfluthrin	40	96%	0.001 [0.00095-0.0012]	0 [0-0]	0.011 [0.0098-0.014]	0.03 [0.027-0.033]	0.011 [0.01-0.011]	0.0049 [0.0048-0.005]	0.055 [0.052-0.058]	0.077 [0.072-0.08]
Cypermethrins	40	100%	0.0015 [0.0013-0.0017]	0 [0-0]	0.019 [0.015-0.022]	0.038 [0.035-0.042]	0.015 [0.014-0.015]	0.006 [0.0059-0.0061]	0.073 [0.071-0.075]	0.1 [0.094-0.11]
Cyproconazole	60	96%	0.0019 [0.0018-0.002]	0 [0-0]	0.024 [0.023-0.026]	0.038 [0.035-0.041]	0.019 [0.018-0.019]	0.015 [0.015-0.015]	0.059 [0.057-0.061]	0.076 [0.073-0.079]
Cyromazine	100	4%	0.00063 [0.00044-0.00086]	0 [0-0]	0.0084 [0.0072-0.0092]	0.0099 [0.0085-0.011]	0.0064 [0.0062-0.0066]	0.0069 [0.0063-0.0072]	0.012 [0.011-0.013]	0.014 [0.012-0.017]
Dichlorvos	100	96%	0.0018 [0.0017-0.0019]	0 [0-0]	0.025 [0.024-0.027]	0.036 [0.034-0.038]	0.018 [0.018-0.018]	0.016 [0.015-0.016]	0.051 [0.05-0.052]	0.064 [0.06-0.068]
Difenoconazole	300	97%	0.0027 [0.0025-0.0029]	0 [0-0]	0.035 [0.033-0.036]	0.047 [0.045-0.05]	0.027 [0.027-0.027]	0.025 [0.025-0.025]	0.074 [0.071-0.077]	0.09 [0.087-0.094]
Dimethomorph	600	97%	0.0027 [0.0025-0.0029]	0 [0-0]	0.034 [0.033-0.036]	0.044 [0.042-0.046]	0.027 [0.026-0.027]	0.025 [0.025-0.025]	0.067 [0.065-0.069]	0.083 [0.081-0.086]
Diquat	800	0%	0.0011 [0-0.012]	0 [0-0]	0.0092 [0-0.072]	0.011 [0-0.081]	0.022 [0.013-0.035]	0.013 [0.011-0.019]	0.088 [0.019-0.088]	0.088 [0.02-0.088]
Dithianon	100	96%	0.0026 [0.0024-0.0027]	0 [0-0]	0.034 [0.032-0.035]	0.044 [0.042-0.046]	0.026 [0.025-0.026]	0.025 [0.024-0.025]	0.06 [0.059-0.063]	0.079 [0.075-0.081]
Emamectinbenzoate	20	97%	0.0027 [0.0025-0.0029]	0 [0-0]	0.034 [0.033-0.036]	0.045 [0.042-0.046]	0.027 [0.026-0.027]	0.025 [0.025-0.025]	0.068 [0.065-0.07]	0.083 [0.081-0.087]

Table 8 Exposure (µg/kg bw/day) of **Italian adult** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Etofenprox	1000	96%	0.0025 [0.0024-0.0027]	0 [0-0]	0.034 [0.032-0.035]	0.044 [0.042-0.046]	0.025 [0.025-0.026]	0.024 [0.024-0.025]	0.062 [0.06-0.065]	0.08 [0.077-0.082]
Fenbuconazole	200	97%	0.0017 [0.0015-0.0018]	0 [0-0]	0.021 [0.02-0.022]	0.032 [0.03-0.034]	0.017 [0.016-0.017]	0.014 [0.014-0.015]	0.047 [0.045-0.048]	0.057 [0.054-0.06]
Fenpropathrin	30	97%	0.0018 [0.0017-0.0019]	0 [0-0]	0.023 [0.022-0.024]	0.037 [0.034-0.04]	0.018 [0.018-0.019]	0.015 [0.015-0.015]	0.059 [0.056-0.061]	0.076 [0.071-0.08]
Fluopyram	500	7%	0.00051 [0.00039-0.00065]	0 [0-0]	0.0077 [0.0061-0.0086]	0.0096 [0.0086-0.011]	0.0052 [0.005-0.0054]	0.0048 [0.0043-0.0051]	0.012 [0.012-0.014]	0.015 [0.014-0.017]
Flutriafol	50	97%	0.0028 [0.0025-0.003]	0 [0-0]	0.035 [0.033-0.036]	0.045 [0.043-0.048]	0.027 [0.027-0.028]	0.025 [0.025-0.025]	0.071 [0.068-0.074]	0.091 [0.086-0.098]
Fluxapyroxad	300	99%	0.0015 [0.0013-0.0016]	0 [0-0]	0.018 [0.017-0.019]	0.025 [0.023-0.026]	0.015 [0.014-0.015]	0.013 [0.013-0.013]	0.042 [0.04-0.043]	0.053 [0.052-0.055]
Imidacloprid	400	100%	0.0027 [0.0026-0.0029]	0 [0-0]	0.035 [0.033-0.036]	0.045 [0.043-0.048]	0.027 [0.026-0.027]	0.025 [0.025-0.025]	0.07 [0.068-0.073]	0.089 [0.086-0.093]
Indoxacarb	100	97%	0.0033 [0.003-0.0036]	0 [0-0]	0.037 [0.036-0.039]	0.056 [0.05-0.064]	0.033 [0.032-0.034]	0.026 [0.026-0.026]	0.13 [0.13-0.14]	0.18 [0.17-0.19]
Methoxyfenozide	900	98%	0.0027 [0.0025-0.0029]	0 [0-0]	0.035 [0.033-0.036]	0.045 [0.042-0.047]	0.027 [0.026-0.027]	0.025 [0.025-0.025]	0.069 [0.067-0.072]	0.086 [0.083-0.09]
Phorate	3	96%	0.0025 [0.0024-0.0027]	0 [0-0]	0.034 [0.032-0.035]	0.043 [0.042-0.045]	0.025 [0.025-0.025]	0.024 [0.024-0.025]	0.06 [0.057-0.062]	0.078 [0.074-0.08]
Phosmet	200	97%	0.0024 [0.0022-0.0026]	0 [0-0]	0.032 [0.03-0.035]	0.054 [0.05-0.059]	0.024 [0.023-0.024]	0.017 [0.016-0.017]	0.085 [0.083-0.088]	0.1 [0.1-0.11]
Profenofos	1000	96%	0.002 [0.0017-0.0024]	0 [0-0]	0.018 [0.016-0.021]	0.035 [0.032-0.038]	0.02 [0.019-0.021]	0.0069 [0.0068-0.0071]	0.15 [0.091-0.18]	0.31 [0.29-0.34]
Prothioconazole	10	99%	0.0027 [0.0026-0.003]	0 [0-0]	0.034 [0.033-0.036]	0.044 [0.042-0.047]	0.027 [0.027-0.028]	0.025 [0.025-0.025]	0.069 [0.068-0.073]	0.089 [0.086-0.096]
Pyraclostrobin	50	100%	0.0027 [0.0025-0.0028]	0 [0-0]	0.034 [0.033-0.036]	0.044 [0.042-0.046]	0.027 [0.026-0.027]	0.025 [0.025-0.025]	0.068 [0.066-0.071]	0.085 [0.081-0.088]
Tebuconazole	300	97%	0.0026 [0.0024-0.0028]	0 [0-0]	0.034 [0.033-0.035]	0.043 [0.042-0.045]	0.026 [0.025-0.026]	0.025 [0.024-0.025]	0.06 [0.059-0.063]	0.079 [0.075-0.081]

Table 8 Exposure (µg/kg bw/day) of **Italian adult** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**	**Mean [95%UI]**	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**
Thiamethoxam	1000	99%	0.0028 [0.0026-0.0032]	0 [0-0]	0.035 [0.033-0.036]	0.045 [0.043-0.048]	0.027 [0.027-0.028]	0.025 [0.025-0.025]	0.071 [0.068-0.074]	0.091 [0.086-0.098]
Triadimenol	80	97%	0.0017 [0.0016-0.002]	0 [0-0]	0.021 [0.02-0.023]	0.032 [0.029-0.035]	0.018 [0.017-0.018]	0.014 [0.014-0.014]	0.055 [0.053-0.058]	0.086 [0.079-0.091]
Triflumizole	300	96%	0.0026 [0.0024-0.0028]	0 [0-0]	0.034 [0.032-0.036]	0.043 [0.042-0.045]	0.026 [0.025-0.026]	0.025 [0.024-0.025]	0.06 [0.059-0.063]	0.079 [0.076-0.081]

