

25 February 2022



# WEBINAR: OPEX calculator for non- dietary exposure to plant protection products

Trusted science for safe food

# Agenda and contributors

TIME	ITEM
11:00 – 11:05	Introduction and webinar outline
11:05 – 12:05	Overview of the OPEX Calculator functionalities
12:05 – 12:15	Q&A session and conclusion

Speaker: Arianna Chiusolo (EFSA)

Speaker: Frederique Istace (EFSA)

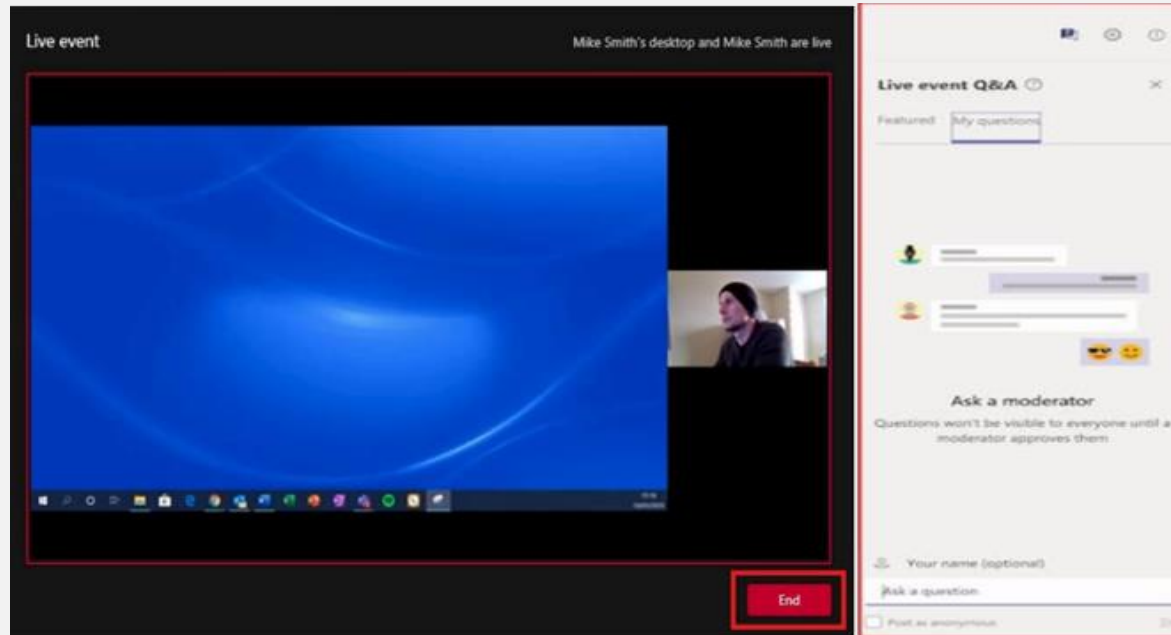
Speaker: Mathilde Colas (EFSA)

Contributors: José Cortinas Abrahantes (EFSA), Dagmar Bemelmans (ext), Denise Bloch (ext), Sabine Martin (ext), Paul Hamey (ext), Peter Craig (ext)

# Webinar guide for attendees

- This webinar **is being recorded**
- The webinar **is in English** and questions should be submitted in English through the platform.
- You are automatically connected to the audio broadcast. One-way audio (listen only mode).

Presentation  
window



**Q&A box:**  
For any  
questions  
related to  
the topic or  
unexpected  
IT issues

# OPEX online calculator



- First EFSA Guidance 'on the assessment of exposure of operators, workers, residents and bystanders in risk assessment for plant protection products' – 2014
  - Excel calculator: scenarios for outdoor uses, and for worker re-entry in greenhouses, including different risk mitigation measures (e.g. protective equipment, technical equipment, buffer zones)
  - First EU validated approaches for non-dietary exposure assessment

- Update of EFSA Guidance (...) – 2022
  - Including greenhouse scenarios
  - Including a revision of crop and human parameters
  - Offering a **new online calculator**
    - With improved functionalities
    - With a manual of formulas used in the calculations
    - With an impact assessment in Annex E of the Guidance

# New calculator: how to access (1)

Link on EFSA website:


<https://www.efsa.europa.eu/en/efsajournal/pub/7032>



The screenshot shows the EFSA website interface. At the top left is the EFSA logo. To the right, there is a language selector set to 'English EN' and a search bar. Below the header is a navigation menu with items: ABOUT, NEWSROOM, TOPICS, RESOURCES, PUBLICATIONS (highlighted with a red underline), APPLICATIONS, ENGAGE, and CALENDAR. The breadcrumb trail reads: Home / Publications / Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk asse... The main title of the article is 'Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment of plant protection products'. Below the title, it states 'Published: 18 January 2022' and 'Adopted: 30 November 2021'. On the right side, there are social media icons for Twitter, Facebook, and LinkedIn. The main content area features a box with the 'ej EFSA Journal on the Wiley Online Library' logo. To the right of this box are two buttons: 'Read the article' (highlighted with a red border and a yellow arrow pointing to it) and 'Access the PDF'. Below these buttons is the DOI: <https://doi.org/10.2903/j.efsa.2022.7032>. On the far right, there is a 'Contents' sidebar with a list of links: Metadata, Abstract, and Related topic(s).

## EFSA JOURNAL

Open Access

Guidance Document |  Open Access |   

### Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment of plant protection products

European Food Safety Authority (EFSA) ✉ Agathi Charistou, Tamara Coja, Peter Craig, Paul Hamey, Sabine Martin, Olivier Sanvido, Arianna Chiusolo, Mathilde Colas, Frédérique Istace

First published: 18 January 2022 | <https://doi.org/10.2903/j.efsa.2022.7032>

**Requestor:** European Commission

**Question number:** EFSA-Q-2018-00274

**Correspondence:** [pesticides.ppr@efsa.europa.eu](mailto:pesticides.ppr@efsa.europa.eu)




**Update:** This scientific output, approved on 30 November 2021, supersedes the previous output published on 24 April 2015 (EFSA Guidance, 2014). The European Commission will decide the implementation time for the mandatory use of this guidance in the regulatory context.


**Declarations of interest:** The declarations of interest of all scientific experts active in EFSA's work are available at <https://ess.efsa.europa.eu/doi/doiweb/doisearch>.

**Acknowledgements:** The EFSA Working Group wishes to acknowledge the hearing experts, Denise Bloch, Isaac Abril Munoz and Thierry Mercier, for the views provided to this scientific output. It is also acknowledged the support of the EFSA AMU Unit in the revision of the online calculator, through the framework contract with Open Analytics NV.

Adopted: 30 November 2021

 SECTIONS

 PDF  TOOLS  SHARE



Abstract
Summary
1 Introduction
2 Assessment
3 Conclusions and recommendations
<b>Supporting information</b>
References
Abbreviations
Glossary
Appendices      A to J
Annexes          A to G



# New calculator: how to access (3)

### Supporting Information

Filename	Description
efs27032-sup-0001-Annex_A.docx Word 2007 document , 95.2 KB	CIPAC formulation codes
efs27032-sup-0002-Annex_B.docx Word 2007 document , 125.5 KB	Public literature on dislodgeable foliar residue
efs27032-sup-0003-Annex_C.docx Word 2007 document , 109.6 KB	Protocol for the review of relevant DT studies
efs27032-sup-0004-Annex_D.xlsx Excel 2007 spreadsheet , 132 KB	DT Data collection
efs27032-sup-0005-Annex_E.docx Word 2007 document , 597.8 KB	New calculator
efs27032-sup-0006-Annex_F.docx Word 2007 document , 138.5 KB	Table overview open call
efs27032-sup-0007-Annex_G.docx Word 2007 document , 358.5 KB	Outcome of Public Consultation on the draft EFSA Guidance

Please note: The publisher is not responsible for the content or functionality of any supporting information supplied by the authors. Any queries (other than missing content) should be directed to the corresponding author for the article.

