

Instructions for using the workbook

The information required for the exposure assessment needs to be entered in the worksheet "**Data entry**".

In the following worksheets formulas calculate the exposure values automatically

Worksheet "**Operator Outdoor Spray AOEM**" is to be for outdoor spray applications. PPE options can be selected in this worksheet

Worksheet "**Operator Granules**" is for granular applications. Currently the calculator does not allow operator exposure for indoor applications. PPE options can be selected in this worksheet

Worksheets "**Resident exposure**" and "**Bystander exposure**" are only relevant for outdoor applications

Worksheet "**Recreational Exposure**" is only applicable for golf course, turf, other sports lawns or amenity turf/grassland areas where members of the public are likely to have access

The combined results of the exposure assessment are presented in worksheet "**Summary**"

This calculator should be used in conjunction with the **Guidance on the Assessment of Exposure for Operators, Workers, Residents and Bystanders in Risk Assessment for Plant Protection Products**

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Note: Some drop-down menus depend on others. To avoid errors, please fill-in from top to bottom

Substance name	ethefon	
Product name	Ethrel-A	
Reference value non acutely toxic active substance (RVNAS)	0,03	mg/kg bw/day
Reference value acutely toxic active substance (RVAAS)	0,03	mg/kg bw/day
Crop type	Pome fruit	
Substance properties		
Formulation type	Soluble concentrates, emulsifiable concentrate, etc.	
Miniumum volume water for application (liquids)	500	L/ha
Maximum application rate of active substance	0,36	kg a.s. /ha
50% Dissipation Time DT50	30	days
Initial Dislodgeable Foliar Residue	3	µg/cm2 of foliage/kg a.s. applied/ha
Dermal absorption of product	3,00%	
Dermal absorption of in-use dilution	1,50%	
Oral absorption of active substance	84,00%	
Inhalation absorption of active substance	100,00%	
Vapour pressure of active substance	moderately volatile substances with a vapour pressure between 5*10-3Pa and 10-2Pa	
Scenario		
Indoor or Outdoor application	Outdoor	
Application method	Upward spraying	
Application equipment	Vehicle-mounted	
Buffer strip	5	m
Number of applications	1	
Interval between multiple applications	365	days
Season (upward spraying orchards only)	late (dense foliage)	

Exposure assessment				
Substance	ethefon	Formulation = Soluble concentrates, emulsifiable concentrate, etc.	Application rate-0,36 kg a.s. /ha	Spray dilution = 0,72 g a.s./l Vapour pressure = moderately volatile substances with a vapour pressure between 5*10-3Pa and 10-2Pa
Scenario	Pome fruit late (dense foliage) / Outdoor / Upward spraying / Vehicle-mounted			Buffer = 5 Number applications = 1, Application interval = 365 days
Percentage Absoprtion	Dermal for product = 3	Dermal for in use diluation = 1,5	Oral = 84	Inhalation = 100
RVNAS	0,03 mg/kg bw/day		RVAAS	0,03 mg/kg bw/day
DFR	3 µg a.s./cm2 per kg a.s./ha		DT50	30 days
Operator Model				
Potential exposure	Longer term systemic exposure mg/kg bw/day		0,0242	% of RVNAS 80,71%
	Acute systemic exposure mg/kg bw/day		0,1492	% of RVAAS 497,18%
Mixing and Loading	Gloves = No		Clothing = Work wear - arms, body and legs covered	RPE = None Soluble bags = No
Application	Gloves = No		Clothing = Work wear - arms, body and legs covered	RPE = None Closed cabin = No
Exposure (including PPE options above)	Longer term systemic exposure mg/kg bw/day		0,0120	% of RVNAS 40,11%
	Acute systemic exposure mg/kg bw/day		0,0511	% of RVAAS 170,32%
Worker - Searching, reaching, picking	Potential exposure mg/kg bw/day		0,0972	% of RVNAS 324,00%
	Working clothing mg/kg bw/day		0,0194	% of RVNAS 64,80%
	Working clothing and gloves mg/kg bw/day		0,0097	% of RVNAS 32,40%
Resident - child	Spray drift (75th percentile) mg/kg bw/day		0,0016	% of RVNAS 5,38%
	Vapour (75th percentile) mg/kg bw/day		0,0161	% of RVNAS 53,50%
	Surface deposits (75th percentile) mg/kg bw/day		0,0004	% of RVNAS 1,45%
	Entry into treated crops (75th percentile) mg/kg bw/day		0,0018	% of RVNAS 6,08%
	All pathways (mean) mg/kg bw/day		0,0188	% of RVNAS 62,51%
Resident - adult	Spray drift (75th percentile) mg/kg bw/day		0,0009	% of RVNAS 2,85%
	Vapour (75th percentile) mg/kg bw/day		0,0035	% of RVNAS 11,50%
	Surface deposits (75th percentile) mg/kg bw/day		0,0001	% of RVNAS 0,26%
	Entry into treated crops (75th percentile) mg/kg bw/day		0,0010	% of RVNAS 3,38%
	All pathways (mean) mg/kg bw/day		0,0049	% of RVNAS 16,23%
Bystander - child	Spray drift (95th percentile) mg/kg bw/day		0,0037	% of RVAAS 12,26%
	Vapour (95th percentile) mg/kg bw/day		0,0161	% of RVAAS 53,50%
	Surface deposits (95th percentile) mg/kg bw/day		0,0011	% of RVAAS 3,69%
	Entry into treated crops (95th percentile) mg/kg bw/day		0,0018	% of RVAAS 6,08%
Bystander - adult	Spray drift (95th percentile) mg/kg bw/day		0,0020	% of RVAAS 6,52%

Exposure assessment				
	Vapour (95th percentile) mg/kg bw/day	0,0035	% of RVAAS	11,50%
	Surface deposits (95th percentile) mg/kg bw/day	0,0002	% of RVAAS	0,73%
	Entry into treated crops (95th percentile) mg/kg bw/day	0,0010	% of RVAAS	3,38%
Recreational Exposure		Child % of RVNAS	Adult % of RVNAS	

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Operator exposure for Ethrel-A outdoor spray applications

Application rate of active substance		0,36 kg a.s./ha		i_AppRate	
Assumed area treated		10 ha/day		d_AreaTreated	
Amount of active substance applied		3,6 kg a.s./day		i_AmoutAS	
Dermal absorption of the product		3,00%		i_AbsorpProduct	
Dermal absorption of in-use dilution		1,50%		i_AbsorInuse	
Formulation type		Soluble concentrates, emulsifiable concentrate, etc.			
Indoor or Outdoor application		Outdoor			
Application method		Upward spraying			
Application equipment		Vehicle-mounted			
Season		late (dense foliage)			
Please complete the exposure data for all the scenarios and the total exposure for each scenario					
Mixing and loading	Exposure values	µg exposure/day mixed and loaded		Reference	Comment
		75 th centile	95 th centile		
	Hands	13020	48250	AOEM	
	Body	8778	104496	AOEM	
	Head	187	18086	AOEM	
	Protected hands (gloves)	79	713	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	74	527	AOEM	
	Protected head (hood and face shield)	3	1024	AOEM	
	Inhalation	5	30	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	No			
	Clothing	Work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Water soluble bag	No		1	
Application	Exposure values	µg exposure/day applied		Reference	Comment
		75 th centile	95 th centile		
	Hands	7858	22452	AOEM	No data available for a drift reduction scenario
	Body	31722	185098	AOEM	
	Head	4169	25586	AOEM	
	Protected hands (gloves)	127	3310	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	414	809	AOEM	
	Inhalation	132	298	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	No			
	Clothing	Work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Closed cab	No		vehicle mounted upward spraying only	