Table 9 Exposure (µg/kg bw/day) of **Netherlands children** consumers using **10%** and **100% usage**										
Pesticides	**ARfD**	**% of consumers = exposed individuals**	**Children - 10% usage**				**Children - 100% usage**			
			Mean [95%UI]	**Median [95%U]**	**P97.5 [95%UI]**	**P99 [95%UI]**	**Mean [95%UI]**	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**
Buprofezin	500	90%	0.04 [0.037-0.044]	0 [0-0]	0.39 [0.36-0.43]	0.71 [0.61-0.79]	0.22 [0.22-0.23]	0.16 [0.16-0.17]	0.79 [0.75-0.83]	1.1 [1.1-1.2]
Carbofuran	1	32%	0.0073 [0.0064-0.0086]	0 [0-0]	0.083 [0.079-0.087]	0.11 [0.097-0.13]	0.073 [0.07-0.076]	0.064 [0.063-0.067]	0.26 [0.23-0.29]	0.37 [0.34-0.4]
Chlorpyrifos-methyl	100	95%	0.011 [0.01-0.012]	0 [0-0]	0.1 [0.094-0.11]	0.19 [0.17-0.21]	0.11 [0.1-0.11]	0.069 [0.068-0.071]	0.41 [0.38-0.43]	0.64 [0.57-0.74]
Clothianidin	600	100%	0.018 [0.017-0.019]	0 [0-0]	0.19 [0.18-0.2]	0.29 [0.26-0.31]	0.18 [0.18-0.18]	0.15 [0.15-0.16]	0.48 [0.47-0.5]	0.59 [0.58-0.61]
Cyfluthrin/beta-cyfluthrin	40	93%	0.011 [0.0099-0.012]	0 [0-0]	0.12 [0.11-0.12]	0.2 [0.18-0.23]	0.11 [0.11-0.11]	0.066 [0.064-0.068]	0.48 [0.46-0.51]	0.68 [0.65-0.72]
Cypermethrins	40	96%	0.016 [0.014-0.019]	0 [0-0]	0.16 [0.15-0.18]	0.29 [0.26-0.32]	0.14 [0.14-0.15]	0.085 [0.083-0.088]	0.56 [0.53-0.58]	0.75 [0.71-0.81]
Cyproconazole	60	72%	0.012 [0.011-0.013]	0 [0-0]	0.15 [0.14-0.17]	0.24 [0.22-0.27]	0.12 [0.12-0.12]	0.091 [0.089-0.093]	0.39 [0.38-0.42]	0.53 [0.49-0.56]
Cyromazine	100	5%	0.0075 [0.0043-0.011]	0 [0-0]	0.088 [0.052-0.15]	0.19 [0.11-0.35]	0.043 [0.036-0.05]	0.01 [0.008-0.015]	0.29 [0.21-0.39]	0.44 [0.31-0.52]
Dichlorvos	100	72%	0.012 [0.011-0.013]	0 [0-0]	0.16 [0.15-0.17]	0.23 [0.21-0.25]	0.12 [0.11-0.12]	0.091 [0.09-0.093]	0.36 [0.35-0.37]	0.44 [0.43-0.47]
Difenoconazole	300	99%	0.02 [0.019-0.021]	0 [0-0]	0.21 [0.2-0.22]	0.33 [0.31-0.35]	0.19 [0.19-0.2]	0.16 [0.16-0.16]	0.6 [0.58-0.61]	0.73 [0.7-0.76]
Dimethomorph	600	93%	0.025 [0.022-0.029]	0 [0-0]	0.22 [0.21-0.24]	0.36 [0.33-0.39]	0.17 [0.16-0.17]	0.14 [0.13-0.14]	0.47 [0.46-0.48]	0.59 [0.58-0.62]
Diquat	800	77%	0.024 [0.022-0.026]	0 [0-0]	0.3 [0.27-0.33]	0.43 [0.41-0.44]	0.19 [0.19-0.2]	0.11 [0.1-0.11]	0.66 [0.63-0.7]	0.83 [0.79-0.86]
Dithianon	100	80%	0.05 [0.042-0.057]	0 [0-0]	0.34 [0.31-0.37]	0.82 [0.66-0.99]	0.2 [0.2-0.21]	0.15 [0.14-0.15]	0.6 [0.58-0.67]	1.2 [1-1.4]
Emamectinbenzoate	20	81%	0.016 [0.015-0.017]	0 [0-0]	0.2 [0.19-0.21]	0.3 [0.28-0.32]	0.16 [0.16-0.16]	0.14 [0.14-0.14]	0.43 [0.42-0.45]	0.55 [0.51-0.58]
Etofenprox	1000	80%	0.019 [0.017-0.021]	0 [0-0]	0.22 [0.2-0.23]	0.33 [0.3-0.36]	0.16 [0.16-0.17]	0.14 [0.14-0.14]	0.45 [0.44-0.47]	0.58 [0.56-0.6]

Table 9 Exposure (µg/kg bw/day) of **Netherlands children** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Children - 10% usage				Children - 100% usage			
			Mean [95%UI]	Median [95%U]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Fenbuconazole	200	89%	0.013 [0.012-0.014]	0 [0-0]	0.14 [0.13-0.15]	0.21 [0.2-0.23]	0.13 [0.13-0.13]	0.1 [0.099-0.1]	0.41 [0.39-0.42]	0.57 [0.52-0.6]
Fenpropathrin	30	76%	0.012 [0.011-0.013]	0 [0-0]	0.15 [0.13-0.16]	0.23 [0.21-0.25]	0.12 [0.11-0.12]	0.089 [0.087-0.09]	0.39 [0.37-0.41]	0.53 [0.49-0.56]
Fluopyram	500	78%	0.021 [0.018-0.026]	0 [0-0]	0.12 [0.1-0.13]	0.35 [0.27-0.47]	0.084 [0.081-0.09]	0.061 [0.06-0.062]	0.24 [0.22-0.26]	0.45 [0.38-0.56]
Flutriafol	50	90%	0.018 [0.017-0.02]	0 [0-0]	0.21 [0.19-0.22]	0.31 [0.29-0.33]	0.18 [0.18-0.18]	0.15 [0.15-0.15]	0.51 [0.49-0.53]	0.63 [0.61-0.66]
Fluxapyroxad	300	100%	0.012 [0.011-0.012]	0 [0-0]	0.11 [0.11-0.12]	0.16 [0.15-0.17]	0.12 [0.11-0.12]	0.1 [0.098-0.1]	0.31 [0.31-0.32]	0.37 [0.36-0.38]
Imidacloprid	400	100%	0.022 [0.02-0.024]	0 [0-0]	0.21 [0.2-0.22]	0.32 [0.29-0.34]	0.19 [0.18-0.19]	0.16 [0.15-0.16]	0.52 [0.51-0.54]	0.65 [0.62-0.67]
Indoxacarb	100	94%	0.021 [0.02-0.023]	0 [0-0]	0.22 [0.21-0.23]	0.35 [0.33-0.38]	0.2 [0.2-0.21]	0.15 [0.15-0.16]	0.75 [0.7-0.8]	1.1 [1-1.2]
Malathion	2000	29%	0.0052 [0.0044-0.0059]	0 [0-0]	0.067 [0.061-0.073]	0.092 [0.082-0.11]	0.051 [0.05-0.052]	0.044 [0.043-0.045]	0.16 [0.15-0.17]	0.21 [0.19-0.21]
Methoxyfenozide	900	84%	0.019 [0.018-0.02]	0 [0-0]	0.21 [0.2-0.22]	0.32 [0.3-0.35]	0.16 [0.16-0.17]	0.14 [0.14-0.14]	0.44 [0.43-0.47]	0.57 [0.54-0.58]
Phorate	3	88%	0.016 [0.015-0.018]	0 [0-0]	0.2 [0.19-0.22]	0.3 [0.28-0.32]	0.16 [0.16-0.17]	0.14 [0.14-0.14]	0.47 [0.46-0.49]	0.58 [0.57-0.59]
Phosmet	200	93%	0.018 [0.016-0.019]	0 [0-0]	0.19 [0.17-0.21]	0.34 [0.31-0.38]	0.16 [0.16-0.17]	0.12 [0.11-0.12]	0.61 [0.6-0.64]	0.77 [0.75-0.82]
Profenofos	1000	72%	0.013 [0.01-0.015]	0 [0-0]	0.11 [0.095-0.13]	0.22 [0.19-0.27]	0.13 [0.12-0.14]	0.045 [0.044-0.047]	0.83 [0.65-0.99]	1.9 [1.7-2]
Prothioconazole	10	89%	0.017 [0.016-0.018]	0 [0-0]	0.2 [0.19-0.22]	0.31 [0.29-0.33]	0.17 [0.17-0.17]	0.14 [0.14-0.14]	0.53 [0.5-0.55]	0.68 [0.63-0.73]
Pyraclostrobin	50	100%	0.025 [0.024-0.027]	0 [0-0]	0.24 [0.22-0.26]	0.36 [0.34-0.39]	0.18 [0.18-0.19]	0.16 [0.15-0.16]	0.52 [0.5-0.54]	0.65 [0.61-0.67]
Tebuconazole	300	89%	0.024 [0.022-0.027]	0 [0-0]	0.23 [0.22-0.25]	0.36 [0.33-0.38]	0.18 [0.18-0.19]	0.15 [0.15-0.15]	0.53 [0.5-0.55]	0.67 [0.64-0.72]