## ANNEX E:

- First access to the calculator:  
<https://r4eu.efsa.europa.eu/>



### Welcome to R4EU

By signing in you will access the EFSA R4EU platform, hosting a suite of different models commonly used in assessments by EFSA.

### Sign in with your federated account

EFSA employee or partner

Google

---

### Sign in with your existing account

Email Address

Password [Forgot your password?](#)

Sign in

By signing in you agree with the [terms of use](#)

Don't have an account? [Sign up now](#)

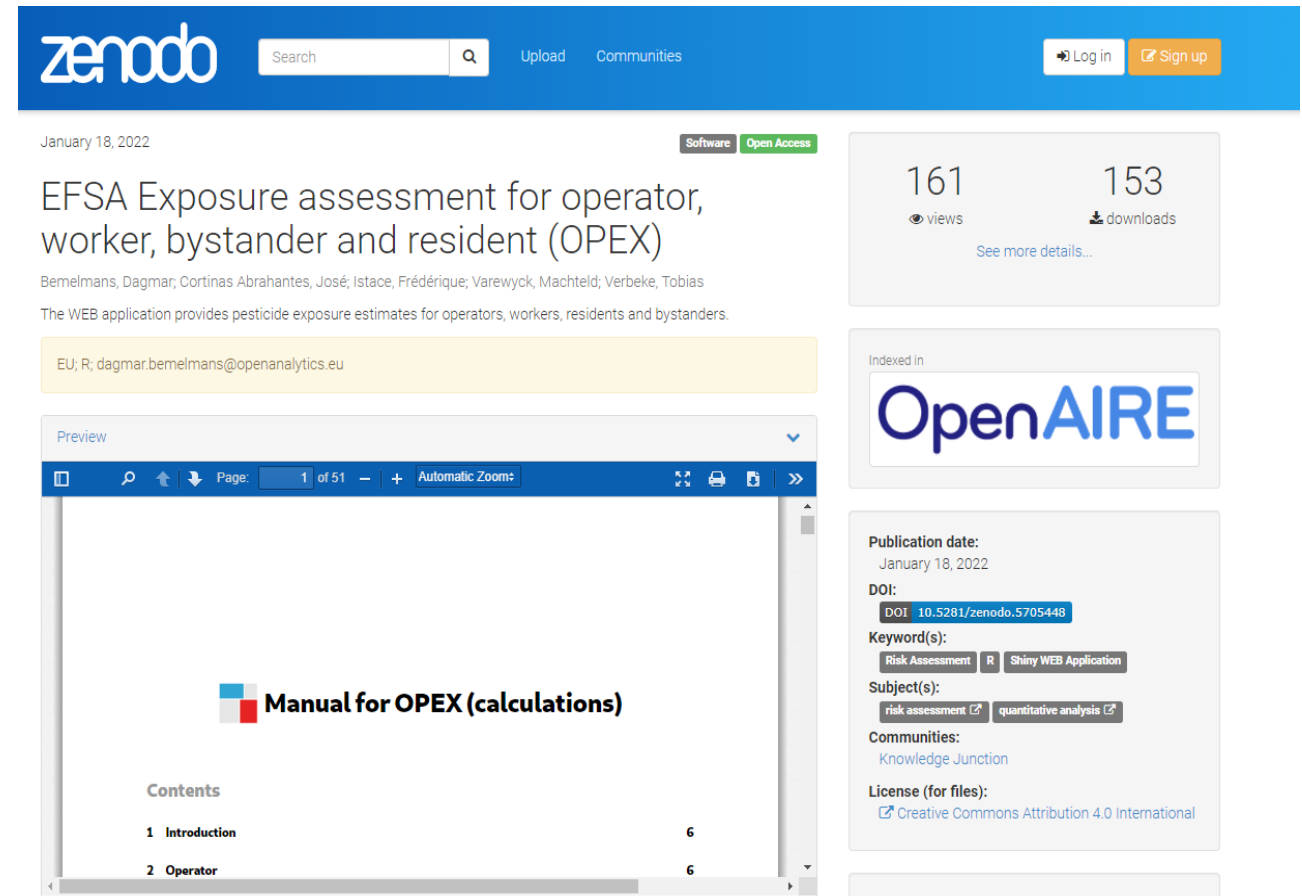
# New calculator: how to access (4)

## ANNEX E:

- Access to the manual with the formulations (and R-package):

[www.doi.org/10.5281/zenodo.5705448](http://www.doi.org/10.5281/zenodo.5705448)

Name	Size	
Files (92.4 MB)		
manual-calculations.pdf	154.1 kB	Preview Download
md5:47d44d21b030f42ce3bd9c7bafa45529		
opex_0.3.19.tar.gz	92.2 MB	Download
md5:f7e45d29a46a5a9bacd1e4ce71b1a231		



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January 18, 2022 Software Open Access

### EFSA Exposure assessment for operator, worker, bystander and resident (OPEX)

Bemelmans, Dagmar; Cortinas Abrahantes, José; Istace, Frédérique; Varewyck, Machteld; Verbeke, Tobias

The WEB application provides pesticide exposure estimates for operators, workers, residents and bystanders.

EU; R; dagmar.bemelmans@openanalytics.eu

161 views 153 downloads

Indexed in OpenAIRE

Publication date: January 18, 2022

DOI: 10.5281/zenodo.5705448

Keyword(s): Risk Assessment R Shiny WEB Application

Subject(s): risk assessment quantitative analysis

Communities: Knowledge Junction

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Preview

Manual for OPEX (calculations)

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### Mixing & loading

$$\begin{aligned}\log(\text{Hands}) &= 3.74 + 0.69 \log(\text{TA}) + 0.71[\text{SC}] + 1.21[\text{WP}] \\ \log(\text{Protected hands}) &= 3.29 + 0.53 \log(\text{TA}) + 0.83[\text{SC}] + 1.39[\text{WP}] \\ \log(\text{Body}) &= 3.87 + 0.69 \log(\text{TA}) + 0.72[\text{SC}] + 1.29[\text{WP}] \\ \log(\text{Protected body}) &= 2.09 + 0.78 \log(\text{TA}) + 0.44[\text{SC}] + 1.58[\text{WP}] \\ \log(\text{Head}) &= 2.19 + 1.00 \log(\text{TA}) + 0.39[\text{SC}] + 0.11[\text{WP}] - 1.16[\text{Faceshield}] \\ \log(\text{Inhalation}) &= 1.81 + 0.49 \log(\text{TA}) - 0.92[\text{SC}] + 1.54[\text{WP}]\end{aligned}$$

If water soluble bags are used, take 10% of the result for all body parts.