1. Total

	Without RPE/PPE	With RPE/PPE	
Longer term			
Total systemic exposure from mixing, loading and application (mg a.s./day)	1,4527836	0,7220533	
Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	0,0242131	0,0120342	
% of RVNAS	80,71%	40,11%	
Acute			

Total systemic exposure from mixing, loading and application (mg a.s./day)	8,9492357	3,0658187	
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Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	0,1491539	0,0510970	
% of RVAAS	497,18%	170,32%	

2. Longer term exposure

2.1 Mixing and loading

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	390,6066285	6,5101105	D15*i_AbsorpProduct
Body	263,3255328	4,3887589	D16*i_AbsorpProduct
Head	5,6034275	0,0933905	D17*i_AbsorpProduct
Inhalation	5,4194551	0,0903243	D21*i_AbsorpInhalation
Sum	664,9550439	11,0825841	
With RPE/PPE (as selected above)			
Hands	390,6066285	6,5101105	D18*i_AbsorpProduct
Body	2,2192238	0,0369871	D19*i_AbsorpProduct or D15*i_AbsorpProduct*F24
Head	5,6034275	0,0933905	D20*i_AbsorpProduct or D17*i_AbsorpProduct*F25
Inhalation	5,4194551	0,0903243	D21*i_AbsorpInhalation*G25
Sum	403,8487349	6,7308122	
Water soluble bag	403,8487349	6,7308122	C70*F26

2.2 Application

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	117,8646654	1,9644111	D30*i_Absorpnuse
Body	475,8321255	7,9305354	D31*i_Absorpnuse
Head	62,5322074	1,0422035	D32*i_Absorpnuse
Inhalation	131,5995361	2,1933256	D35*i_AbsorpInhalation
Sum	787,8285344	13,1304756	
With RPE/PPE (as selected above)			
Hands	117,8646654	1,9644111	D33*i_Absorpnuse
Body	6,2081723	0,1034695	D34*i_Absorpnuse or D31*i_Absorpnuse*F38
Head	62,5322074	1,0422035	D32*i_Absorpnuse*F39
Inhalation	131,5995361	2,1933256	D35*i_Absorpnuse*G39
Sum	318,2045812	5,3034097	

3. Acute exposure

3.1 Mixing and loading

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	1447,4968179	24,1249470	E15*i_AbsorpProduct
Body	3134,8708286	52,2478471	E16*i_AbsorpProduct
Head	542,5924614	9,0432077	E17*i_AbsorpProduct
Inhalation	29,6044534	0,4934076	E21*i_AbsorpInhalation
Sum	5154,5645614	85,9094094	
With RPE/PPE (as selected above)			
Hands	1447,4968179	24,1249470	E18*i_AbsorpProduct
Body	15,7951500	0,2632525	E19*i_AbsorpProduct or E16*i_AbsorpProduct*F24
Head	542,5924614	9,0432077	E20*i_AbsorpProduct or E17*i_AbsorpProduct*F25
Inhalation	29,6044534	0,4934076	E21*i_AbsorpInhalation*G25
Sum	2035,4888828	33,9248147	
Water soluble bag	2035,4888828	33,9248147	C104*F26

2.2 Application

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	336,7857906	5,6130965	E30*i_Absorpnuse
Body	2776,4749519	46,2745825	E31*i_Absorpnuse
Head	383,7900930	6,3965015	E32*i_Absorpnuse
Inhalation	297,6202662	4,9603378	E35*i_AbsorpInhalation

Sum	3794,6711017	63,2445184	
With RPE/PPE (as selected above)			
Hands	336,7857906	5,6130965	$E33*i_Absorplnuse$
Body	12,1337142	0,2022286	$E34*i_Absorplnuse$ or $E31*i_Absorplnuse*F38$
Head	383,7900930	6,3965015	$E32*i_Absorplnuse*F39$
Inhalation	297,6202662	4,9603378	$E35*i_Absorplnhalation*G39$
Sum	1030,3298639	17,1721644	

Operator exposure for Ethrel-A granular applications

Application rate of active substance	0,36	kg a.s./ha	i_AppRate
Assumed area treated	10	ha/day	d_AreaTreated
Amount of active substance applied	3,6	kg a.s./day	i_AmoutAS
Dermal absorption of the product	3,00%		i_AbsorpProduct
Dermal absorption of in-use dilution	1,50%		i_AbsorInuse
Formulation type	Soluble concentrates, emulsifiable concentrate, etc.		
Indoor or Outdoor application	Outdoor This sheet is only to be used for granular applications		
Application method	Upward spraying		
Application equipment	Vehicle-mounted		

Mixing and loading	Exposure values	mg exposure/kg a.s. mixed and loaded		Reference	Comment
		75 th centile	95 th centile		
	Hands	#N/A	#N/A	#N/A	#N/A
	Body	#N/A	#N/A	#N/A	#N/A
	Inhalation	#N/A	#N/A	#N/A	#N/A
	Protective Equipment	Choose item		Penetration factor	
	Gloves	Chemical resistant gloves			Protection for granules exposure is based on measured values
	Body PPE	Certified protective coverall			
	RPE	None		1	
Application	Exposure values	mg exposure/kg a.s. applied		Reference	Comment
		75 th centile	95 th centile		
	Hands	#N/A	#N/A	#N/A	#N/A
	Body	#N/A	#N/A	#N/A	#N/A
	Inhalation	#N/A	#N/A	#N/A	#N/A
	Protective Equipment	Choose item		Penetration factor	
	Gloves	Chemical resistant gloves			Protection for granules exposure is based on measured values
	Body PPE	Certified protective coverall			
	RPE	FP1, P1 and similar		0,25	

1. Total

	Without RPE/PPE	With RPE/PPE	
Longer term			
Total systemic exposure from mixing, loading and application (mg a.s./day)	#N/A	#N/A	
Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	#N/A	#N/A	
% of RVNAS	#N/A	#N/A	
Acute			

Total systemic exposure from mixing, loading and application (mg a.s./day)	#N/A	#N/A	
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Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	#N/A	#N/A	
% of RVAAS	#N/A	#N/A	