Table 9 Exposure (µg/kg bw/day) of **Netherlands children** consumers using **10%** and **100% usage**										
Pesticides	**ARfD**	**% of consumers = exposed individuals**	**Children - 10% usage**				**Children - 100% usage**			
			Mean [95%UI]	**Median [95%U]**	**P97.5 [95%UI]**	**P99 [95%UI]**	**Mean [95%UI]**	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**
Thiamethoxam	1000	99%	0.019 [0.018-0.02]	0 [0-0]	0.2 [0.19-0.21]	0.3 [0.29-0.32]	0.19 [0.18-0.19]	0.16 [0.16-0.16]	0.53 [0.51-0.54]	0.65 [0.62-0.67]
Triadimenol	80	89%	0.014 [0.013-0.018]	0 [0-0]	0.15 [0.14-0.16]	0.22 [0.21-0.24]	0.14 [0.13-0.14]	0.1 [0.1-0.1]	0.45 [0.42-0.47]	0.63 [0.59-0.68]
Triflumizole	300	75%	0.016 [0.015-0.018]	0 [0-0]	0.21 [0.19-0.22]	0.3 [0.29-0.33]	0.16 [0.16-0.16]	0.14 [0.14-0.14]	0.43 [0.42-0.44]	0.55 [0.51-0.57]

Table 10 Exposure (µg/kg bw/day) of **French children** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Children - 10% usage				Children - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Buprofezin	500	34%	0.0082 [0.0071-0.0098]	0 [0-0]	0.083 [0.069-0.096]	0.13 [0.11-0.15]	0.074 [0.071-0.077]	0.052 [0.05-0.053]	0.27 [0.25-0.3]	0.4 [0.35-0.48]
Carbofuran	1	4%	0.0049 [0.0027-0.013]	0 [0-0]	0.052 [0.039-0.081]	0.089 [0.051-0.14]	0.055 [0.044-0.079]	0.035 [0.029-0.039]	0.19 [0.13-0.31]	0.33 [0.18-0.84]
Chlorpyrifos-methyl	100	35%	0.01 [0.0085-0.013]	0 [0-0]	0.087 [0.074-0.1]	0.16 [0.13-0.22]	0.061 [0.058-0.063]	0.045 [0.042-0.045]	0.2 [0.2-0.22]	0.33 [0.28-0.39]
Clothianidin	600	44%	0.0069 [0.0064-0.0075]	0 [0-0]	0.071 [0.067-0.08]	0.11 [0.1-0.12]	0.066 [0.064-0.067]	0.05 [0.05-0.052]	0.22 [0.21-0.23]	0.27 [0.25-0.29]
Cyfluthrin/beta-cyfluthrin	40	29%	0.0069 [0.0061-0.0084]	0 [0-0]	0.082 [0.067-0.099]	0.13 [0.12-0.16]	0.07 [0.066-0.073]	0.047 [0.045-0.05]	0.29 [0.25-0.32]	0.47 [0.39-0.56]
Cypermethrins	40	46%	0.017 [0.014-0.021]	0 [0-0]	0.13 [0.12-0.16]	0.27 [0.23-0.33]	0.11 [0.11-0.12]	0.065 [0.062-0.067]	0.45 [0.42-0.5]	0.7 [0.62-0.97]
Cyproconazole	60	8%	0.0028 [0.0018-0.0039]	0 [0-0]	0.034 [0.024-0.05]	0.062 [0.045-0.083]	0.027 [0.025-0.03]	0.014 [0.012-0.019]	0.13 [0.1-0.14]	0.2 [0.14-0.26]
Cyromazine	100	26%	0.0094 [0.0073-0.012]	0 [0-0]	0.1 [0.077-0.12]	0.2 [0.16-0.25]	0.062 [0.058-0.067]	0.031 [0.029-0.032]	0.31 [0.29-0.33]	0.42 [0.39-0.47]
Dichlorvos	100	4%	0.0011 [0.00065-0.0019]	0 [0-0]	0.013 [0.0059-0.023]	0.026 [0.017-0.049]	0.011 [0.0098-0.013]	0.0044 [0.0037-0.0047]	0.053 [0.044-0.082]	0.082 [0.056-0.12]
Difenoconazole	300	44%	0.011 [0.0095-0.013]	0 [0-0]	0.1 [0.095-0.12]	0.19 [0.15-0.23]	0.067 [0.064-0.07]	0.044 [0.042-0.045]	0.3 [0.27-0.32]	0.43 [0.38-0.49]
Dimethomorph	600	32%	0.017 [0.011-0.024]	0 [0-0]	0.094 [0.069-0.11]	0.28 [0.19-0.4]	0.045 [0.039-0.05]	0.02 [0.018-0.022]	0.19 [0.17-0.21]	0.34 [0.27-0.48]
Diquat	800	32%	0.012 [0.01-0.013]	0 [0-0]	0.12 [0.11-0.13]	0.2 [0.16-0.22]	0.082 [0.078-0.085]	0.053 [0.05-0.055]	0.32 [0.32-0.35]	0.49 [0.42-0.55]
Dithianon	100	21%	0.11 [0.087-0.14]	0 [0-0]	0.99 [0.74-1.2]	2.2 [1.5-3.2]	0.17 [0.15-0.2]	0.055 [0.052-0.057]	1.1 [0.95-1.4]	2.5 [1.9-3.3]
Emamectinbenzoate	20	32%	0.0061 [0.0055-0.0068]	0 [0-0]	0.066 [0.06-0.074]	0.1 [0.09-0.11]	0.055 [0.054-0.057]	0.045 [0.045-0.048]	0.16 [0.16-0.18]	0.19 [0.19-0.2]
Etofenprox	1000	21%	0.019 [0.014-0.024]	0 [0-0]	0.13 [0.11-0.18]	0.39 [0.26-0.56]	0.065 [0.061-0.071]	0.047 [0.045-0.05]	0.21 [0.19-0.25]	0.46 [0.32-0.59]