### Application

$$\begin{aligned}\log(\text{Hands}) &= 2.96 + 0.73 \log(\text{TA}) + 0.61[\text{Droplets} = \text{Normal}] - 0.21[\text{Equipment} = \text{Normal}] \\ \log(\text{Protected hands}) &= -0.46 + 0.12 \log(\text{TA}) + 1.79[\text{Droplets} = \text{Normal}] + 2.19[\text{Equipment} = \text{Normal}] \\ \log(\text{Body}) &= 1.94 + 1.00 \log(\text{TA}) + 1.51[\text{Droplets} = \text{Normal}] - 0.82[\text{Equipment} = \text{Normal}] \\ \log(\text{Protected body}) &= 0.47 + 1.00 \log(\text{TA}) + 1.05[\text{Droplets} = \text{Normal}] - 0.77[\text{Equipment} = \text{Normal}] \\ \log(\text{Head}) &= 1.16 + 1.00 \log(\text{TA}) + 1.03[\text{Droplets} = \text{Normal}] - 1.12[\text{Equipment} = \text{Normal}] \\ \log(\text{Inhalation}) &= 1.27 + 0.58 \log(\text{TA}) + 0.33[\text{Droplets} = \text{Normal}] - 1.14[\text{Equipment} = \text{Normal}]\end{aligned}$$

If area treated [ha/day] is smaller than or equals to 10, use small area equipment. Otherwise use normal equipment.

If there is any drift reduction, the droplets are coarse. Otherwise the droplets are considered normal.

## 2.4 Final step

At this point, the user should have results for six different body parts for both mixing & loading and application (hand, protected hands, body, protected body, head and inhalation). To make the distinction clear, the results from mixing & loading are indicated by "(M/L)" and the results from application are indicated by "(App)". This section applies to both solubles and granules.



- Correction for absorption (dermal and inhalation)
- Correction for additional protection (PPE/RPE)
- Sum up for M/L and App and comparison to (A)AOEL

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Crop type	activity	activityTSF	hours	bodyPrts	TcUCV	TcCV1	TcCV2	TcCV3	indoor category	TSF
Cane fruit/High berries	Inspection, irrigation	Inspection, watering	2	Hand; body	12,500	1,400	1,250		1 both	0.01
Field crops	Inspection, irrigation		2	Hand; body	12,500	1,400	1,250		1	
Field crops	Hand harvesting (Only sweet corn)		8	Hand; body		23,000			1	
High ornamentals	Cutting, sorting, bundling, carrying	Harvesting, including cutting and bundling	8	Hand; body	14,000	5,000	1,400		1 other	0.10
High ornamentals	Cutting, sorting, bundling, carrying	Harvesting, including cutting and bundling	8	Hand; body	14,000	5,000	1,400		1 herbicide	0.01

### 6.3.1 Spray drift: Dermal spray drift exposure

#### 6.3.1.1 50th percentile

Application Method	Buffer Strip (m)	Adults Dermal Spray Drift Exposure	Children Dermal Spray Drift Exposure	Adults Inhalation Spray Drift Exposure	Children Inhalation Spray Drift Exposure
Downward Spraying	2-3	0.22	0.18	0.00011	0.00012
Downward Spraying	5	0.12	0.12	9e-05	1e-04
Downward Spraying	10	0.11	0.1	8e-05	8e-05
Upward Spraying	2-3	NA	NA	NA	NA
Upward Spraying	5	3.68	1.11	0.0017	0.00083
Upward Spraying	10	3.68	1.11	0.0017	0.00083

# NEW CALCULATOR



European Food Safety Authority

**OPEX**

Non-dietary exposure estimation related to the use of plant protection products

# 1. Info tab








## WELCOME TO OPEX







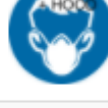

This tool is developed to provide estimates of the non-dietary exposure (for operators, workers, residents and bystanders) related to the use of plant protection products, therefore allowing a conclusion on the non-dietary risk assessment for these products. It has been developed based on the following EFSA Guidance documents:

- Description of all registers
- Technical documentation
  - R package
  - Icons legend
  - Abbreviations
  - Background data



# 1. Info tab

Icon	PPE
	No No safe use
	None No Workwear
	Protected Body Workwear
	Rain Suit Body Rain suit & trousers
	Coverall Body Certified protective coverall
	Protected Hands Gloves
	Visor Visor

	Hood	Hood
	Hood and faceshield	Hood & faceshield
	Faceshield	Faceshield
	FP1, P1 and similar	FP1, P1 and similar
	FP2, P2 and similar	FP2, P2 and similar
	Hood and FP1, P1 and similar	Hood and FP1, P1 and similar
	Hood and FP2, P2 and similar	Hood and FP2, P2 and similar
	Closed cabin	Closed cabin

# 2. Data Entry



## Exposure assessment for operator, worker, bystander and resident

v 0.3.20 • [Report new issue](#)

- Info
- Data Entry** ▾
- Summary
- Operator
- Worker
- Resident
- Bystander



- Info
- Data Entry** ▾
- Summary
- Operator
- Worker
- Resident
- Bystander

- 1 **Product**
- 2 Active Substances
- 3 Application Scenarios
- 4 Intended Use

# 2. Data Entry

① Product

**Load Saved Product (.zip)**

Browse... No file selected

Please refresh page before analyzing new product

**New Product**

**Product name**

PRODUCT

**Formulation type**

Please select

- Solubles
  - Wettable powder, soluble powder
  - Wettable granules, soluble granules
  - Soluble concentrates, emulsifiable concentrate, etc.
- Non-Solubles
  - Granules, fine granules



## Product

**Load Saved Product (.zip)**

Browse... No file selected

Please refresh page before analyzing new product

**New Product**

**Product name**

PRODUCT

**Formulation type**

Soluble concentrates, emulsifiable concentrate, etc.

Water soluble bags

**Product category ⓘ**

Please select

- Herbicide
- Other

# 2. Data Entry

Info Data Entry Summary Operator Worker Resident Bystander

## Product

### Load Saved Product (.zip)

Browse... No file selected

Please refresh page before analyzing new product

### New Product

#### Product name

PRODUCT

#### Formulation type

Soluble concentrates, emulsifiable concentrate, etc.

Water soluble bags

#### Product category

Other

### Summary

Please complete data to download product data.

#### Product

**Product name** : PRODUCT

**Formulation type** : Soluble concentrates, emulsifiable concentrate, etc.

**Water soluble bags** : No

**Product category** : other

#### Active Substances

No data added

#### Application Scenarios

No data added

#### Intended Use

No data added



# 2. Data Entry



2

## Active Substances

Name of active substance

Active SC1

Concentration of active substance [g a.s./l or kg]

300

AOEL [mg/kg bw/day]

0.05

AAOEL [mg/kg bw]

0.1

Vapour pressure [Pa]

0.001

### Absorption of the Active Substance

Dermal absorption [%] from experimental data or default value for concentrate

	Concentration [g a.s./l or kg]	Dermal absorption [%]
Concentrate (product)	300	10
Dilution 1 tested	3	20
Dilution 2 tested	1	30
Dilution 3 tested		
Dilution 4 tested		
Dilution 5 tested		

You can add rows by right-clicking in the table.