2. Longer term exposure

2.1 Mixing and loading

	Systemic exposure [mg a.s. /day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	#N/A	#N/A	$D14*100*i_AmountAS*i_AbsorpProduct$
Body	#N/A	#N/A	$D15*100*i_AmountAS*i_AbsorpProduct$
Inhalation	#N/A	#N/A	$D16*i_AmountAS*i_AbsorpInhalation$
Sum	#N/A	#N/A	
With RPE/PPE (as selected above)			
Hands	#N/A	#N/A	$D14*i_AmountAS*i_AbsorpProduct$
Body	#N/A	#N/A	$D15*i_AmountAS*i_AbsorpProduct$
Inhalation	#N/A	#N/A	$D16*i_AmountAS*i_AbsorpInhalation*F20$
Sum	#N/A	#N/A	

2.2 Application

	Systemic exposure [mg a.s. /day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	#N/A	#N/A	$D25*100*i_AmountAS*i_Absorplnuse$
Body	#N/A	#N/A	$D26*100*i_AmountAS*i_Absorplnuse$
Inhalation	#N/A	#N/A	$D27*i_AmountAS*i_Absorplnhalation$
Sum	#N/A	#N/A	
With RPE/PPE (as selected above)			
Hands	#N/A	#N/A	$D25*i_AmountAS*i_Absorplnuse$
Body	#N/A	#N/A	$D26*i_AmountAS*i_Absorplnuse$
Inhalation	#N/A	#N/A	$D27*i_AmountAS*i_Absorplnhalation*F31$
Sum	#N/A	#N/A	

3. Acute exposure

3.1 Mixing and loading

	Systemic exposure [mg a.s. /day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	#N/A	#N/A	$E14*100*i_AmountAS*i_AbsorpProduct$
Body	#N/A	#N/A	$E15*100*i_AmountAS*i_AbsorpProduct$
Inhalation	#N/A	#N/A	$E16*i_AmountAS*i_AbsorpInhalation$
Sum	#N/A	#N/A	
With RPE/PPE (as selected above)			
Hands	#N/A	#N/A	$E14*100*i_AmountAS*i_AbsorpProduct$
Body	#N/A	#N/A	$E15*100*i_AmountAS*i_AbsorpProduct$
Inhalation	#N/A	#N/A	$E16*i_AmountAS*i_AbsorpInhalation*F20$
Sum	#N/A	#N/A	

3.2 Application

	Systemic exposure [mg a.s. /day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	#N/A	#N/A	$E25*100*i_AmountAS*i_Absorplnuse$
Body	#N/A	#N/A	$E25*100*i_AmountAS*i_Absorplnuse$

Inhalation	#N/A	#N/A	$E26 * i_AmountAS * i_Absorplnhalation$
Sum	#N/A	#N/A	
With RPE/PPE (as selected above)			
Hands	#N/A	#N/A	$E25 * 100 * i_AmountAS * i_Absorplnuse$
Body	#N/A	#N/A	$E26 * 100 * i_AmountAS * i_Absorplnuse$
Inhalation	#N/A	#N/A	$E27 * i_AmountAS * i_Absorplnhalation * F31$
Sum	#N/A	#N/A	

Worker exposure from residues on foliage for Ethrel-A

Crop type	Pome fruit	
Indoor or outdoor	Outdoor	
Application method	Upward spraying	
Application equipment	Vehicle-mounted	
Worker's task	Searching, reaching, picking	
Main body parts in contact with foliage	Hand and body	
Application rate of active substance	0,36 kg a.s./ha	i_AppRate
Number of applications	1	i_AppNo
Interval between multiple applications	365 days	i_AppInt
Half-life of active substance	30 days	d_HalflifeAS
Multiple application factor	1,0	d_MAF
Dermal absorption of the product	3,00%	i_AbsorpProduct
Dermal absorption of the in-use dilution	1,50%	i_AbsorpInuse
Dislodgeable foliar residue (i_AppRate*i_DFR)	1,08 µg a.s./cm²	d_DFR
Working hours	8 hr	d_WorkHr
Dermal transfer coefficient - Total potential exposure	22500 cm²/hr	d_DermTcUCV
Dermal transfer coefficient - arms, body and legs covered	4500 cm²/hr	d_DermTcCV1
Dermal transfer coefficient - hands, arms, body and legs covered	2250 cm²/hr	d_DermTcCV2
Inhalation transfer coefficient for automated applications	NA ha/hr*10^(-3)	d_InhalTcAut
Inhalation transfer coefficient for cutting ornamentals	NA ha/hr*10^(-3)	d_InhalTcCut
Inhalation transfer coefficient for sorting / bundling ornamentals	NA ha/hr*10^(-3)	d_InhalTcSort

1. Total

	Potential exposure	Work wear - arms, body and legs covered	Working wear and gloves	Comments
Total systemic exposure (mg a.s./day)	5,8320000	1,1664000	0,5832000	
Total systemic exposure per kg body weight (mg/kg bw/day)	0,0972000	0,0194400	0,0097200	
% of RVNAS	324,00%	64,80%	32,40%	

2. Details

	Systemic exposure		Formula	Comments
	[mg a.s. /day]	[mg a.s./kg bw/day]		
Dermal - Potential	5,8320000	0,0972000	d_DermTcUCV*d_WorkHr*i_DFR*i_MAF/1000*i_AbsorpProduct	
Dermal - Work wear - arms, body and legs covered	1,1664000	0,0194400	d_DermTcCV1*d_WorkHr*d_DFR*d_MAF/1000*i_AbsorpProduct	
Dermal - Working wear and gloves	0,5832000	0,0097200	d_DermTcCV2*d_WorkHr*d_DFR*d_MAF/1000*i_AbsorpProduct	
Inhalation				Na for outdoor activities