Table 10 Exposure (µg/kg bw/day) of **French children** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Children - 10% usage				Children - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Fenbuconazole	200	27%	0.01 [0.0087-0.012]	0 [0-0]	0.1 [0.085-0.11]	0.17 [0.13-0.21]	0.067 [0.064-0.071]	0.05 [0.047-0.051]	0.24 [0.22-0.27]	0.45 [0.35-0.56]
Fenpropathrin	30	23%	0.0045 [0.0034-0.0065]	0 [0-0]	0.051 [0.042-0.059]	0.081 [0.067-0.098]	0.043 [0.04-0.049]	0.028 [0.028-0.029]	0.14 [0.13-0.16]	0.23 [0.18-0.29]
Fluopyram	500	44%	0.027 [0.022-0.034]	0 [0-0]	0.22 [0.17-0.26]	0.52 [0.4-0.68]	0.068 [0.063-0.074]	0.038 [0.037-0.04]	0.26 [0.23-0.29]	0.55 [0.46-0.7]
Flutriafol	50	33%	0.0071 [0.0063-0.008]	0 [0-0]	0.075 [0.067-0.086]	0.12 [0.11-0.13]	0.067 [0.066-0.07]	0.049 [0.047-0.05]	0.26 [0.23-0.27]	0.36 [0.32-0.4]
Fluxapyroxad	300	45%	0.0052 [0.0048-0.0058]	0 [0-0]	0.062 [0.057-0.066]	0.092 [0.08-0.1]	0.053 [0.051-0.054]	0.04 [0.039-0.042]	0.18 [0.17-0.19]	0.21 [0.2-0.21]
Imidacloprid	400	46%	0.016 [0.014-0.021]	0 [0-0]	0.13 [0.12-0.15]	0.26 [0.22-0.33]	0.07 [0.067-0.076]	0.048 [0.047-0.05]	0.26 [0.24-0.28]	0.39 [0.34-0.43]
Indoxacarb	100	33%	0.0099 [0.0083-0.012]	0 [0-0]	0.1 [0.09-0.11]	0.16 [0.13-0.2]	0.073 [0.069-0.076]	0.05 [0.049-0.052]	0.27 [0.25-0.29]	0.37 [0.32-0.44]
Malathion	2000	36%	0.0052 [0.0046-0.0058]	0 [0-0]	0.062 [0.056-0.067]	0.099 [0.086-0.11]	0.05 [0.049-0.052]	0.038 [0.037-0.04]	0.18 [0.17-0.19]	0.23 [0.2-0.24]
Methoxyfenozide	900	44%	0.01 [0.0086-0.012]	0 [0-0]	0.09 [0.08-0.1]	0.15 [0.12-0.19]	0.062 [0.06-0.065]	0.047 [0.045-0.048]	0.2 [0.2-0.21]	0.26 [0.24-0.3]
Phorate	3	10%	0.0034 [0.0024-0.0047]	0 [0-0]	0.045 [0.031-0.056]	0.076 [0.054-0.11]	0.035 [0.031-0.037]	0.019 [0.017-0.023]	0.16 [0.12-0.19]	0.24 [0.18-0.27]
Phosmet	200	21%	0.014 [0.01-0.021]	0 [0-0]	0.11 [0.097-0.13]	0.24 [0.16-0.37]	0.074 [0.069-0.079]	0.053 [0.051-0.055]	0.27 [0.24-0.3]	0.41 [0.32-0.51]
Profenofos	1000	17%	0.0027 [0.0022-0.0033]	0 [0-0]	0.037 [0.03-0.046]	0.059 [0.05-0.067]	0.027 [0.026-0.029]	0.021 [0.019-0.023]	0.1 [0.084-0.1]	0.12 [0.11-0.14]
Prothioconazole	10	10%	0.0058 [0.0038-0.0084]	0 [0-0]	0.06 [0.042-0.071]	0.1 [0.071-0.15]	0.058 [0.052-0.066]	0.028 [0.025-0.029]	0.34 [0.23-0.46]	0.69 [0.48-0.89]
Pyraclostrobin	50	44%	0.019 [0.017-0.022]	0 [0-0]	0.18 [0.15-0.21]	0.35 [0.3-0.41]	0.062 [0.059-0.065]	0.039 [0.038-0.041]	0.24 [0.22-0.26]	0.38 [0.33-0.48]
Tebuconazole	300	43%	0.028 [0.023-0.035]	0 [0-0]	0.21 [0.17-0.25]	0.52 [0.41-0.65]	0.075 [0.07-0.082]	0.04 [0.038-0.042]	0.33 [0.3-0.38]	0.61 [0.53-0.73]

Table 10 Exposure (µg/kg bw/day) of **French children** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Children - 10% usage				Children - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Thiamethoxam	1000	45%	0.0085 [0.0076-0.0096]	0 [0-0]	0.083 [0.071-0.092]	0.13 [0.12-0.15]	0.067 [0.065-0.07]	0.05 [0.048-0.051]	0.23 [0.22-0.25]	0.33 [0.3-0.36]
Triadimenol	80	30%	0.0086 [0.0073-0.012]	0 [0-0]	0.09 [0.075-0.11]	0.15 [0.12-0.2]	0.069 [0.065-0.074]	0.045 [0.043-0.047]	0.29 [0.26-0.32]	0.44 [0.39-0.53]
Triflumizole	300	3%	0.0048 [0.003-0.0066]	0 [0-0]	0.058 [0.041-0.08]	0.089 [0.055-0.12]	0.046 [0.043-0.049]	0.04 [0.036-0.042]	0.12 [0.12-0.13]	0.13 [0.12-0.13]

Table 11 Exposure (µg/kg bw/day) of **American adult** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Buprofezin	500	99%	0.006 [0.005-0.0076]	0 [0-0.000000016]	0.041 [0.038-0.046]	0.077 [0.069-0.089]	0.033 [0.032-0.035]	0.019 [0.018-0.019]	0.13 [0.13-0.14]	0.2 [0.19-0.23]
Carbofuran	1	52%	0.0016 [0.0014-0.0018]	0 [0-0]	0.021 [0.018-0.026]	0.041 [0.036-0.047]	0.016 [0.015-0.017]	0.0072 [0.0068-0.0078]	0.075 [0.071-0.081]	0.11 [0.098-0.11]
Chlorpyrifos-methyl	100	93%	0.00079 [0.0007-0.00088]	0 [0-0]	0.0091 [0.0077-0.011]	0.021 [0.019-0.024]	0.0079 [0.0077-0.0082]	0.0023 [0.0022-0.0024]	0.046 [0.045-0.05]	0.065 [0.062-0.068]
Clothianidin	600	99%	0.014 [0.013-0.016]	0.0013 [0.0011-0.0014]	0.087 [0.082-0.095]	0.17 [0.15-0.2]	0.094 [0.092-0.097]	0.06 [0.059-0.062]	0.38 [0.37-0.4]	0.61 [0.58-0.66]
Cyfluthrin/beta-cyfluthrin	40	99%	0.049 [0.045-0.053]	0 [0-0]	0.61 [0.54-0.66]	1 [0.95-1.1]	0.49 [0.47-0.5]	0.32 [0.31-0.33]	1.9 [1.9-2]	2.4 [2.4-2.5]
Cypermethrins	40	99%	0.093 [0.089-0.1]	0.009 [0.008-0.01]	0.8 [0.76-0.87]	1.3 [1.2-1.4]	0.84 [0.83-0.86]	0.66 [0.65-0.67]	2.7 [2.6-2.8]	3.4 [3.3-3.5]
Cyproconazole	60	78%	0.0022 [0.002-0.0025]	0 [0-0]	0.03 [0.027-0.033]	0.054 [0.048-0.06]	0.022 [0.021-0.023]	0.011 [0.011-0.012]	0.11 [0.1-0.11]	0.14 [0.13-0.16]
Cyromazine	100	99%	0.0066 [0.0061-0.0072]	0 [0-0]	0.06 [0.056-0.066]	0.12 [0.1-0.13]	0.063 [0.061-0.064]	0.036 [0.035-0.037]	0.31 [0.29-0.32]	0.46 [0.43-0.49]
Dichlorvos	100	99%	0.0099 [0.009-0.011]	0 [0-0]	0.11 [0.095-0.12]	0.21 [0.19-0.24]	0.099 [0.096-0.1]	0.049 [0.048-0.051]	0.48 [0.46-0.51]	0.65 [0.62-0.68]
Difenoconazole	300	99%	0.016 [0.014-0.018]	0.00077 [0.00066-0.00084]	0.084 [0.075-0.094]	0.28 [0.23-0.33]	0.054 [0.052-0.057]	0.037 [0.036-0.037]	0.18 [0.17-0.2]	0.33 [0.28-0.4]
Dimethomorph	600	99%	0.0084 [0.0068-0.011]	0 [0-0]	0.045 [0.04-0.05]	0.11 [0.09-0.14]	0.045 [0.043-0.048]	0.022 [0.022-0.023]	0.23 [0.21-0.26]	0.42 [0.37-0.46]
Emamectinbenzoate	20	99%	0.0021 [0.002-0.0023]	0 [0-0]	0.022 [0.021-0.024]	0.036 [0.033-0.04]	0.021 [0.021-0.022]	0.013 [0.013-0.014]	0.088 [0.085-0.091]	0.14 [0.12-0.14]
Etofenprox	1000	87%	0.0035 [0.0031-0.0039]	0 [0-0]	0.045 [0.04-0.05]	0.081 [0.073-0.092]	0.035 [0.034-0.036]	0.013 [0.012-0.014]	0.19 [0.19-0.21]	0.28 [0.27-0.31]
Fenbuconazole	200	99%	0.0041 [0.0037-0.0047]	0 [0-0]	0.031 [0.028-0.033]	0.056 [0.05-0.063]	0.027 [0.026-0.028]	0.018 [0.018-0.019]	0.1 [0.099-0.11]	0.14 [0.13-0.15]
Fenpropathrin	30	99%	0.021 [0.019-0.022]	0 [0-0]	0.25 [0.22-0.27]	0.42 [0.38-0.47]	0.18 [0.18-0.19]	0.12 [0.11-0.12]	0.74 [0.71-0.78]	0.94 [0.92-0.99]