Air concentration calculation

Molecular weight of the active substance [g/mol]

Oral absorption [%]

100

Inhalation absorption [%]

100

Experimental vapour concentration [mg/m<sup>3</sup>]

+ Add

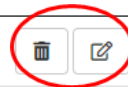
# 2. Data Entry

## Active substance(s)

+ Add



Name of active substance	AOEL [mg/kg bw/day]	AAOEL [mg/kg bw]	Vapour pressure [Pa]	Oral absorption [%]	Inhalation absorption [%]	Molecular weight of the active substance [g/mol]	Experimental vapour concentration [mg/m <sup>3</sup> ]	Concentration of active substance [g a.s./l or kg]	Dermal absorption [%]
Active SC1	0.05	0.1	0.001	100	100			300	10
								3	20
								1	30
Active SC2	0.03	0.06	0.001	100	100			200	5
								2	10
								0.5	15



# 2. Data Entry

3

## Application Scenarios

**Crops** (dropdown menu): Please select, Field crops, Low vegetables, High vegetables, Low berries, Cane fruit/High berries, Low ornamentals, High ornamentals, Viticulture

**Indoor/outdoor** (dropdown menu): [Empty]

**Unit** (dropdown menu): kg/ha

**Max. no. of applications** (dropdown menu): 1

**Min. volume water [l/ha]** (input field): [Empty]

**Max. volume water [l/ha]** (input field): [Empty]

**Buffer strip [m]** (dropdown menu): 2-3

**Drift reduction [%]** (dropdown menu): 0

**+ Add** (button)



## Application Scenarios

**Crops** (dropdown menu): Low vegetables

**Indoor/outdoor** (dropdown menu): Outdoor

**Re-entry activity** (dropdown menu): [Empty]

**Crop Type** Brassica, Bulb, Fruiting, Legume, Leaf vegetables and fresh herbs, Root, tuber and bulb vegetables, Stem vegetables

**Crop Examples** Brassica vegetables - broccoli, cauliflower, Brussels sprout, cabbage Fruiting vegetables - aubergine, tomato, pepper, courgette, cucumber, melon, sweet corn Legume vegetables - vining pea, edible podded pea Leaf vegetables and fresh herbs - lettuce, spinach, spinach beet, basil, parsley Root, tuber and bulb vegetables - sugar beet, potato, sweet potato, carrot, celeriac, Jerusalem artichoke, parsnip, swede, turnip, garlic, bulb onion, shallot, fennel, cucumber/zucchini, bell pepper/eggplant, rhubarb Stem vegetables - asparagus, celery, leek, rhubarb

**Dermal transfer coefficients for worker:**

Total potential exposure [cm <sup>2</sup> /h]: 5800	Arm, body and legs covered [cm <sup>2</sup> /h]: 2500	Hands, arm, body and legs covered [cm <sup>2</sup> /h]: 580	Hands covered, no workwear [cm <sup>2</sup> /h]: NA
---	---	---	---

# 2. Data Entry

## Application Scenarios

Crops:

**Crop Type** Brassica, Bulb, Fruiting, Legume, Leaf vegetables and fresh herbs, Root, tuber and bulb vegetables, Stem vegetables

**Crop Examples** Brassica vegetables - broccoli, cauliflower, Brussels sprout, cabbage Fruiting vegetables - aubergine, tomato, pepper  
herbs - lettuce, spinach, spinach beet, basil, parsley Root, tuber and bulb vegetables - sugar beet, potato, sweet potato, carrot, celery  
rhubarb Stem vegetables - asparagus, celery, leek, rhubarb

ables - vining pea, edible podded pea Leaf vegetables and fresh  
b onion, shallot, fennel, cucumber/zucchini, bell pepper/eggplant,

**Dermal transfer coefficients for worker:**


Total potential exposure [cm²/h]: 5800	Arm, body and legs covered [cm²/h]: 2500	Hands, arm, body and legs covered [cm²/h]: 580	Hands covered, no workwear [cm²/h]: NA
--	--	--	--

**Application Rate**

<input type="text" value="3"/> Max. application rate of the product [l or kg/ha]	<input type="text" value="kg/ha"/> Unit	<input type="text" value="3"/> Max. no. of applications	<input type="text" value="7"/> Interval between multiple applications [days]
<input type="text" value="normal"/> Type of cultivation	<input type="text" value="100"/> Min. volume water [l/ha]	<input type="text" value="500"/> Max. volume water [l/ha]	

**Method of Application**

<input type="text" value="Downward spraying"/> Application method	<input type="text" value="Vehicle-mounted Manual-Hand held Manual-Knapsack"/> Application technique (Normal)
<input type="text" value="2-3"/> Buffer strip [m]	<input type="text" value="0"/> Drift reduction [%]





# 2. Data Entry

## Application Scenarios

**Crops**  **Indoor/outdoor**  **Re-entry activity**

**Crop Type** Brassica, Bulb, Fruiting, Legume, Leaf vegetables and fresh herbs, Root, tuber and bulb vegetables, Stem vegetables

**Crop Examples** Brassica vegetables - broccoli, cauliflower, Brussels sprout, cabbage Fruiting vegetables - aubergine, tomato, pepper, courgette, cucumber, melon, sweet corn Legume vegetables - vining pea, edible podded pea Leaf vegetables and fresh herbs - lettuce, spinach, spinach beet, basil, parsley Root, tuber and bulb vegetables - sugar beet, potato, sweet potato, carrot, celeriac, Jerusalem artichoke, parsnip, swede, turnip, garlic, bulb onion, shallot, fennel, cucumber/zucchini, bell pepper/eggplant, rhubarb Stem vegetables - asparagus, celery, leek, rhubarb

**Dermal transfer coefficients for worker:**

Total potential exposure [cm <sup>2</sup> /h]: 12500	Arm, body and legs covered [cm <sup>2</sup> /h]: 1400	Hands, arm, body and legs covered [cm <sup>2</sup> /h]: 1250	Hands covered, no workwear [cm <sup>2</sup> /h]: NA
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## Application Rate


**Max. application rate of the product [l or kg/ha]**  **Unit**  **Max. no. of applications**  **Interval between multiple applications [days]**

**Type of cultivation**  **Min. volume water [l/ha]**  **Max. volume water [l/ha]**

## Method of Application

**Application method**  **Application technique (Normal)**

**Buffer strip [m]**  **Drift reduction [%]**



0  
50

# 2. Data Entry

## Application Scenarios

**Crops**  **Indoor/outdoor**  **Re-entry activity**  **Re-entry activity TSF**

**Crop Type** Leaf vegetables, fresh herbs and stem vegetables

**Crop Examples** Lettuce, spinach

**Dermal transfer coefficients for worker:**

Total potential exposure [cm<sup>2</sup>/h]: 12500    Arm, body and legs covered [cm<sup>2</sup>/h]: 1400    Hands, arm, body and legs covered [cm<sup>2</sup>/h]: 1250    Hands covered, no workwear [cm<sup>2</sup>/h]: NA    TSF [mg a.s./h ha/kg a.s.]: 0.01

### Application Rate

**Max. application rate of the product [l or kg/ha]**  **Unit**  **Max. no. of applications**  **Interval between multiple applications [days]**

**Type of cultivation**   **Min. volume water [l/ha]**  **Max. volume water [l/ha]**

### Method of Application

**Application method**  **Application technique (Normal)**   **Application technique (Dense)**

**Buffer strip [m]**  **Drift reduction [%]**

**+ Add** 



# 2. Data Entry

## Application Scenarios



+ Add

Uses	Crops	Max. application rate of the product [l or kg/ha]	Unit	Max. no. of applications	Interval between multiple applications [days]	Min. volume water [l/ha]	Max. volume water [l/ha]	Indoor/outdoor	Re-entry activity	Re-entry activity TSF	Buffer strip [m]	Drift reduction [%]	Application method	Type of cultivation	Application technique
Use 1	Low vegetables	3	l/ha	3	10	100	300	Outdoor	Reaching, picking (all except Brassica)		2-3	0	Downward spraying	normal	Vehicle-mounted Manual-Hand hel Manual-Knapsack
Use 2	Low vegetables	2	l/ha	3	10	100	300	Indoor	Inspection, irrigation (all)	Inspection, watering	2-3	0	Downward spraying	normal	Manual-Hand hel Manual-Knapsack
														dense	Manual-Hand hel Manual-Knapsack