Resident exposure for Ethrel-A

Croptype	Pome fruit		
Application method	Upward spraying		
Application equipment	Vehicle-mounted		<i>i_AppEquip</i>
Formulation type	Soluble concentrates, emulsifiable concentrate, etc.		<i>i_FormVal</i>
Buffer strip	5 m		<i>i_Buffer</i>
Application rate of the product	0,36 kg a.s./ha		<i>i_AppRate</i>
Concentration of active substance (in-use dilution for liquid applications)	0,72 g a.s./l		<i>d_ConcAS</i>
Dermal absorption of product	3,00%		<i>i_AbsorpProduct</i>
Dermal absorption of in-use dilution	1,50%		<i>i_AbsorpInuse</i>
Oral absorption	100,00%		<i>i_AbsorpOrallnuse</i>
Dislodgeable foliar residue (i_AppRate*i_DFR)	1,08 µg a.s./cm²		<i>d_DFR</i>
Vapour pressure of in-use dilution	moderately volatile substances with a vapour pressure between 5*10-3Pa and 10-2Pa	Pa	<i>i_Volat</i>
Concentration in air	0,015 mg/m³		<i>d_AirCon</i>
Resident dermal spray drift exposure 75th percentile - adult	5,63 ml spray dilution/person		
Resident dermal spray drift exposure 75th percentile - child	1,689 ml spray dilution/person		
Resident inhal. spray drift exposure 75th percentile - adult	0,00210 ml spray dilution/person		
Resident inhal. spray drift exposure 75th percentile - child	0,00164 ml spray dilution/person		
Resident dermal spray drift exposure mean - adult	3,68 ml spray dilution/person		
Resident dermal spray drift exposure mean - child	1,11 ml spray dilution/person		
Resident inhal. spray drift exposure mean - adult	0,00170 ml spray dilution/person		
Resident inhal. spray drift exposure mean - child	0,00133 ml spray dilution/person		
Exposure duration dermal	2 hours		<i>d_ReExpDur</i>
Exposure duration inhalation	24 hours		<i>d_ReExpDurInhal</i>
Exposure duration entry into treated crops	0,25 hours		<i>d_ExpDurTreatCrop</i>
Light clothing adjustment factor	18,0%		<i>d_ClothAF</i>
Breathing rate adult	0,23 m³/day/kg		<i>d_BreathRAAd</i>
Breathing rate child (1-3 year old)	1,07 m³/day/kg		<i>d_BreathRCh</i>
Drift percentage on surface (75th percentile)	6,04%		
Drift percentage on surface (mean)	3,73%		
Turf transferable residues percentage	5,00%		<i>d_Turf</i>
Transfer coeff. of surface deposits-adult	7300 cm²/hour		<i>d_ReTCAd</i>
Transfer coeff. of surface deposits-child (1-3 year old)	2600 cm²/hour		<i>d_ReTCCh</i>
Saliva extraction percentage	50,00%		<i>d_SalExt</i>
Surface area of hands mouthed	20 cm²		<i>d_AreaHM</i>
Frequency of hand to mouth activity	9,5 events/hour		<i>d_ReFreqHM</i>
Ingestion rate for mouthing of grass per day	25 cm²		<i>d_MouthGrass</i>
Dislodgeable residues percentage transferability for object to mouth	20,00%		<i>d_DRP</i>
Transfer coefficient for entry into treated crops (75th percentile) - adult	7500 cm²/h		<i>d_TcEntryAd</i>
Transfer coefficient for entry into treated crops (75th percentile) - child	2250 cm²/h		<i>d_TcEntryCh</i>
Transfer coefficient for entry into treated crops (mean) - adult	5980 cm²/h		<i>d_TcEntryAd</i>
Transfer coefficient for entry into treated crops (mean) - child	1794 cm²/h		<i>d_TcEntryCh</i>

1. Total

1.1 1-3 year old child

	Spray drift (75th percentile)	Vapour (75th percentile)	Surface deposits (75th percentile)	Entry into treated crops (75th percentile)	All pathways (mean)
Total systemic exposure (mg a.s./day)	0,0161411	0,1605000	0,0043445	0,0182250	0,1875445
Total systemic exposure per kg body weight (mg/kg bw/day)	0,0016141	0,0160500	0,0004344	0,0018225	0,0187544
% of RVNAS	5,38%	53,50%	1,45%	6,08%	62,51%

1.2 Adult

	Spray drift	Vapour	Surface deposits	Entry into treated crops	All pathways (mean)
Total systemic exposure (mg a.s./day)	0,0513713	0,2070000	0,0047619	0,0607500	0,2921928
Total systemic exposure per kg body weight (mg/kg bw/day)	0,0008562	0,0034500	0,0000794	0,0010125	0,0048699
% of RVNAS	2,85%	11,50%	0,26%	3,38%	16,23%

2. Resident exposure 75th Percentile

	Systemic exposure [mg a.s. /day]	Systemic exposure [mg a.s./kg bw/day]	Formula	Comments
1-3 year old child				
Spray drift	0,0161411	0,0016141	$((C16*i_Absorplnuse*(1-d_ClothAF))+C18)*d_ConcAS$	the only available values are for the 8 m distance downwind from the middle of the tree trunk, which are assumed to represent 5 m distance from the edge of orchard; the same value is used for 5 and 10 m.
Vapour	0,1605000	0,0160500	$d_AirCon*d_BreathRCh*d_BwChild$	
Surface deposits				
Dermal	0,0016960	0,0001696	$(i_AppRate/100)*C29*d_Turf*d_ReTCCh*d_ReExpDur*MAX(i_AbsorpProduct,i_Absorplnuse)*d_MAF*IF(i_AppEquip = "Vehicle-mounted-Drift Reduction",0.5,1))$	
Hand to mouth	0,0017352	0,0001735	$(i_AppRate/100)*C29*d_Turf*d_SalExt*d_AreaHM*d_ReFreqHM*d_ReExpDur*i_AbsorpOrallnuse*d_MAF$	
Object to mouth	0,0009132	0,0000913	$(i_AppRate/100)*C29*d_DRP*d_MouthGrass*i_AbsorpOrallnuse*d_MAF$	

Entry into treated crops				
Dermal	0,0182250	0,0018225	$(d_TcEntryCh*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_Absorplnuse)$	
Hand to mouth			$(i_AppRate/100)*d_Turf*d_MAF*d_SalExt*d_AreaHM*d_ReFreqHM*d_ReExpDur*i_AbsorpOrallnuse$	Considered only for application on grassland and lawns and for application on golf course, turf or other sports lawns.
Object to mouth			$(i_AppRate/100)*d_DRP*d_MouthGrass*i_AbsorpOrallnuse*d_MAF$	Considered only for application on grassland and lawns and for application on golf course, turf or other sports lawns.
Adult				
Spray drift	0,0513713	0,0008562	$(C15*i_Absorplnuse*(1-d_ClothAF))+C17)*d_ConcAS$	the only available values are for the 8 m distance downwind from the middle of the tree trunk, which are assumed to represent 5 m distance from the edge of orchard; the same value is used for 5 and 10 m.
Vapour	0,2070000	0,0034500	$d_AirCon*d_BreathRA*d_BwAdult$	
Surface deposits (dermal)	0,0047619	0,0000794	$(i_AppRate/100)*C30*d_Turf*d_ReTCAd*d_ReExpDur*i_AbsorpProduct*d_MAF$	
Entry into treated crops (dermal)	0,0607500	0,0010125	$(d_TcEntryAd*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_Absorplnuse)$	