Table 11 Exposure (µg/kg bw/day) of **American adult** consumers using **10%** and **100% usage**

Pesticides	**ARfD**	**% of consumers = exposed individuals**	**Adults - 10% usage**				**Adults - 100% usage**			
			Mean [95%UI]	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**	**Mean [95%UI]**	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**
Fenpyroximate	20	96%	0.0036 [0.0032-0.0041]	0 [0-0]	0.033 [0.031-0.036]	0.062 [0.056-0.069]	0.02 [0.02-0.021]	0.0096 [0.0092-0.01]	0.095 [0.091-0.1]	0.13 [0.13-0.14]
Fluopyram	500	72%	0.001 [0.00089-0.0012]	0 [0-0]	0.011 [0.0095-0.012]	0.021 [0.018-0.024]	0.0077 [0.0073-0.008]	0.003 [0.0028-0.0032]	0.041 [0.039-0.045]	0.067 [0.059-0.072]
Flutriafol	50	99%	0.0039 [0.0035-0.0043]	0 [0-0]	0.037 [0.033-0.04]	0.075 [0.065-0.083]	0.038 [0.037-0.039]	0.019 [0.019-0.02]	0.19 [0.19-0.21]	0.28 [0.26-0.3]
Fluxapyroxad	300	99%	0.0051 [0.0045-0.0057]	0 [0-0]	0.042 [0.037-0.046]	0.1 [0.085-0.13]	0.039 [0.038-0.04]	0.013 [0.013-0.013]	0.25 [0.24-0.26]	0.4 [0.37-0.43]
Imidacloprid	400	99%	0.034 [0.03-0.039]	0.0066 [0.0062-0.007]	0.19 [0.17-0.21]	0.43 [0.38-0.53]	0.16 [0.16-0.17]	0.087 [0.085-0.089]	0.78 [0.72-0.87]	1.4 [1.3-1.5]
Indoxacarb	100	99%	0.0066 [0.0059-0.0072]	0 [0-0]	0.055 [0.051-0.06]	0.11 [0.096-0.13]	0.056 [0.055-0.058]	0.026 [0.025-0.027]	0.31 [0.29-0.32]	0.47 [0.44-0.5]
Malathion	2000	99%	0.0031 [0.0029-0.0034]	0 [0-0]	0.027 [0.025-0.03]	0.05 [0.043-0.055]	0.028 [0.027-0.028]	0.018 [0.017-0.018]	0.11 [0.11-0.12]	0.16 [0.15-0.17]
Methoxyfenozide	900	99%	0.011 [0.0098-0.013]	0.00055 [0.00049-0.00062]	0.07 [0.065-0.079]	0.16 [0.14-0.2]	0.052 [0.05-0.054]	0.032 [0.031-0.032]	0.21 [0.2-0.22]	0.36 [0.32-0.4]
Phorate	3	99%	0.0028 [0.0026-0.003]	0 [0-0]	0.032 [0.03-0.035]	0.058 [0.053-0.063]	0.028 [0.027-0.028]	0.017 [0.017-0.018]	0.12 [0.12-0.13]	0.17 [0.16-0.17]
Phosmet	200	99%	0.015 [0.013-0.017]	0 [0-0]	0.13 [0.12-0.14]	0.26 [0.22-0.3]	0.11 [0.1-0.11]	0.056 [0.055-0.057]	0.54 [0.49-0.57]	0.87 [0.79-0.93]
Profenofos	1000	99%	0.0022 [0.002-0.0024]	0 [0-0]	0.027 [0.025-0.03]	0.046 [0.041-0.05]	0.022 [0.021-0.022]	0.015 [0.014-0.015]	0.086 [0.082-0.088]	0.11 [0.1-0.11]
Prothioconazole	10	37%	0.013 [0.011-0.016]	0 [0-0]	0.17 [0.14-0.22]	0.33 [0.29-0.41]	0.13 [0.12-0.13]	0.056 [0.053-0.059]	0.62 [0.57-0.66]	0.71 [0.69-0.79]
Pyraclostrobin	50	99%	0.029 [0.026-0.032]	0.0022 [0.002-0.0023]	0.23 [0.2-0.25]	0.46 [0.4-0.54]	0.062 [0.059-0.065]	0.031 [0.03-0.031]	0.32 [0.3-0.36]	0.57 [0.51-0.64]
Sedaxane	300	12%	0.00046 [0.00035-0.00055]	0 [0-0]	0.0066 [0.0049-0.0075]	0.0099 [0.0081-0.012]	0.0045 [0.0043-0.0047]	0.0032 [0.003-0.0035]	0.016 [0.015-0.017]	0.02 [0.017-0.021]
Sulfoxaflor	300	89%	0.0016 [0.0014-0.0019]	0 [0-0]	0.013 [0.012-0.015]	0.028 [0.024-0.033]	0.0069 [0.0066-0.0072]	0.0042 [0.004-0.0044]	0.029 [0.027-0.031]	0.046 [0.043-0.049]

Table 11 Exposure (µg/kg bw/day) of **American adult** consumers using **10%** and **100% usage**

Pesticides	ARfD	% of consumers = exposed individuals	Adults - 10% usage				Adults - 100% usage			
			Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]	Mean [95%UI]	Median [95%UI]	P97.5 [95%UI]	P99 [95%UI]
Tebuconazole	300	99%	0.025 [0.022-0.03]	0.0011 [0.00096-0.0013]	0.14 [0.13-0.17]	0.4 [0.33-0.47]	0.084 [0.079-0.089]	0.056 [0.055-0.057]	0.27 [0.26-0.29]	0.48 [0.43-0.54]
Thiamethoxam	1000	99%	0.019 [0.017-0.021]	0.0014 [0.0013-0.0016]	0.13 [0.12-0.14]	0.23 [0.21-0.26]	0.16 [0.16-0.17]	0.096 [0.094-0.098]	0.78 [0.71-0.84]	1.3 [1.2-1.5]
Triadimenol	80	90%	0.0042 [0.0036-0.0054]	0 [0-0]	0.033 [0.031-0.038]	0.078 [0.069-0.095]	0.041 [0.039-0.043]	0.0085 [0.008-0.0093]	0.29 [0.27-0.34]	0.53 [0.46-0.58]
Triflumizole	300	64%	0.0012 [0.0009-0.0015]	0 [0-0]	0.0074 [0.0062-0.0088]	0.024 [0.017-0.031]	0.0051 [0.0048-0.0056]	0.00057 [0.00052-0.00062]	0.042 [0.039-0.048]	0.08 [0.068-0.087]