# 2. Data Entry

4

## Intended Use

Refresh

To enter manually dermal absorption value(s) you can deselect 'Experimental Data?' (see Info page)

	Name of active substance	Crops	Total amount applied of a.s. [g a.s./ha]	Concentration in the dilution [g a.s./l]	Experimental data?	Dermal absorption [%] (dilution)	Default DFR [ $\mu\text{g}/\text{cm}^2$ foliage per kg a.s./ha]	Default DT50 [days]
1	Active SC1	Low vegetables	900.00	3.00	<input checked="" type="checkbox"/>	20.00	3.00	30.00
2	Active SC2	Low vegetables	600.00	2.00	<input checked="" type="checkbox"/>	10.00	3.00	30.00
3	Active SC1	Low vegetables	600.00	2.00	<input checked="" type="checkbox"/>	30.00	3.00	30.00
4	Active SC2	Low vegetables	400.00	1.33	<input checked="" type="checkbox"/>	15.00	3.00	30.00



# 2. Data Entry

## Intended Use



Worker	DFR refined worker [µg/cm <sup>2</sup> foliage per kg a.s./ha]	DT50 foliar worker [days]	DT50 air worker [days]	DT50 soil worker [days]	Resident	DFR refined resident [µg/cm <sup>2</sup> foliage per kg a.s./ha]	DT50 refined resident [days]	Bystander	DFR refined bystander [µg/cm <sup>2</sup> foliage per kg a.s./ha]	DT50 refined bystander [days]
<input type="checkbox"/>	3.00	30.00	30.00	30.00	<input type="checkbox"/>	3.00	30.00	<input type="checkbox"/>	3.00	30.00
<input type="checkbox"/>	3.00	30.00	30.00	30.00	<input type="checkbox"/>	3.00	30.00	<input type="checkbox"/>	3.00	30.00
<input type="checkbox"/>	3.00	30.00	30.00	30.00	<input type="checkbox"/>	3.00	30.00	<input type="checkbox"/>	3.00	30.00
<input type="checkbox"/>	3.00	30.00	30.00	30.00	<input type="checkbox"/>	3.00	30.00	<input type="checkbox"/>	3.00	30.00

# 2. Data Entry

## Summary



### Product

**Product name :** PRODUCT

**Formulation type :** Soluble concentrates, emulsifiable concentrate, etc.

**Water soluble bags :** No

**Product category :** other

### Active Substances

Name of active substance	AOEL [mg/kg bw/day]	AAOEL [mg/kg bw]	Vapour pressure [Pa]	Oral absorption [%]	Inhalation absorption [%]	Molecular weight of the active substance [g/mol]	Experimental vapour concentration [mg/m <sup>3</sup> ]	Concentration of active substance [g a.s./l or kg]	Dermal absorption [%]
Active SC1	0.05	0.1	0.001	100	100			300	10
								3	20
								1	30
Active SC2	0.03	0.06	0.001	100	100			200	5
								2	10
								0.5	15

# 3. Summary



Info Data Entry **Summary** Operator Worker Resident Bystander

## Safe Use per Crop

The worst case for all substances and all application equipments is selected with minimum necessary protection level to reach an exposure level below the (A)AOEL in the listed scenarios

Generate Report

Download Report

### Crop

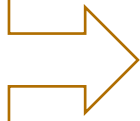
Use 1: Low vegetables  Use 2: Low vegetables

### Season

Not relevant

### Navigate to:

- Operator
- Worker
- Resident
- Bystander











# 3. Summary: operator

Operator

Low vegetables - Short term exposure (% AOEL)

Active SC1











Active SC2

Mixing/Loading	Application	Active SC1			Active SC2		
		normal & Vehicle-mounted	normal & Manual-Hand held	normal & Manual-Knapsack	normal & Vehicle-mounted	normal & Manual-Hand held	normal & Manual-Knapsack
		593	1543	639	369	866	534
		368	232	104	232	136	88
		59.3	171	71.9	33.9	96.4	61.6
		14.4	144	59.8	8.6	80.4	50

Low vegetables - Acute exposure (% AAOEL)

Active SC1

Active SC2

Mixing/Loading	Application	Active SC1			Active SC2		
		normal & Vehicle-mounted	normal & Manual-Hand held	normal & Manual-Knapsack	normal & Vehicle-mounted	normal & Manual-Hand held	normal & Manual-Knapsack
		1764	1405	519	1104	801	434
		816	654	267	511	373	223
		156	543	225	98.3	303	188
		77.3	511	211	50.6	285	176
		70.1	510	210	45.7	284	175







# 3. Summary: operator





## Operator



Low vegetables - Short term combined exposure (hazard index)

Mixing/Loading	Application	normal & Vehicle-mounted	normal & Manual-Hand held	normal & Manual-Knapsack
		9.6	24.1	11.7
		6	3.7	1.9

Low vegetables - Acute combined exposure (hazard index)

Mixing/Loading	Application	normal & Vehicle-mounted	normal & Manual-Hand held	normal & Manual-Knapsack
		28.7	22.1	9.5
		13.3	10.3	4.9

# 3. Summary: worker

## Active SC1

PPE	% of AOEL at day 0	Safe re-entry interval (days)
Total potential exposure	2024	131
Arms, body and legs covered	873	94
Hands, arms, body and legs covered	202	31
Hands covered, no workwear		

## Active SC2

PPE	% of AOEL at day 0	Safe re-entry interval (days)
Total potential exposure	1125	105
Arms, body and legs covered	485	69
Hands, arms, body and legs covered	112	6
Hands covered, no workwear		

## Combined Exposure

PPE	Hazard index at day 0	Safe re-entry interval (days)
Total potential exposure	31.5	236
Arms, body and legs covered	13.6	163
Hands, arms, body and legs covered	3.1	37
Hands covered, no workwear		

# 3. Summary: resident

## Resident

### Active SC1 (% AOEL)

#### Adults

Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
23.2	0.5	5.9	81.8	81

### Active SC2 (% AOEL)

#### Adults

Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
12.9	0.9	3.3	45.4	45.6

### Combined exposure (hazard index)

#### Adults

Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
0.4	0.01	0.09	1.3	1.3

#### Children

Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
97.7	1.6	16.2	147	184

#### Children

Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
54.4	2.7	11	81.8	106

#### Children

Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
1.5	0.04	0.3	2.3	2.9

# 3. Summary: bystander

## Bystander

### Active SC1 (% AAOEL)

#### Adults

Spray drift	Vapour	Surface deposits	Entry into treated crops
29.9	0.3	9	40.9

#### Children

Spray drift	Vapour	Surface deposits	Entry into treated crops
110	0.8	23.9	73.6

### Active SC2 (% AAOEL)

#### Adults

Spray drift	Vapour	Surface deposits	Entry into treated crops
16.6	0.5	5	22.7

#### Children

Spray drift	Vapour	Surface deposits	Entry into treated crops
62	1.3	15.9	40.9

### Combined exposure (hazard index)

#### Adults

Spray drift	Vapour	Surface deposits	Entry into treated crops
0.5	0.007	0.1	0.6

#### Children

Spray drift	Vapour	Surface deposits	Entry into treated crops
1.7	0.02	0.4	1.1

# 4. Operator



Info Data Entry Summary **Operator** Worker Resident Bystander

## Description

**Operators** are persons who are involved in activities relating to the application of a plant protection product (PPP); such activities include mixing/loading the product into the application machinery, operation of the application machinery, repair of the application machinery whilst it contains the PPP and emptying/cleaning the machinery/containers after use. Operators may be either professionals (e.g. farmers or contract applicators engaged in commercial crop production) or amateur users (e.g. home garden users; it is noted that this tool does not include an assessment of this scenario).