3. Summing of exposure pathways mean

	Systemic exposure [mg a.s. /day]	Systemic exposure [mg a.s./kg bw/day]	Formula	Comments
1-3 year old child				
Spray drift	0,0098302	0,0009830	$((C20*i_Absorplnuse*(1-d_ClothAF))+C22)*d_ConcAS$	the only available values are for the 8 m distance downwind from the middle of the tree trunk, which are assumed to represent 5 m distance from the edge of orchard; the same value is used for 5 and 10 m.
Vapour	0,1605000	0,0160500	$d_AirCon*d_BreathRCh*d_BwChild$	
Surface deposits				
Dermal	0,0010474	0,0001047	$(i_AppRate/100)*C30*d_Turf*d_ReTCCh*d_ReExpDur*MAX(i_AbsorpProduct,i_Absorplnuse)*d_MAF*IF(i_AppEquip = "Vehicle-mounted-Drift Reduction",0.5,1))$	
Hand to mouth	0,0010716	0,0001072	$(i_AppRate/100)*C30*d_Turf*d_SalExt*d_AreaHM*d_ReFreqHM*d_ReExpDur*i_AbsorpOrallnuse*d_MAF$	
Object to mouth	0,0005640	0,0000564	$(i_AppRate/100)*C30*d_DRP*d_MouthGrass*i_AbsorpOrallnuse*d_MAF$	
Entry into treated crops				
Dermal	0,0145314	0,0014531	$(d_TcEntryMeanCh*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_Absorplnuse))$	
Hand to mouth			$(i_AppRate/100)*1*d_Turf*d_MAF*d_SalExt*d_AreaHM*d_ReFreqHM*d_ReExpDur*i_AbsorpOrallnuse$	Considered only for application on grassland and lawns and for application on golf course, turf or other sports lawns.
Object to mouth			$(i_AppRate/100)*1*d_DRP*d_MouthGrass*i_AbsorpOrallnuse*d_MAF$	Considered only for application on grassland and lawns and for application on golf course, turf or other sports
Adult				
Spray drift	0,0338141	0,0005636	$"(C19*i_Absorplnuse*(1-d_ClothAF))+C21)*d_ConcAS"$	the only available values are for the 8 m distance downwind from the middle of the tree trunk, which are assumed to represent 5 m distance from the edge of orchard; the same value is used for 5 and 10 m.
Vapour	0,2070000	0,0034500	$d_AirCon*d_BreathRA*d_BwAdult$	
Surface deposits (dermal)	0,0029407	0,0000490	$(i_AppRate/100)*C30*d_Turf*d_ReTCAd*d_ReExpDur*MAX(i_AbsorpProduct,i_Absorplnuse)*d_MAF*IF(i_AppEquip = "Vehicle-mounted-Drift Reduction",0.5,1)$	
Entry into treated crops (dermal)	0,0484380	0,0008073	$(d_TcEntryMeanAd*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_Absorplnuse)$	

Bystander exposure for Ethrel-A

Croptype	Pome fruit	
Application method	Upward spraying	
Application equipment	Vehicle-mounted	i_AppEquip
Formulation type	Soluble concentrates, emulsifiable concentrate, etc.	
Application rate of the product	0,36 kg a.s./ha	i_AppRate
Buffer strip	5 m	i_Buffer
Concentration of active substance (in-use dilution for liquid applications)	0,72 g a.s./l	d_ConcAS
Dermal absorption of product	3,00%	i_AbsorpProduct
Dermal absorption of in-use dilution	1,50%	i_AbsorpInuse
Oral absorption	100,00%	i_AbsorpOrallInuse
Dislodgeable foliar residue (i_AppRate*i_DFR)	1,08 µg a.s./cm²	d_DFR
Vapour pressure of in-use dilution	moderately volatile substances with a vapour pressure between 5*10-3Pa and 10-2Pa	i_Volat
Concentration in air	0,015 mg/m³	d_AirCon
Bystander dermal spray drift exposure - adult	12,9 ml spray dilution/person	
Bystander dermal spray drift exposure - child	3,87 ml spray dilution/person	
Bystander inhal. spray drift exposure - adult	0,00440 ml spray dilution/person	
Bystander inhal. spray drift exposure - child	0,00348 ml spray dilution/person	
Exposure duration	2 hours	d_ByExpDur
Exposure duration entry into treated crops	0,25 hours	d_ExpDurTreatCrop
Light clothing adjustment factor	18,0%	d_ClothAF
Breathing rate adult	0,23 m³/hours/kg	d_BreathRAd
Breathing rate child (1-3 year old)	1,07 m³/hours/kg	d_BreathRCh
Drift percentage on surface (90th percentile)	8,41%	
Turf transferable residues percentage	5,00%	d_Turf
Transfer coeff. of surface deposits-adult	14500 cm²/hour	d_ByTCAd
Transfer coeff. of surface deposits-child (1-3 year old)	5200 cm²/hour	d_ByTCCh
Saliva extraction percentage	50,00%	d_SalExt
Surface area of hands mouthed	20 cm²	d_AreaHM
Frequency of hand to mouth activity	20 events/hour	d_ByFreqHM
Ingestion rate for mouthing of grass per day	25 cm²	d_MouthGrass
Dislodgeable residues percentage transferability for object to mouth	20,00%	d_DRP
Transfer coefficient for entry into treated crops - adult	7500 cm²/h	d_TcEntryAd
Transfer coefficient for entry into treated crops - child	2250 cm²/h	d_TcEntryCh

1. Total

1.1 1-3 year old child

	Spray drift	Vapour	Surface deposits	Entry into treated crops
Total systemic exposure (mg a.s./day)	0,0367807	0,1605000	0,0110810	0,0182250
Total systemic exposure per kg body weight (mg/kg bw/day)	0,0036781	0,0160500	0,0011081	0,0018225
% of RVAAS	12,26%	53,50%	3,69%	6,08%

1.2 Adult

	Spray drift	Vapour	Surface deposits	Entry into treated crops
Total systemic exposure (mg a.s./day)	0,1174104	0,2070000	0,0131701	0,0607500
Total systemic exposure per kg body weight (mg/kg bw/day)	0,0019568	0,0034500	0,0002195	0,0010125
% of RVAAS	6,52%	11,50%	0,73%	3,38%

2. Details

	Systemic exposure [mg a.s. /day]	Systemic exposure [mg a.s./kg bw/day]	Formula	Comments
1-3 year old child				
Spray drift	0,0367807	0,0036781	$((C16*i_Absorpinuse*(1-d_ClothAF))+C18)*d_ConcAS''$	the only available values are for the 8 m distance downwind from the middle of the tree trunk, which are assumed to represent 5 m distance from the edge of orchard; the same value is used for 5 and 10 m.
Vapour	0,1605000	0,0160500	$d_AirCon*d_BreathRCh*d_BwChild$	
Surface deposits				
Dermal	0,0047231	0,0004723	$(i_AppRate/100)*C24*d_Turf*d_ByTCCh*d_ByExpDur*MAX(i_AbsorpProduct,i_Absorpinuse)*d_MAF*IF(i_AppEquip="Vehicle-mounted-Drift Reduction",0.5,1)$	
Hand to mouth	0,0050864	0,0005086	$(i_AppRate/100)*C25*d_Turf*d_SalExt*d_AreaHM*d_ByFreqHM*d_ByExpDur*i_AbsorpOralinuse*d_MAF$	
Object to mouth	0,0012716	0,0001272	$(i_AppRate/100)*C25*d_DRP*d_MouthGrass*i_AbsorpOralinuse*d_MAF$	