Table 12 Exposure (µg/kg bw/day) of American children consumers using 10% and 100% usage										
Pesticides	**ARfD**	**% of consumers = exposed individuals**	**Adults - 10% usage**				**Adults - 100% usage**			
			Mean [95%UI]	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**	**Mean [95%UI]**	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**
Buprofezin	500	98%	0.023 [0.021-0.027]	0.0000044 [0.0000016-0.0000085]	0.18 [0.17-0.2]	0.29 [0.27-0.31]	0.16 [0.16-0.16]	0.13 [0.13-0.13]	0.5 [0.49-0.51]	0.59 [0.58-0.61]
Carbofuran	1	69%	0.0044 [0.0039-0.0051]	0 [0-0]	0.059 [0.05-0.067]	0.12 [0.1-0.13]	0.045 [0.043-0.046]	0.019 [0.018-0.021]	0.22 [0.2-0.23]	0.31 [0.28-0.33]
Chlorpyrifos-methyl	100	88%	0.0019 [0.0017-0.0022]	0 [0-0]	0.022 [0.019-0.025]	0.051 [0.046-0.06]	0.019 [0.019-0.02]	0.0056 [0.0051-0.0061]	0.11 [0.11-0.12]	0.15 [0.15-0.16]
Clothianidin	600	98%	0.043 [0.041-0.049]	0.0036 [0.0032-0.004]	0.32 [0.3-0.34]	0.53 [0.49-0.6]	0.34 [0.34-0.35]	0.25 [0.25-0.26]	1.2 [1.2-1.3]	1.7 [1.6-1.9]
Cyfluthrin/beta-cyfluthrin	40	98%	0.37 [0.35-0.4]	0 [0-0]	5.2 [4.7-5.5]	8.1 [7.4-8.8]	3.7 [3.6-3.8]	2.8 [2.8-2.9]	13 [12-13]	16 [15-17]
Cypermethrins	40	99%	0.47 [0.45-0.5]	0.025 [0.022-0.027]	5.4 [5.1-5.9]	8.6 [8-9.5]	4.6 [4.5-4.7]	3.7 [3.6-3.7]	15 [14-15]	17 [16-18]
Cyproconazole	60	80%	0.0068 [0.0062-0.0074]	0 [0-0]	0.087 [0.079-0.095]	0.16 [0.14-0.18]	0.068 [0.066-0.07]	0.038 [0.037-0.04]	0.31 [0.3-0.32]	0.4 [0.37-0.43]
Cyromazine	100	97%	0.026 [0.024-0.028]	0 [0-0]	0.32 [0.3-0.36]	0.51 [0.47-0.55]	0.25 [0.25-0.26]	0.19 [0.19-0.19]	0.85 [0.82-0.87]	1 [1-1.1]
Dichlorvos	100	98%	0.042 [0.039-0.044]	0 [0-0]	0.5 [0.46-0.53]	0.77 [0.71-0.81]	0.42 [0.41-0.42]	0.31 [0.3-0.32]	1.5 [1.4-1.6]	1.8 [1.7-1.9]
Difenoconazole	300	98%	0.046 [0.042-0.052]	0.00092 [0.00076-0.0012]	0.3 [0.28-0.33]	0.68 [0.58-0.82]	0.25 [0.24-0.26]	0.18 [0.18-0.19]	0.83 [0.76-0.89]	1.3 [1.2-1.6]
Dimethomorph	600	98%	0.017 [0.015-0.021]	0 [0-0]	0.15 [0.14-0.16]	0.25 [0.23-0.28]	0.13 [0.13-0.14]	0.097 [0.095-0.1]	0.48 [0.46-0.53]	0.86 [0.74-0.89]
Emamectinbenzoate	20	98%	0.017 [0.016-0.018]	0 [0-0]	0.18 [0.17-0.19]	0.28 [0.26-0.3]	0.17 [0.17-0.17]	0.12 [0.12-0.12]	0.59 [0.56-0.64]	0.91 [0.84-0.92]
Etofenprox	1000	89%	0.026 [0.023-0.03]	0 [0-0]	0.28 [0.26-0.32]	0.59 [0.53-0.68]	0.26 [0.25-0.27]	0.13 [0.13-0.14]	1.3 [1.2-1.4]	2.1 [1.9-2.2]
Fenbuconazole	200	98%	0.024 [0.022-0.026]	0.00000035 [0.000000016-0.00000098]	0.19 [0.17-0.2]	0.3 [0.27-0.34]	0.17 [0.16-0.17]	0.13 [0.13-0.13]	0.51 [0.49-0.53]	0.69 [0.61-0.77]

Table 12 Exposure (µg/kg bw/day) of A**merican children** consumers using **10%** and **100% usage**										
Pesticides	**ARfD**	**% of consumers = exposed individuals**	**Adults - 10% usage**				**Adults - 100% usage**			
			Mean [95%UI]	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**	**Mean [95%UI]**	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**
Fenpropathrin	30	97%	0.15 [0.14-0.16]	0 [0-0]	2 [1.9-2.2]	3.2 [3-3.5]	1.4 [1.4-1.4]	1.1 [1.1-1.1]	4.9 [4.8-4.9]	6.1 [5.7-6.4]
Fenpyroximate	20	92%	0.018 [0.017-0.02]	0 [0-0]	0.17 [0.16-0.19]	0.31 [0.27-0.34]	0.099 [0.095-0.1]	0.06 [0.058-0.062]	0.42 [0.4-0.43]	0.56 [0.5-0.63]
Fluopyram	500	79%	0.0078 [0.0067-0.0094]	0 [0-0]	0.08 [0.068-0.089]	0.17 [0.14-0.19]	0.057 [0.054-0.059]	0.028 [0.026-0.029]	0.28 [0.26-0.3]	0.44 [0.43-0.46]
Flutriafol	50	97%	0.017 [0.015-0.018]	0 [0-0]	0.17 [0.16-0.19]	0.31 [0.27-0.34]	0.17 [0.16-0.17]	0.1 [0.098-0.1]	0.67 [0.63-0.69]	0.9 [0.88-0.94]
Fluxapyroxad	300	97%	0.015 [0.013-0.016]	0 [0-0]	0.14 [0.11-0.15]	0.29 [0.25-0.34]	0.1 [0.098-0.1]	0.038 [0.037-0.039]	0.58 [0.55-0.6]	0.86 [0.83-0.9]
Imidacloprid	400	99%	0.088 [0.082-0.098]	0.019 [0.018-0.02]	0.53 [0.47-0.57]	1.1 [0.95-1.2]	0.47 [0.45-0.48]	0.32 [0.32-0.33]	1.9 [1.7-2.1]	2.9 [2.8-3.1]
Indoxacarb	100	97%	0.029 [0.027-0.032]	0 [0-0]	0.29 [0.27-0.32]	0.56 [0.51-0.63]	0.27 [0.26-0.28]	0.15 [0.15-0.16]	1.2 [1.1-1.3]	1.7 [1.7-1.8]
Malathion	2000	97%	0.0099 [0.0094-0.011]	0 [0-0.000000088]	0.086 [0.079-0.093]	0.15 [0.14-0.17]	0.083 [0.082-0.085]	0.059 [0.058-0.06]	0.32 [0.31-0.33]	0.38 [0.37-0.38]
Methoxyfenozide	900	99%	0.037 [0.034-0.041]	0.0016 [0.0014-0.0018]	0.26 [0.24-0.28]	0.49 [0.41-0.55]	0.21 [0.21-0.22]	0.17 [0.16-0.17]	0.69 [0.66-0.71]	0.88 [0.85-0.95]
Phorate	3	97%	0.019 [0.017-0.02]	0 [0-0]	0.25 [0.23-0.27]	0.39 [0.35-0.42]	0.19 [0.18-0.19]	0.14 [0.13-0.14]	0.62 [0.61-0.63]	0.8 [0.76-0.81]
Phosmet	200	98%	0.11 [0.098-0.13]	0 [0-0]	0.96 [0.9-1]	1.7 [1.5-1.9]	0.65 [0.64-0.67]	0.48 [0.47-0.49]	2.2 [2.2-2.3]	2.8 [2.8-3]
Profenofos	1000	97%	0.016 [0.015-0.017]	0 [0-0]	0.23 [0.2-0.24]	0.35 [0.33-0.39]	0.16 [0.16-0.16]	0.12 [0.12-0.13]	0.55 [0.55-0.57]	0.69 [0.65-0.74]
Prothioconazole	10	53%	0.049 [0.043-0.054]	0 [0-0]	0.59 [0.53-0.65]	1.2 [0.99-1.4]	0.48 [0.46-0.5]	0.22 [0.2-0.23]	2.4 [2.2-2.6]	3.4 [3.1-3.7]
Pyraclostrobin	50	99%	0.1 [0.098-0.11]	0.0086 [0.008-0.0094]	0.84 [0.76-0.94]	1.6 [1.4-1.8]	0.28 [0.27-0.3]	0.17 [0.16-0.17]	1.4 [1.3-1.6]	2.5 [2.2-2.7]
Sedaxane	300	14%	0.0011 [0.00091-0.0013]	0 [0-0]	0.018 [0.014-0.02]	0.024 [0.021-0.033]	0.011 [0.011-0.012]	0.0072 [0.0068-0.0083]	0.044 [0.04-0.045]	0.049 [0.045-0.056]

Table 12 Exposure (µg/kg bw/day) of A**merican children** consumers using **10%** and **100% usage**