### Crop

Use 1: Low vegetables  Use 2: Low vegetables

Product name	Name of active substance	Total amount applied of a.s. [g a.s./ha]	Indoor/outdoor	Application technique	Type of cultivation	Application method	AOEL [mg/kg bw/day]	AAOEL [mg/kg bw]	Dermal absorption [%] (concentrate)	Dermal absorption [%] (dilution)	Inhalation absorption [%]
PRODUCT	Active SC1	900	Outdoor	Vehicle-mounted	normal	Downward spraying	0.05	0.1	10	20	100
PRODUCT	Active SC1	900	Outdoor	Manual-Hand held	normal	Downward spraying	0.05	0.1	10	20	100
PRODUCT	Active SC1	900	Outdoor	Manual-Knapsack	normal	Downward spraying	0.05	0.1	10	20	100
PRODUCT	Active SC2	600	Outdoor	Vehicle-mounted	normal	Downward spraying	0.03	0.06	5	10	100
PRODUCT	Active SC2	600	Outdoor	Manual-Hand held	normal	Downward spraying	0.03	0.06	5	10	100
PRODUCT	Active SC2	600	Outdoor	Manual-Knapsack	normal	Downward spraying	0.03	0.06	5	10	100

# 4. Operator

Info Data Entry Summary **Operator** Worker Resident Bystander

## Description

**Operators** are persons who are involved in activities relating to the application of a plant protection product (PPP); such activities include mixing/loading the product into the application machinery, operation of the application machinery, repair of the application machinery whilst it contains the PPP and emptying/cleaning the machinery/containers after use. Operators may be either professionals (e.g. farmers or contract applicators engaged in commercial crop production) or amateur users (e.g. home garden users; it is noted that this tool does not include an assessment of this scenario).

### Crop

Use 1: Low vegetables  Use 2: Low vegetables

Product name	Name of active substance	Total amount applied of a.s. [g a.s./ha]	Indoor/outdoor	Application technique	Type of cultivation	Application method	AOEL [mg/kg bw/day]	AAOEL [mg/kg bw]	Dermal absorption [%] (concentrate)	Dermal absorption [%] (dilution)	Inhalation absorption [%]
PRODUCT	Active SC1	600	Indoor	Manual-Hand held	normal	Downward spraying	0.05	0.1	10	30	100
PRODUCT	Active SC1	600	Indoor	Manual-Knapsack	normal	Downward spraying	0.05	0.1	10	30	100
PRODUCT	Active SC1	600	Indoor	Manual-Hand held	dense	Downward spraying	0.05	0.1	10	30	100
PRODUCT	Active SC1	600	Indoor	Manual-Knapsack	dense	Downward spraying	0.05	0.1	10	30	100
PRODUCT	Active SC2	400	Indoor	Manual-Hand held	normal	Downward spraying	0.03	0.06	5	15	100
PRODUCT	Active SC2	400	Indoor	Manual-Knapsack	normal	Downward spraying	0.03	0.06	5	15	100
PRODUCT	Active SC2	400	Indoor	Manual-Hand held	dense	Downward spraying	0.03	0.06	5	15	100
PRODUCT	Active SC2	400	Indoor	Manual-Knapsack	dense	Downward spraying	0.03	0.06	5	15	100



# 4. Operator



PRODUCT	Active SC2	400	Indoor	Manual-Knapsack	dense	Downward spraying	0.03	0.06	5	15	100
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## Output

Single Scenario

Estimated short term and acute exposure when using no protection and least cumbersome safe protection.



Systemic exposure (mg a.s./day)

Percentile	Mixing & Loading	Application	ML	App	Total	Total systemic exposure per kg body weight (mg/kg bw/day)	% of (A)AOEL
Short term	!	!	0.6	45.7	46.3	0.8	2572
Short term			0.04	0.3	0.3	0.005	18.2
Acute	!	!	1.5	72.1	73.5	1.2	2043
Acute			0.05	0.5	0.6	0.009	15.7



# 4. Operator

## All Combinations of PPE







### Exposure

Short term (75th percentile)
  Acute (95th percentile)

The estimated short term and acute exposure when wearing increasing level of protection is displayed as percentage of the (A)AOEL. Results are given for all active substances and all application scenarios.

### Legend

- Safe use with workwear
- Safe use with PPE
- No safe use
- No data to calculate the exposure for this scenario

Mixing/Loading	Application	Active SC1				Active SC2			
		normal & Manual-Hand held	normal & Manual-Knapsack	dense & Manual-Hand held	dense & Manual-Knapsack	normal & Manual-Hand held	normal & Manual-Knapsack	dense & Manual-Hand held	dense & Manual-Knapsack
		242	210	3673	3642	187	177	2052	2043
		59.4	68.8	1331	1340	43.8	58.9	748	763
		28.1	26.6	1299	1298	24.1	23.8	728	728



# 5. Worker

Info Data Entry Summary Operator **Worker** Resident Bystander

## Description

**Workers** are persons who, as part of their employment, enter an area that has been treated previously with a PPP or who handle a crop that has been treated with a PPP.

Crop  
 Use 1: Low vegetables  Use 2: Low vegetables

Product name	Name of active substance	Total amount applied of a.s. [g a.s./ha]	Indoor/outdoor	Max. no. of applications	Re-entry activity	DFR [ $\mu\text{g}/\text{cm}^2$ foliage per kg a.s./ha]	DT50 foliar worker [days]	DT50 air worker [days]	DT50 soil worker [days]	Dermal transfer coefficient - Total potential exposure [ $\text{cm}^2/\text{h}$ ]	Dermal transfer coefficient - Arm, body and legs covered [ $\text{cm}^2/\text{h}$ ]	Dermal transfer coefficient - Hands, arm, body and legs covered [ $\text{cm}^2/\text{h}$ ]	Dermal transfer coefficient - Hands covered, no workwear [ $\text{cm}^2/\text{h}$ ]	Dermal absorption [%]
PRODUCT	Active SC1	900	Outdoor	3	Reaching, picking (all except Brassica)	3	30	30	30	5800	2500	580		20
PRODUCT	Active SC2	600	Outdoor	3	Reaching, picking (all except Brassica)	3	30	30	30	5800	2500	580		10

Output at d0

Single Scenario

Possibility to select a different scenario (row) from the table above.