Entry into treated crops				
Dermal	0,0182250	0,0018225	$(d_TcEntryCh*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_Absorplnuse)$	
Hand to mouth			$(i_AppRate/100)*d_MAF*d_Turf*d_SalExt*d_AreaHM*d_ByFreqHM*d_ByExpDur*i_AbsorpOrallnuse$	Considered only for application on grassland and lawns and for application on golf course, turf or other sports lawns.
Object to mouth			$(i_AppRate/100)*d_DRP*d_MouthGrass*i_AbsorpOrallnuse*d_MAF$	Considered only for application on grassland and lawns and for application on golf course, turf or other sports lawns.
Adult				
Spray drift	0,1174104	0,0019568	$((C15*i_Absorplnuse*(1-d_ClothAF)t)+C17)*d_ConcAS$	the only available values are for the 8 m distance downwind from the middle of the tree trunk, which are assumed to represent 5 m distance from the edge of orchard; the same value is used for 5 and 10 m.
Vapour	0,2070000	0,0034500	$d_AirCon*d_BreathRAd*d_BwAdult$	
Surface deposits (dermal)	0,0131701	0,0002195	$(i_AppRate/100)*C24*d_Turf*d_ByTCAd*d_ByExpDur*MAX(i_AbsorpProduct,i_Absorplnuse)*d_MAF*IF(i_AppEquip="Vehicle-mounted-Drift Reduction",0.5,1)$	
Entry into treated crops (dermal)	0,0607500	0,0010125	$(d_TcEntryAd*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_Absorplnuse)$	

Recreational exposure for Ethrel-A

Croptype	Golf course, turf or other sports lawns	This sheet is only to be used for treatment of grassland used for recreational purposes	
Application method	Upward spraying		
Application equipment	Vehicle-mounted		<i>i_AppEquip</i>
Formulation type	Soluble concentrates, emulsifiable concentrate, etc.		<i>i_FormVal</i>
Application rate of the product	0,36 kg a.s./ha		<i>i_AppRate</i>
Dermal absorption of product	3,00%		<i>i_AbsorpProduct</i>
Dermal absorption of in-use dilution	1,50%		<i>i_Absorplnuse</i>
Oral absorption	100,00%		<i>i_AbsorpOrallnuse</i>
Dislodgeable foliar residue (i_AppRate*i_DFR)	1,08 µg a.s./cm²		<i>d_DFR</i>
Exposure duration dermal	2 hours		<i>d_ReExpDur</i>
Light clothing adjustment factor Adult resident	18,0%		<i>d_ClothAF</i>
Drift percentage on surface	100,00%		
Turf transferable residues percentage	5,00%		<i>d_Turf</i>
Transfer coeff. of surface deposits-adult	7300 cm²/hour		<i>d_ReTCAd</i>
Transfer coeff. of surface deposits-child (1-3 year old)	2600 cm²/hour		<i>d_ReTCCh</i>
Saliva extraction percentage	50,00%		<i>d_SalExt</i>
Surface area of hands mouthed	20 cm²		<i>d_AreaHM</i>
Frequency of hand to mouth activity	9,5 events/hour		<i>d_ReFreqHM</i>
Ingestion rate for mouthing of grass per day	25 cm²		<i>d_MouthGrass</i>

2. Details

	Systemic exposure [mg a.s. /day]	Systemic exposure [mg a.s./kg bw/day]	Formula	Comments
1-3 year old child				
Surface deposits				
Dermal	0,0280800	0,0028080	$(i_AppRate/100)*C13*d_Turf*d_ReTCCh*d_ReExpDur*MAX(i_AbsorpProduct,i_Absorplnuse)*d_MAF$	
Hand to mouth	0,0287280	0,0028728	$(i_AppRate/100)*C13*d_Turf*d_SalExt*d_AreaHM*d_ReFreqHM*d_ReExpDur*i_AbsorpOrallnuse*d_MAF$	
Object to mouth	0,0151200	0,0015120	$(i_AppRate/100)*C13*d_DRP*d_MouthGrass*i_AbsorpOrallnuse*d_MAF$	
Total systemic exposure	0,0719280	0,0071928		
% of RVNAS				
Adult				
Surface deposits (dermal)	0,0788400	0,0013140	$(i_AppRate/100)*C13*d_Turf*d_ReTCAd*d_ReExpDur*MAX(i_AbsorpProduct,i_Absorplnuse)*d_MAF$	
% of RVNAS				

<i>d_AirConVol</i>	Concentration in air of moderately volatile substances	0,015 mg/m ³
<i>d_AirConNonVol</i>	Concentration in air of low volatile substances	0,001 mg/m ³
<i>d_AreaHM</i>	Surface area of hands mouthed	20 cm ²
<i>d_AreaTreated</i>	Area treated (defined by crop type)	10 ha
<i>d_BreathRAd</i>	Breathing rate adult residents	0,23 m ³ /day/kg
<i>d_BreathRCh</i>	Breathing rate child (1-3 year old) residents	1,07 m ³ /day/kg
<i>d_BwAdult</i>	Adult body weight	60 kg
<i>d_BwChild</i>	Child body weight (1 to < 3 year olds)	10 kg
<i>d_ByBreathRAd</i>	Breathing rate adult bystander	0,04 m ³ /hours/kg
<i>d_ByBreathRCh</i>	Breathing rate child (1-3 year old) bystander	0,19 m ³ /hours/kg
<i>d_ByExpDur</i>	Exposure duration intense activity breathing rates	2 hours
<i>d_ByFreqHM</i>	Frequency of hand to mouth activity	20 events/hour
<i>d_ByTCAd</i>	Transfer coeff. of surface deposits-adult	14500 cm ² /hour
<i>d_ByTCCh</i>	Transfer coeff. of surface deposits-child (1-3 year old)	5200 cm ² /hour
<i>d_ClothAF</i>	Light clothing adjustment factor resident and bystanders	18,0%
<i>d_ConcAs</i>	Concentration of active substance (in-use dilution for liquid applications)	0,72 g a.s./l
<i>d_DFR</i>	Dislodgeable foliar residue (i_AppRate*i_DFR)	1,08 µg a.s./cm ²
<i>d_DRP</i>	Dislodgeable residues percentage transferability for object to mouth	20,0%
<i>d_HalfLifeAS</i>	Half-life of active substance (DT50)	30 days
<i>d_InhalTcAut</i>	Inhalation transfer coefficient for automated applications	NA ha/hr*10 [^] (-3)
<i>d_InhalTcCut</i>	Inhalation transfer coefficient for cutting ornamentals	NA ha/hr*10 [^] (-3)
<i>d_InhalTcSort</i>	Inhalation transfer coefficient for sorting / bundling ornamentals	NA ha/hr*10 [^] (-3)
<i>d_MAF</i>	Multiple application factor	1,00
<i>d_MouthGrass</i>	Ingestion rate for mouthing of grass per day	25 cm ² grass/day
<i>d_ReExpDur</i>	Exposure duration resident dermal	2 hours
<i>d_ReExpDurInhal</i>	Exposure duration resident inhalation	24 hours
<i>d_ExpDurTreatCrop</i>	Exposure duration for resident and bystander entry into treated crops	0,25 hours
<i>d_ReFreqHM</i>	Frequency of hand to mouth activity	9,5 events/hour
<i>d_ReTCAd</i>	Transfer coeff. of surface deposits-adult	7300 cm ² /hour
<i>d_ReTCCh</i>	Transfer coeff. of surface deposits-child (1-3 year old)	2600 cm ² /hour
<i>d_SalExt</i>	Saliva extraction percentage	50,0%
<i>d_TcEntryAd</i>	Transfer coefficient for entry into treated crops 75th percentile - adult	7500 cm ² /h
<i>d_TcEntryCh</i>	Transfer coefficient for entry into treated crops 75th percentile - child	2250 cm ² /h
<i>d_TcEntryMeanAd</i>	Transfer coefficient for entry into treated crops mean - adult	5980 cm ² /h
<i>d_TcEntryMeanCh</i>	Transfer coefficient for entry into treated crops mean - child	1794 cm ² /h
<i>d_Turf</i>	Turf transferable residues percentage	5,0%
<i>d_PctExtrapolation</i>	For exposure value 75 percentiles above this amount linear extrapolation is performed	1,5 kg
<i>d_head75ProtectionFactor</i>	Coefficient to estimate head protection factor 75 th Percentile	1,79422
<i>d_head95ProtectionFactor</i>	Coefficient to estimate head protection factor 95 Percentile	1,24705