Pesticides	**ARfD**	**% of consumers = exposed individuals**	**Adults - 10% usage**				**Adults - 100% usage**			
			Mean [95%UI]	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**	**Mean [95%UI]**	**Median [95%UI]**	**P97.5 [95%UI]**	**P99 [95%UI]**
Sulfoxaflor	300	82%	0.0025 [0.0021-0.0032]	0 [0-0]	0.021 [0.02-0.024]	0.045 [0.039-0.054]	0.013 [0.012-0.014]	0.0065 [0.0062-0.0068]	0.064 [0.061-0.067]	0.088 [0.082-0.095]
Tebuconazole	300	99%	0.088 [0.078-0.1]	0.0043 [0.0038-0.0048]	0.53 [0.49-0.57]	1.2 [1-1.4]	0.39 [0.37-0.41]	0.28 [0.28-0.29]	1.1 [1.1-1.2]	1.9 [1.7-2.3]
Thiamethoxam		99%	0.075 [0.071-0.08]	0.0035 [0.003-0.004]	0.71 [0.67-0.75]	1.1 [1-1.2]	0.7 [0.69-0.71]	0.55 [0.54-0.56]	2.3 [2.3-2.4]	3.3 [3.1-3.4]
Triadimenol		85%	0.011 [0.0096-0.013]	0 [0-0]	0.12 [0.11-0.13]	0.21 [0.19-0.25]	0.11 [0.1-0.11]	0.032 [0.031-0.035]	0.64 [0.56-0.66]	1.1 [1.1-1.1]
Triflumizole		62%	0.0034 [0.0026-0.0042]	0 [0-0]	0.021 [0.017-0.025]	0.06 [0.047-0.078]	0.012 [0.011-0.014]	0.0011 [0.00091-0.0012]	0.1 [0.085-0.11]	0.19 [0.15-0.22]

Annex 4 – Main contributors to acute exposure per pesticide and per country

Table 13 Food which contributes the most to the exposure by country for the **adult** consumers using **10% and 100% usage**

Pesticides	Adults - 10% usage					Adults - 100% usage				
	Australia	**Canada**	**Czech republic**	**Italia**	**USA**	**Australia**	**Canada**	**Czech republic**	**Italia**	**USA**
Buprofezin	Apple	Okra	Banana	Cattle milk	Tomato	Apple	Cattle meat	Mango	Cattle milk	Cattle milk
Carbofuran		Cattle meat	Banana	Sunflower seed	Banana		Cattle meat	Banana	Sunflower seed	Oranges
Chlorpyrifos-methyl	Wheat		Mandarins	Cattle milk	Chicken eggs	Wheat		Potato	Cattle milk	Chicken eggs
Clothianidin	Grapefruit		Sweet corn (corn-on-the-cob)	Cattle milk	Potato	Apple		Mango	Cattle milk	Grapes
Cyfluthrin/beta-cyfluthrin	Apple		Liver (swine)	Cattle milk	Cattle milk	Apple		Potato	Cattle milk	Cattle milk
Cypermethrins	Sorghum		Mango	Sunflower seed	Spinach	Apple		Potato	Cattle milk	Cattle milk
Cyproconazole			Common & proso millet	Cattle milk	Rice			Cattle milk	Cattle milk	Rice
Cyromazine		Celery (whole)	Onion, Bulb	Lentil (dry)	Celery		Cowpea (dry)	Mango	Lentil (dry)	Cattle milk
Dichlorvos	Wheat	Wheat flour	Cattle milk	Cattle milk	Cattle milk	Wheat	Chicken meat	Liver (swine)	Cattle milk	Cattle milk
Difenoconazole	Soya bean (dry)		Celeriac	Sunflower seed	Tomato	Apple		Mango	Cattle milk	Cattle milk
Dimethomorph			Grapes	Cattle milk	Spinach			Potato	Cattle milk	Cattle milk
Diquat	Barley		Apple	Sunflower seed		Barley		Banana	Sunflower seed	
Dithianon	Apple		Apple	Cattle milk		Apple		Apple	Cattle milk	
Emamectinbenzoate			Common bean (pods and/or immature seeds)	Cattle milk	Cattle milk			Cattle milk	Cattle milk	Cattle milk
Etofenprox		Pig meat	Peach	Cattle milk	Rice		Apple	Apple	Cattle milk	Rice
Fenbuconazole			Peach	Sunflower seed	Cherries			Apple	Cattle milk	Cattle milk

Table 13 Food which contributes the most to the exposure by country for the **adult** consumers using **10% and 100% usage**

Pesticides	Adults - 10% usage					Adults - 100% usage				
	Australia	Canada	Czech republic	Italia	USA	Australia	Canada	Czech republic	Italia	USA
Fenpropathrin			Liver (swine)	Cattle milk	Strawberry			Oranges	Cattle milk	Cattle milk
Fenpyroximate					Pear					Oranges
Fluopyram			Cherries	Walnuts	Cucumber			Potato	Walnuts	Apple
Flutriafol	Soya bean (dry)	Okra	Squash, summer	Cattle milk	Sweet corn (kernels)	Soya bean (dry)	Apple	Apple	Cattle milk	Watermelon
Fluxapyroxad			Raspberries, Red, Black	Sunflower seed	Tomato			Potato	Cattle milk	Nectarine
Imidacloprid	Grapefruit		Mango	Sunflower seed	Potato	Grapefruit		Mango	Cattle milk	Grapes
Indoxacarb	Apple	Peppers, chili	Sweet corn (corn-on-the-cob)	Cattle milk	Nectarine	Apple	Chicken meat	Potato	Cattle milk	Watermelon
Malathion	Peach	Wheat flour	Sweet corn (corn-on-the-cob)		Strawberry	Apple	Wheat flour	Sweet corn (corn-on-the-cob)		Oranges
Methoxyfenozide	Oranges		Sweet corn (corn-on-the-cob)	Cattle milk	Nectarine	Apple		Sweet corn (corn-on-the-cob)	Cattle milk	Oranges
Phorate		Poultry meat	Common bean (pods and/or immature seeds)	Cattle milk	Cattle milk		Pig meat	Potato	Cattle milk	Cattle milk
Phosmet		Apple/ Blueberries	Cashew nuts	Cattle milk	Nectarine		Oranges	Potato	Cattle milk	Cattle milk
Profenofos		Chicken meat	Edible offal (swine)	Cattle milk	Cattle milk		Chicken meat	Mango	Cattle milk	Cattle milk
Prothioconazole			Cattle milk	Cattle milk	Oats			Liver (swine)	Cattle milk	Oats
Pyraclostrobin	Apple		Raspberries, Red, Black	Sunflower seed	Grapes	Apple		Mango	Cattle milk	Cattle milk
Sedaxane					Sweet corn (corn-on-the-cob)					Sweet corn (corn-on-the-cob)

Table 13 Food which contributes the most to the exposure by country for the **adult** consumers using **10% and 100% usage**

Pesticides	Adults - 10% usage					Adults - 100% usage				
	Australia	**Canada**	**Czech republic**	**Italia**	**USA**	**Australia**	**Canada**	**Czech republic**	**Italia**	**USA**
Sulfoxaflor	Apple				Tomato	Apple				Potato
Tebuconazole	Barley		Peach	Sunflower seed	Nectarine	Peas (dry)		Mango	Cattle milk	Cattle milk
Thiamethoxam			Sweet corn (corn-on-the-cob)	Cattle milk	Squash, summer			Mango	Cattle milk	Cattle milk/Nectarine
Triadimenol	Oats		Pineapple	Cattle milk	Peppers Chili	Wheat		Apple	Cattle milk	Grapes
Triflumizole			Cattle milk	Cattle milk	Cherries			Cattle milk	Cattle milk	Grapes

Table 14: Food which contributes the most to the exposure by country for the **children** consumers using **10% and 100% usage**