PPE	Dermal exposure (mg a.s./day)	Inhalation exposure (mg a.s./day)	Total exposure (mg a.s./day)	Total exposure (mg/kg bw/day)	% of AOEL at day 0	Safe re-entry interval (days)
Total potential exposure	60.7	NA	60.7	1	2024	131
Arms, body and legs covered	26.2	NA	26.2	0.4	873	94
Hands, arms, body and legs covered	6.1	NA	6.1	0.1	202	31
Hands covered, no workwear	NA	NA	NA	NA	NA	NA

# 5. Worker

## Combined exposure to more than one a.s. in the product

### All Substances

Per Substance

Combined exposure

PPE	Dermal exposure (mg a.s./day)	Inhalation exposure (mg a.s./day)	Total exposure (mg a.s./day)	Total exposure (mg/kg bw/day)	Hazard index at day 0	Safe re-entry interval (days)
Total potential exposure	43.6	0.03	43.7	0.7	17	123
Arms, body and legs covered	4.9	0.03	4.9	0.08	1.9	29
Hands, arms, body and legs covered	4.4	0.03	4.4	0.07	1.7	24
Hands covered, no workwear	NA	NA	NA	NA	NA	NA

# 5. Worker

## Application Scenarios

Crops: **Bare arable land** (circled in red)

Indoor/outdoor: **Outdoor**

Re-entry activity: Inspection without contact with treated soil (circled in red)

Crop Type: Bare soil

Crop Examples:

### 3.2 Solubles and granules

#### 3.2.1 Outdoor (circled in green)

##### 3.2.1.2 Scenario 2: Bare arable land, no contact with treated soil

PDE soil – NA  
PDE foliar – NA

PIE soil – NA  
PIE foliar – NA  
PIE air – NA

#### 3.2.2 Indoor (circled in green)

##### 3.2.2.2 Scenario 2: Bare arable land, no contact with treated soil

PDE soil – NA  
PDE foliar – NA

PIE soil – NA  
PIE foliar – NA  
PIE air – Vapour · Inhalation absorption

with vapour =  $d\_inhalationRate \cdot hours \cdot Vapour\ concentration$ .  
See Residents for the calculation of Vapour concentration.

# 6. Resident

Info Data Entry ▾ Summary Operator Worker **Resident** Bystander

## Description

**Residents** are persons who live, work or attend school or any other institution adjacent to an area that is or has been treated with a PPP; whose presence is quite incidental and unrelated to work involving PPPs but whose position might lead them to be exposed; who take no action to avoid or control exposure; and who might be in the location for up to 24 hours per day (short term exposure).

### Crop

Use 1: Low vegetables  Use 2: Low vegetables

### Season

Not relevant

Product name	Name of active substance	Total amount applied of a.s. [g a.s./ha]	Indoor/outdoor	Max. no. of applications	Drift reduction [%]	Buffer strip [m]	Season	DFR [ $\mu\text{g}/\text{cm}^2$ foliage per kg a.s./ha]	DT50 [days]	Dermal absorption [%]	Air concentration [ $\text{mg}/\text{m}^3$ ]
PRODUCT	Active SC1	900	Outdoor	3	0	2-3	Not relevant	3	30	20	0.001
PRODUCT	Active SC2	600	Outdoor	3	0	2-3	Not relevant	3	30	10	0.001



# 6. Resident

## Use 1: low vegetables - outdoor

Per Substance

Combined exposure

### Active SC1

#### Adults

	Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
Systemic exposure [mg a.s./day]	0.7	0.02	0.2	2.5	2.4
Systemic exposure [mg a.s./kg bw/day]	0.01	0.0003	0.003	0.04	0.04
% of AOEL	23.2	0.5	5.9	81.8	81

#### Children

	Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
Systemic exposure [mg a.s./day]	0.5	0.008	0.08	0.7	0.9
Systemic exposure [mg a.s./kg bw/day]	0.05	0.0008	0.008	0.07	0.09
% of AOEL	97.7	1.6	16.2	147	184

### Active SC2

#### Adults

	Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
Systemic exposure [mg a.s./day]	0.2	0.02	0.06	0.8	0.8
Systemic exposure [mg a.s./kg bw/day]	0.004	0.0003	0.001	0.01	0.01
% of AOEL	12.9	0.9	3.3	45.4	45.6

#### Children

	Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
Systemic exposure [mg a.s./day]	0.2	0.008	0.03	0.2	0.3
Systemic exposure [mg a.s./kg bw/day]	0.02	0.0008	0.003	0.02	0.03
% of AOEL	54.4	2.7	11	81.8	106

# 6. Resident

## Use on amenity grasslands: recreational exposure

### Adults

	Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)	<u>Entry into treated crops (recreational)</u>
Systemic exposure [mg a.s./day]	0.04	0.02	0.01	0.03	0.07	0.2
Systemic exposure [mg a.s./kg bw/day]	0.0005	0.0003	0.0002	0.0005	0.001	0.004
% of ADEL	5.4	2.7	2	4.6	11.8	35.5

### Children

	Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)	<u>Entry into treated crops (recreational)</u>
Systemic exposure [mg a.s./day]	0.03	0.008	0.007	0.03	0.04	0.1
Systemic exposure [mg a.s./kg bw/day]	0.003	0.0008	0.0007	0.003	0.004	0.01
% of ADEL	27.2	8	6.8	28.3	37.5	122

# 7. Bystander

Info Data Entry ▾ Summary Operator Worker Resident **Bystander**

## Description

**Bystanders** are persons who could be located within or directly adjacent to the area where PPP application or treatment is in process or has recently been completed; whose presence is quite incidental and unrelated to work involving PPPs, but whose position might lead them to be exposed during a short period of time (acute exposure); and who take no action to avoid or control exposure.

### Crop

Use 1: Low vegetables  Use 2: Low vegetables

### Season

Not relevant

Product name	Name of active substance	Total amount applied of a.s. [g a.s./ha]	Indoor/outdoor	Max. no. of applications	Drift reduction [%]	Buffer strip [m]	Season	DFR [ $\mu\text{g}/\text{cm}^2$ foliage per kg a.s./ha]	DT50 [days]	Dermal absorption [%]	Air concentration [ $\text{mg}/\text{m}^3$ ]
PRODUCT	Active SC1	600	Indoor	3	0	2-3	Not relevant	3	30	30	0.001
PRODUCT	Active SC2	400	Indoor	3	0	2-3	Not relevant	3	30	15	0.001

## Single Scenario

Possibility to select a different scenario (row) from the table above.

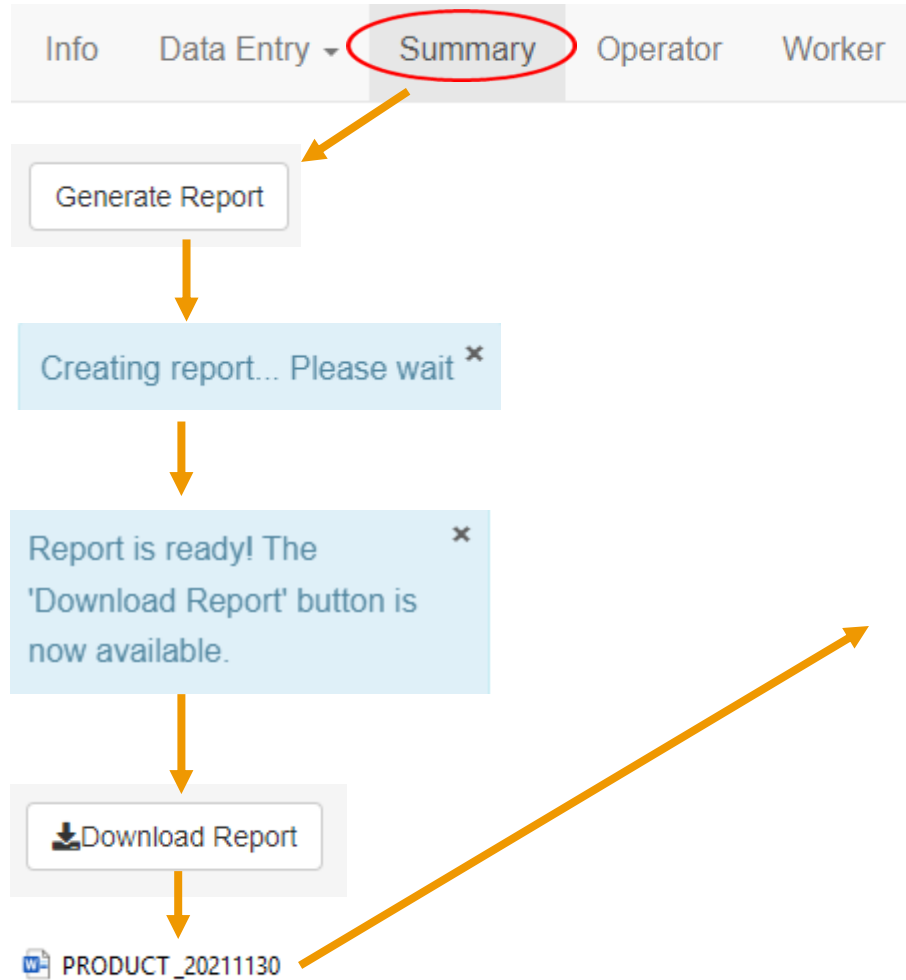
## Adults

	Spray drift	Vapour	Surface deposits	Entry into treated crops
Systemic exposure [mg a.s./day]	1.8	0.02	0.5	NA
Systemic exposure [mg a.s./kg bw/day]	0.03	0.0003	0.009	NA
% of AAOEL	29.8	0.3	9	NA