<i>sys_KeyOperator</i>	Variables for operator exposure lookup key	i_IndoorOutdoor&i_FormVal&i_AppMeth&i_AppEquip&
<i>sys_OperatorModel</i>	Operator model	1

RPE reduction factor		
key_MixRPE, ay_MixRPE		
None		1
FP1, P1 and similar		0,25
FP2, P2 and similar		0,1

PPE reduction factor		
key_MixPPEBody, ay_MixPPEBody		
Potential exposure		1
Work wear - arms, body and legs covered		0,1
Certified protective coverall		0,05

PPE reduction factor		
key_MixPPEHead, ay_MixPPEHead		
None		1
Hood		0,5
Hood and visor		0,05
FP1, P1 and similar		0,8
FP2, P2 and similar		0,8

Application: Gloves PPE reduction factor (depending on formulation type)		
key_AppPPEHands, ay_AppPPEHands		
Wettable powder, soluble powder	Chemical resistant gloves	0,05
Granules, fine granules	Chemical resistant gloves	0,05
Wettable granules, soluble granules	Chemical resistant gloves	0,05
Soluble concentrates, emulsifiable concentrate, etc.	Chemical resistant gloves	0,1
Wettable powder, soluble powder	None	1
Granules, fine granules	None	1
Wettable granules, soluble granules	None	1
Soluble concentrates, emulsifiable concentrate, etc.	None	1

Crop dependent exposure parameters											
key_CropType, ay_CropType	Transfer coefficients		Transfer coefficients		2250		Transfer coefficients			Area Treated	
Crop type	Arm, body and legs covered		Total potential exposure	Activity	hours per day	Body parts involved	Hands, arm, body and legs covered	Type of crop for Resident Bystander	Vehicle Mounted Applications		
Bare soil	NA		NA	NA	NA	NA	NA	Field crops		50	
Low berries and other small fruits			3000	5800 Reaching, picking		8 Hand and forearm		750 Field crops		50	
Brassica vegetables			2500	5800 Reaching, picking		8 Hand and body		580 Field crops		50	
Bulb vegetables			2500	5800 Reaching, picking		8 Hand and body		580 Field crops		50	
Cane fruit			4500	22500 Searching, reaching, picking		8 Hand and body		2250 Field crops		10	
Cereals			1400	12500 Inspection, irrigation		2 Hand and body	no TC available for this assessment	Field crops		50	
Citrus fruit			4500	22500 Searching, reaching, picking		8 Hand and body		2250 Fruit crops		10	
Fruiting vegetables			2500	5800 Reaching, picking		8 Hand and body		580 Field crops		50	
Grapes			10100	30000 Hand harvesting		8 Hand and body	no TC available for this assessment	Grapes		10	
Grassland and lawns			1400	12500 Inspection, irrigation		2 Hand and body	no TC available for this assessment	Field crops		50	
Golf course, turf or other sports lawns			2500	5800 Maintenance		8 Hand and body		580 Field crops		50	
Hops			1400	12500 Inspection, irrigation		2 Hand and body	no TC available for this assessment	Hops		10	
Leaf vegetables and fresh herbs			2500	5800 Reaching, picking		8 Hand and body		580 Field crops		50	
Legume vegetables			2500	5800 Reaching, picking		8 Hand and body		580 Field crops		50	
Oilfruits			4500	22500 Searching, reaching, picking		8 Hand and body		2250 Fruit crops		10	
Oilseeds			1400	12500 Inspection, irrigation		2 Hand and body	no TC available for this assessment	Field crops		50	
Ornamentals			5000	14000 Cutting, sorting, bundling, carrying		8 Hand and body		1400 Field crops		10	
Pome fruit			4500	22500 Searching, reaching, picking		8 Hand and body		2250 Fruit crops		10	
Root and tuber vegetables			1400	12500 Inspection, irrigation		2 Hand and body	no TC available for this assessment	Field crops		50	
Stone fruit			4500	22500 Searching, reaching, picking		8 Hand and body		2250 Fruit crops		10	
Tree nuts			4500	22500 Searching, reaching, picking		8 Hand and body		2250 Fruit crops		10	

Resident Spray Drift					
key_ResidSpray, ay_ResidSpray					
These values are the 75th Percentiles for Residents (assuming average breathing rates for inhalation exposures)					
Adults Dermal		Children Dermal	Adults Inhalation	Children Inhalation	
Downward spraying2-3		0,47	0,327	0,0001	0,00022
Downward spraying5		0,24	0,22	0,00009	0,00017
Downward spraying10		0,20	0,18	0,00009	0,00013
Upward spraying2-3	NA	NA	NA	NA	
Upward spraying5		5,63	1,689	0,0021	0,00164
Upward spraying10		5,63	1,689	0,0021	0,00164

Bystander Spray Drift					
key_BySpray, ay_BySpray					
These values are the 95th Percentiles for Bystanders (assuming high breathing rates for inhalation exposures)					
Adults Dermal		Children Dermal	Adults Inhalation	Children Inhalation	
Downward spraying2-3		1,21	0,74	0,0005	0,0011
Downward spraying5		0,57	0,48	0,00048	0,0008
Downward spraying10		0,48	0,39	0,00051	0,00076
Upward spraying2-3	NA	NA	NA	NA	
Upward spraying5		12,9	3,87	0,0044	0,0035
Upward spraying10		12,9	3,87	0,0044	0,0035