Pesticides	Children - 10% usage					Children - 100% usage				
	Australia	**Canada**	**Netherlands**	**France**	**USA**	**Australia**	**Canada**	**Netherlands**	**France**	**USA**
Buprofezin	Apple	Grapes	Pummelo and Grapefruits	Mandarins	Tomato	Apple	Apple	Pummelo and Grapefruits	Mandarins	Cattle milk
Carbofuran		Turmeric, root	Banana	Mandarins	Banana		Oranges	Banana	Mandarins	Oranges
Chlorpyrifos-methyl	Wheat		Pummelo and Grapefruits	Mandarins	Chicken eggs	Wheat		Pummelo and Grapefruits	Mandarins	Rice
Clothianidin	Apple		Pummelo and Grapefruits	Chervil	Potato	Apple		Pummelo and Grapefruits	Chervil	Apple
Cyfluthrin/beta-cyfluthrin	Apple		Cattle milk	Tomato	Cattle milk	Apple		Pummelo and Grapefruits	Apple	Cattle milk
Cypermethrins	Sorghum		Pummelo and Grapefruits	Litchi	Spinach	Apple		Pummelo and Grapefruits	Litchi, Hazelnuts/ cobnuts, Chervil	Cattle milk
Cyproconazole			Cattle milk	Eggs (chicken)	Rice			Cattle milk	Beans (dry & shells)	Oats
Cyromazine		Celery (whole)	Melons, except watermelon	Lentil (dry)	Celery		Cantaloupe	Melons, except watermelon	Lentil (dry)	Cattle milk
Dichlorvos	Wheat	Wheat flour	Cattle milk	Eggs (chicken)	Cattle milk	Wheat	Wheat flour	Cattle milk	Rice	Cattle milk
Difenoconazole	Soya bean (dry)		Pummelo and Grapefruits	Asparagus	Tomato	Apple		Pummelo and Grapefruits	Hazelnuts/cobnuts	Cattle milk
Dimethomorph			Grapes	Shallot	Spinach			Cattle milk	Grapes	Cattle milk
Diquat	Barley		Pummelo and Grapefruits	Apple		Barley		Pummelo and Grapefruits	Mandarins	
Dithianon	Apple		Apple	Apple		Apple		Cattle milk	Apple	

Table 14: Food which contributes the most to the exposure by country for the **children** consumers using **10% and 100% usage**

Pesticides	Children - 10% usage					Children - 100% usage				
	Australia	Canada	Netherlands	France	USA	Australia	Canada	Netherlands	France	USA
Emamectinbenzoate			Cattle milk	Walnuts	Cattle milk			Cattle milk	Apple	Cattle milk
Etofenprox		Apple	Cattle milk	Peach	Rice		Apple	Cattle milk	Apple	Apple
Fenbuconazole			Apricot	Hazelnuts/ cobnuts	Cherries			Pummelo and Grapefruits	Hazelnuts/ cobnuts	Cattle milk
Fenpropathrin			Pummelo and Grapefruits	Hazelnuts/ cobnuts	Strawberry			Pummelo and Grapefruits	Hazelnuts/ cobnuts	Cattle milk
Fenpyroximate					Pear					Apple
Fluopyram			Chestnuts	Hazelnuts/ cobnuts	Apple			Chestnuts	Hazelnuts/ cobnuts	Apple
Flutriafol	Soya bean (dry)	Apple/Grapes/Melons	Apricot	Peppers	Sweet corn (kernels)	Soya bean (dry)	Apple	Cattle milk	Apple	Apple
Fluxapyroxad			Pistachio nuts	Hazelnuts/ cobnuts	Strawberry			Cattle milk	Hazelnuts/ cobnuts	Sweet corn (kernels)
Imidacloprid	Oranges		Pummelo and Grapefruits	Hazelnuts/ cobnuts	Potato	Apple		Pummelo and Grapefruits	Hazelnuts/ cobnuts	Grapes
Indoxacarb	Apple	Peppers, chili	Cattle milk	Apple	Nectarine	Apple	Apple	Cattle milk	Apple	Apple
Malathion	Apple	Strawberry	Blueberries	Asparagus	Strawberry	Apple	Apple	Pummelo and Grapefruits	Asparagus	Oranges
Methoxyfenozide	Apple		Pummelo and Grapefruits	Hazelnuts/ cobnuts	Nectarine	Apple		Pummelo and Grapefruits	Hazelnuts/ cobnuts	Cattle milk
Phorate		Mammals meat	Cattle milk	Coriander, seed	Cattle milk		Mammals meat	Cattle milk	Coriander, seed	Cattle milk
Phosmet		Apple	Pistachio nuts	Hazelnuts/ cobnuts	Apple		Apple	Pummelo and Grapefruits	Hazelnuts/ cobnuts	Cattle milk

Table 14: Food which contributes the most to the exposure by country for the **children** consumers using **10% and 100% usage**

Pesticides	Children - 10% usage					Children - 100% usage				
	Australia	Canada	Netherlands	France	USA	Australia	Canada	Netherlands	France	USA
Profenofos		Mammals meat	Cattle milk	Cumin seed	Cattle milk		Mammals meat	Cattle milk	Cumin seed	Cattle milk
Prothioconazole			Cattle milk	Lentil (dry)	Oats			Cattle milk	Lentil (dry)	Oats
Pyraclostrobin	Apple		Pummelo and Grapefruits	Hazelnuts/ cobnuts	Grapes	Apple		Pummelo and Grapefruits	Hazelnuts/ cobnuts	Cattle milk
Sedaxane					Sweet corn (corn-on-the-cob)					Sweet corn (corn-on-the-cob)
Sulfoxaflor	Apple				Tomato	Apple				Potato
Tebuconazole	Barley		Peach	Hazelnuts/ cobnuts	Nectarine	Wheat		Cattle milk	Hazelnuts/ cobnuts	Cattle milk
Thiamethoxam			Pummelo and Grapefruits	Chervil	Watermelon			Pummelo and Grapefruits	Chervil	Cattle milk
Triadimenol	Oats		Cattle milk	Tomato	Winter squash	Wheat		Cattle milk	Apple	Winter squash
Triflumizole			Cattle milk	Grape/ Cherries	Cherries			Cattle milk	Grapes/ Cherries	Papaya

Annex 5 – Estimated Level of Protection (LoP) of MRLs for all countries and all populations

Table 15: Estimation of the probability to exceed the ARfD is all pesticide residues are at Codex MRL level per country and per population (only results > 0 are reported)

			USA children				Canada children				Australia children				Netherlands children				France children			
Pesticides	ARfD	Number of runs	Nber of exposed individuals	Risk consumers only (%)			Nber of exposed individuals	Risk consumers only (%)			Nber of exposed individuals	Risk consumers only (%)			Nber of exposed individuals	Risk consumers only			Nber of exposed individuals	Risk consumers only		
				Estimate	Uncertainty interval			Estimate	Uncertainty interval			Estimate	Uncertainty interval			Estimate	Uncertainty interval			Estimate	Uncertainty interval	
Buprofezin	500	100	978500	0.21	0.12	0.32																
Carbofuran	1	100	693832	31	30	32	866140	36	35	37					318580	5	4.4	5.7	35509	87	84	91
Cyfluthrin/beta-cyfluthrin	40	100	978781	0.041	0.01	0.082																
Cypermethrins	40	100	990573	9	8.3	9.5					932611	2	1.8	2.3								
Dichlorvos	100	100	980195	0.071	0.02	0.13																
Difenoconazole	300	100	981170	0.041	0.01	0.081																
Fenbuconazole	200	100	978012	0.041	0.01	0.082																
Fenpropathrin	30	100	973566	5.6	5.2	6									762151	0.18	0.098	0.28	233959	0.17	0.043	0.39
Fenpyroximate	20	100	915656	5.5	5	5.9																
Flutriafol	50	100	969568	0.7	0.54	0.87	968499	0.95 E	0.67 E	1.2 E												
Indoxacarb	100	100	969638	0.36	0.23	0.46	977612	1	0.83	1.3												
Methoxyfenozide	900	100	989495	0.04	0.01	0.081																
Phorate	3	100	972354	1.7	1.5	2	922239	2.1	1.8	2.9					882932	3.4	3.1	3.9				
Phosmet	200	100	977518	17	16	17	892019	14	13	15					934707	0.096	0.043	0.15	207626	0.33	0.14	0.58
Pyraclostrobin	50	100	990213	5.7	5.1	6.1																
Tebuconazole	300	100	989375	0.24	0.16	0.33																
Prothioconazole	10	100																	102526	0.47	0.098	0.9

			USA adult				Canada adult				Czech Republic adult			
Pesticides	ARfD	Number of runs	Nber of exposed individuals	Risk consumers only (%)			Nber of exposed individuals	Risk consumers only (%)			Nber of exposed individuals	Risk consumers only		
				Estimate	Uncertainty interval			Estimate	Uncertainty interval			Estimate	Uncertainty interval	
Carbofuran	1	100	515028	25	24	26	873767	21	20	22	256518	19	17	20
Fenpropathrin	30	100	991210	0.22	0.13	0.31								
Fenpyroximate	20	100	958683	0.031	0.01	0.078								
Phorate	3	100	985158	0.041	0.01	0.091	934761	0.24 E	0.13 E	0.35 E	881215	0.14	0.056	0.22
Phosmet	200	100	987091	0.83	0.69	0.98								
Pyraclostrobin	50	100	993753	0.54	0.42	0.68								

	LoP = 100%
	LoP > 99%
	LoP > 90%
	LoP < 90%