## Children

	Spray drift	Vapour	Surface deposits	Entry into treated crops
Systemic exposure [mg a.s./day]	1.1	0.008	0.2	NA
Systemic exposure [mg a.s./kg bw/day]	0.1	0.0008	0.02	NA
% of AAOEL	110	0.8	22.4	NA

# 8. Report generation



## Exposure assessment for operator, worker, resident and bystander

Product: PRODUCT

OPEX version: 0.3.19

30 November 2021

1. Information on product and active substance(s)	
Product name	PRODUCT
Formulation type	Spluble concentrates, emulsifiable concentrate, etc.
Product category	Other
<b>Name of active substance</b>	<b>Active sc1</b>
Concentration of active substance [g a.s./l or kg]	300
AOEL [mg/kg bw/day]	0.05
AAOEL [mg/kg bw]	0.1
Inhalation absorption [%]	100
Oral absorption [%]	100
Dermal absorption [%] (concentrate)	10
Dermal absorption [%] (dilution) 3 [g a.s./l or kg]	20
Dermal absorption [%] (dilution) 1 [g a.s./l or kg]	30
<b>Name of active substance</b>	<b>Active sc2</b>
Concentration of active substance [g a.s./l or kg]	200
AOEL [mg/kg bw/day]	0.03
AAOEL [mg/kg bw]	0.06
Inhalation absorption [%]	100
Oral absorption [%]	100
Dermal absorption [%] (concentrate)	5
Dermal absorption [%] (dilution) 2 [g a.s./l or kg]	10
Dermal absorption [%] (dilution) 0.5 [g a.s./l or kg]	15



**OPEX tool webinar**

26 January 2022

# Q & A

Trusted science for safe food

# Questions and Answers session

	Comment	Answer
1	<b>Differences between exposure values:</b> scenario summaries (report) <i>versus</i> appendix	<u>Generated report</u> : all PPE/RPE up to safe use <u>Appendix</u> : the PPE/RPE leading to safe use
2	<b>Rounding in Report:</b> More significant figures?	Limitation of the number of significant digits: data variability, extra-accuracy
3	<b>Risk assessment for workers – grapes:</b> No TC values leading to conservative exposure estimation Possible refinements?	<u>Workers</u> : TC values and duration of the specific re-entry activities cannot be modified in the OPEX calculator <u>Residents/Bystanders</u> : reduction of the exposure by applying refined DFR/DT50 values, drift reduction, buffer zones
4	<b>Cumulative risk assessment calculation:</b> Sum of hazard quotients index?	CRA = HQs calculated for all a.s. in the product by dividing the individual exposure levels by the respective systemic AOEL
5	Availability of <b>an offline tool</b>	Instructions to be included in the Manual on Zenodo

# Questions and Answers session

	Comment	Answer
6	<b>Generated report: error message</b> "Report could not be generated: undefined columns selected"	Recommended approach: 1. All entries complete? 2. Save the product 3. Click on 'report new issue' → Email: zip file + description of the problem
7	Workers entering the field before harvesting: <b>No Pre Harvesting Interval (PHI)</b> needed to calculate the adjusted DFR value?	The model automatically calculates the PHI taking into account the DT50 value
8	<b>Discontinuous work:</b> how to avoid losing the data entries?	Recommendation to save the product in a zip file – timeout extended by circa 20-30 minutes
9	<b>Personal data protection</b> and user tracking	'By signing in you agree with the Terms of Use. You can click on the Terms of Use to see what you are agreeing with, they are in compliance with personal data protection'

# Thank you for attending our webinar

In case we did not manage to answer all your questions, please feel free to re-submit them via EFSA Ask a question webform (EFSA.Connect at: <https://connect.efsa.europa.eu/RM/s/askefsa>)

The **recording** of today's webinar and **ppt** will be available on the EFSA website in few days

Please take few minutes to fill out the **evaluation form** that you will receive shortly in your inbox. Your feedback is essential to improve our future webinars

# OPEX NEXT: stakeholders event

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## Stakeholder workshop on the next update of the EFSA Guidance on Non-Dietary Exposure to Pesticides

Location: Online Date: 28 March 2022

[Register here](#) Deadline: 14 March 2022 - 12:00 (CET)

28 March 2022, 13:30 – 17:00 (CET)

**Contents**

- Documents
- Related topic(s)

### Background

EFSA recently published the [Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment for plant protection products](#) (OPEX Guidance), as requested by the [European Commission](#). Notwithstanding an [open call for data](#), information/data on a limited number of the open issues have been obtained and considered for the update and the annexed calculator.

For the remaining issues listed in the original mandate, insufficient new information was available, and it was agreed with the Commission to address them in a subsequent revision, once related data has been made available to EFSA. In addition, EFSA highlighted the need to reconsider the methodology for data collection, with the direct involvement of relevant stakeholders at an early stage of the preparatory work.

EFSA carried out an analysis of the future of non-dietary exposure (NDE) to plant protection products (PPPs). In particular, a methodology for the collection and assessment of evidence for the update of current approaches used to estimate NDE to PPPs has been proposed in a 'state of the art and perspectives' document. This recommends, as a starting point, engaging with data owners and model developers to identify evidence that could be relevant to the update. Some information/evidence has already been made available, mainly from industry and public organisations. Also, EFSA has been informed about ongoing activities for which final results and raw data could be submitted in the near future.

EFSA's PREV Unit is holding a workshop with relevant stakeholders on the next update of the OPEX Guidance and annexed calculator on 28 March 2022. The meeting provides an opportunity to gather relevant data/information and discuss what needs to be addressed in the update.

### Objectives of the meeting

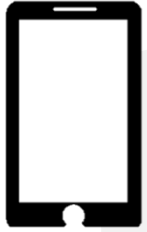
The overall aim of the meeting is to discuss the approach to be implemented for the next update based on new evidence.

Specific objectives are to:

- have a clear understanding of finalised as well as ongoing activities related to the subject matter
- receive an overview of available data/models
- identify possible cooperation among relevant stakeholders (e.g., competent authorities of Member States, public organisations, academia, non-governmental organisations) for the assessment of submitted data/models as well as for the development of new models
- finalise the 'State of the art and perspectives' document based on stakeholders' feedback (published with this announcement)

A survey, published with this announcement (see below), will enable the collection of preliminary information on the above-mentioned points and facilitate the discussion during the event. Registrants are therefore recommended to fill in the questionnaire by the registration deadline (14 March 2022, 12:00 CET).

### Structure of the meeting



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