Mean Spray Drift					
key_AvgSpray, ay_AvgSpray					
These values are the mean values (assuming average breathing rates for inhalation exposures)					
Adults Dermal		Children Dermal	Adults Inhalation	Children Inhalation	
Downward spraying2-3		0,22	0,18	0,0001	0,0002
Downward spraying5		0,12	0,12	0,0001	0,0001
Downward spraying10		0,11	0,1	0,0001	0,0001
Upward spraying2-3	NA	NA	NA	NA	
Upward spraying5		3,68	1,11	0,0017	0,0013
Upward spraying10		3,68	1,11	0,0017	0,0013

Resident and bystander Surface Deposits Drift percentage				
key_ByCropType, ay_ByCropType				
key_ByCropType	Bystander surface deposit (90th Percentile)	Resident surface deposit (77th Percentile)	mean	
Field cropsnot relevant2-3		0,085	0,056	0,041
Field cropsnot relevant5		0,035	0,023	0,018
Field cropsnot relevant10		0,019	0,013	0,010
Fruit cropsnot relevant2-3		0,292	0,240	0,190
Fruit cropsnot relevant5		0,199	0,158	0,117
Fruit cropsnot relevant10		0,118	0,090	0,061
Fruit cropsearly (without leaves)2-3		0,292	0,240	0,190
Fruit cropsearly (without leaves)5		0,199	0,158	0,117

Fruit cropsearly (without leaves)10	0,118	0,090	0,061
Fruit cropslate (dense foliage)2-3	0,157	0,110	0,070
Fruit cropslate (dense foliage)5	0,084	0,060	0,037
Fruit cropslate (dense foliage)10	0,036	0,027	0,016
Grapesnot relevant2-3	0,080	0,069	0,053
Grapesnot relevant5	0,036	0,031	0,023
Grapesnot relevant10	0,012	0,010	0,008
Hopsnot relevant2-3	0,193	0,159	0,100
Hopsnot relevant5	0,116	0,086	0,059
Hopsnot relevant10	0,058	0,037	0,029

		1	2	3	4	5	6	7	8				9	10	11	12				13	14

[illegible]

Outdoor/Wettable granules, soluble granules/Downward spraying/Manual-Knap-sack/Protected Hands	Outdoor	Wettable granules, soluble granules	Downward spraying	Manual-Knap-sack	Protected Hands	18,00		164,00					5,00					22,00
Outdoor/Wettable granules, soluble granules/Upward spraying/Manual-Knap-sack/Protected Hands	Outdoor	Wettable granules, soluble granules	Upward spraying	Manual-Knap-sack	Protected Hands	18,00		164,00	2,26	1,00	-0,88			2,61	1,00	-0,51		
Outdoor/Wettable powder, soluble powder/Downward spraying/Manual-Knap-sack/Protected Hands	Outdoor	Wettable powder, soluble powder	Downward spraying	Manual-Knap-sack	Protected Hands	18,00		164,00					5,00					22,00
Outdoor/Wettable powder, soluble powder/Upward spraying/Manual-Knap-sack/Protected Hands	Outdoor	Wettable powder, soluble powder	Upward spraying	Manual-Knap-sack	Protected Hands	18,00		164,00	2,26	1,00	-0,88			2,61	1,00	-0,51		
Outdoor/Soluble concentrates, emulsifiable concentrate, etc./Downward spraying/Vehicle-mounted/Protected Hands	Outdoor	Soluble concentrates, emulsifiable concentrate, etc.	Downward spraying	Vehicle-mounted	Protected Hands	1,22	0,65	0,32	1,50	1,00	0,80			0,23	0,54	1,11		
Outdoor/Soluble concentrates, emulsifiable concentrate, etc./Upward spraying/Vehicle-mounted/Protected Hands	Outdoor	Soluble concentrates, emulsifiable concentrate, etc.	Upward spraying	Vehicle-mounted	Protected Hands	1,22	0,65	0,32	1,50	1,00	0,80			0,23	0,54	1,11		
Outdoor/Wettable granules, soluble granules/Downward spraying/Vehicle-mounted/Protected Hands	Outdoor	Wettable granules, soluble granules	Downward spraying	Vehicle-mounted	Protected Hands	1,22	0,65		1,50	1,00				0,23	0,54	1,11		
Outdoor/Wettable granules, soluble granules/Upward spraying/Vehicle-mounted/Protected Hands	Outdoor	Wettable granules, soluble granules	Upward spraying	Vehicle-mounted	Protected Hands	1,22	0,65		1,50	1,00				0,23	0,54	1,11		
Outdoor/Wettable powder, soluble powder/Downward spraying/Vehicle-mounted/Protected Hands	Outdoor	Wettable powder, soluble powder	Downward spraying	Vehicle-mounted	Protected Hands	1,22	0,65		1,50	1,00				0,23	0,54	1,11		
Outdoor/Wettable powder, soluble powder/Upward spraying/Vehicle-mounted/Protected Hands	Outdoor	Wettable powder, soluble powder	Upward spraying	Vehicle-mounted	Protected Hands	1,22	0,65	1,74	1,50	1,00	1,81			0,23	0,54	1,11		
Outdoor/Soluble concentrates, emulsifiable concentrate, etc./Downward spraying/Vehicle-mounted-Drift Reduction/Protected Hands	Outdoor	Soluble concentrates, emulsifiable concentrate, etc.	Downward spraying	Vehicle-mounted-Drift Reduction	Protected Hands	1,22	0,65	0,32	1,50	1,00	0,80			0,23	0,54	1,11		
Outdoor/Soluble concentrates, emulsifiable concentrate, etc./Upward spraying/Vehicle-mounted-Drift Reduction/Protected Hands	Outdoor	Soluble concentrates, emulsifiable concentrate, etc.	Upward spraying	Vehicle-mounted-Drift Reduction	Protected Hands	1,22	0,65	0,32	1,50	1,00	0,80			0,23	0,54	1,11		
Outdoor/Wettable granules, soluble granules/Downward spraying/Vehicle-mounted-Drift Reduction/Protected Hands	Outdoor	Wettable granules, soluble granules	Downward spraying	Vehicle-mounted-Drift Reduction	Protected Hands	1,22	0,65		1,50	1,00				0,23	0,54	1,11		
Outdoor/Wettable granules, soluble granules/Upward spraying/Vehicle-mounted-Drift Reduction/Protected Hands	Outdoor	Wettable granules, soluble granules	Upward spraying	Vehicle-mounted-Drift Reduction	Protected Hands	1,22	0,65		1,50	1,00				0,23	0,54	1,11		
Outdoor/Wettable powder, soluble powder/Downward spraying/Vehicle-mounted-Drift Reduction/Protected Hands	Outdoor	Wettable powder, soluble powder	Downward spraying	Vehicle-mounted-Drift Reduction	Protected Hands	1,22	0,65	1,74	1,50	1,00	1,81			0,23	0,54	1,11		
Outdoor/Wettable powder, soluble powder/Upward spraying/Vehicle-mounted-Drift Reduction/Protected Hands	Outdoor	Wettable powder, soluble powder	Upward spraying	Vehicle-mounted-Drift Reduction	Protected Hands	1,22	0,65	1,74	1,50	1,00	1,81			0,23	0,54	1,11		