

## BfR develops new dietary intake model for children

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Consumption data play a major role in the dietary risk assessment of residues in food. As this may vary considerably depending on eating habits, estimates are used. No up-to-date data were available on eating habits, particularly for children in Germany.

BfR, therefore, developed a new model to estimate the long and short-term dietary intake of pesticide residues for children. The basis for this model is a new, nationwide food consumption survey, which was financed by the Federal Ministry of Consumer Protection, Food and Agriculture (BMVEL). The VELS study (food consumption survey to determine food intake by infants and small children for the estimation of the acute toxicity risk from pesticide residues) was launched in June 2001 and completed in September 2002. Data were collected for a total of 816 infants and small children aged between six months and five years from all over Germany. To this end, parents kept a record of the food eaten over a period of six days by each child. In order to record seasonal differences in eating habits, information was recorded at different times for three-day periods.

The goal of the survey was to record the type and amount of food and drinks consumed by the infants and small children in Germany as accurately as possible. In order to facilitate evaluation of the data, the foods and drinks eaten were broken down into their basic constituents. In this way, it was possible, for example, to identify the important role that apples play in the diet of small children.

The BfR model is currently limited to food consumption data for children who are older than two and younger than five. The data are presented in the following table. The average body weight of children in this age group is 16.15 kg. For each food the amount consumed is given both as a mean and as a large portion. Whereas the mean amount consumed is used for the risk assessment of long-term intake, short-time intake is decisive for the assessment of an acute risk.

The table is not only of interest for risk assessors, risk managers, supervisory bodies and food manufacturers. The data are also a valuable working foundation for nutritionists.

BfR intends to extend the model to children aged from six month to two years.

More detailed information on the VELS study and the new model for the assessment of the long and short-term risk of pesticide residues in food has just been published in the Bundesgesundheitsblatt (1).

Table: Consumption data for children from 2 to under 5 years

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
<b>1 Animal commodities</b>	380.2		
<b>1.1 Milk</b>	230.8	97.5	712.3
Milk	230.4	97.5	712.6
Condensed milk	0.1	97.5	22.6
Goats milk	0.2	MAX	265.0
Ewe's milk	0.1	MAX	95.0
<b>1.2 Milk products</b>	77.6	97.5	280.6
Cheese	8.7	97.5	72.4
Ewe's cheese	0.4	97.5	213.2
Goats cheese	0.1	90	49.4
Butter	8.9	97.5	35.2
Single cream	7.4	97.5	56.5
Curd cheese/cottage cheese	14.8	97.5	168.0
Milk protein*	0.1 (0.007)	97.5	1.5
Other milk products	37.3	97.5	300.0
<b>1.3 Eggs</b>	18.0	97.5	82.0
Eggs	16.2	97.5	80.7
Egg yolk	1.4	97.5	12.2
Egg protein	0.4	97.5	42.0
<b>1.4 Meat</b>	22.1	97.5	179.4
Beef	4.7	97.5	99.6
Veal	0.4	95	206.4
Pork	7.0	97.5	137.1
Lamb/mutton	0.2	90	166.9
Rabbit	0.1	MAX	92.5
Chicken	5.5	97.5	181.4
Duck	0.1	MAX	223.1
Goose	0.1	MAX	82.1
Turkey	3.8	97.5	163.1
Ostrich*	0.1 (0.009)	MAX	20.6
Hare*	0.1 (0.033)	MAX	95.4
Venison of roe deer *	0.1 (0.033)	MAX	83.9
Venison of red deer *	0.1 (0.043)	MAX	85.8
Wild boar*	0.1 (0.004)	MAX	12.0
Mallard*	0.1 (0.01)	MAX	15.2
Offal	0.1	95	45.4
<b>1.5 Processed meat products</b>	24.5	97.5	131.3
Sausages	19.9	97.5	137.3
Sausages made of poultry	2.0	97.5	84.0
Pork products	2.3	97.5	54.9
Beef products*	0.1 (0.004)	MAX	4.3
Other meat products	0.3	97.5	8.1
Gelatine	0.8	97.5	12.6
<b>1.6 Fish</b>	5.6	97.5	152.5
Sea fish	5.2	97.5	128.1

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
Freshwater fish	0.4	MAX	325.7
<b>1.7 Honey</b>	1.6	97.5	22.1
<b>2 Plant commodities</b>	587.9		
<b>2.1 Fruit</b>	372.1		
<b>2.1.1 Citrus fruit</b>	74.2		
Limes*	0.1 (0.016)	MAX	22.2
Mandarins, total	6.6		
Mandarins, raw	6.2	97.5	231.0
Mandarins, processed	0.3	95	94.6
Mandarins, portion in juice	0.1	MAX	100.0
Oranges, total	61.5		
Oranges, raw	3.0	97.5	238.4
Oranges, processed*	0.1 (0.042)	90	15.6
Oranges, portion in juice	58.4	97.5	800.0
Orange peel*	0.1 (0.027)	97.5	4.0
Grapefruit, total	3.5		
Grapefruit, raw	0.5	90	358.6
Grapefruit, portion in juice	2.9	97.5	116.7
Lemons, total	2.6		
Lemons, raw	0.1	95	125.5
Lemons, processed*	0.1 (0.019)	95	5.2
Lemons, portion in juice	2.4	97.5	38.5
Lemon peel*	0.1 (0.041)	97.5	3.4
Other citrus fruits, portion in juice	0.1	MAX	30.0
<b>2.1.2 Nuts</b>	2.4		
Chestnuts	0.1 (0.013)	MAX	28.0
Hazelnuts	1.3	97.5	17.7
Hazelnut oil*	0.1 (0.000)	MAX	0.6
Cashew nuts*	0.1 (0.028)	90	17.6
Coconuts	0.2	97.5	24.8
Coconut milk*	0.1 (0.007)	MAX	20.0
Almonds	0.5	97.5	16.0
Brazil nuts*	0.1 (0.011)	MAX	8.5
Pecan nuts*	0.1 (0.01)	MAX	28.0
Pine nuts*	0.1 (0.026)	95	10.8
Pistachios*	0.1 (0.032)	90	32.4
Walnuts	0.2	97.5	49.4
<b>2.1.3 Pome fruit</b>	205.3		
Apples, total	194.9		
Apples, raw	37.9	97.5	234.8
Apples, processed	6.8	97.5	183.0
Apples, portion in juice	150.2	97.5	822.9
Pears, total	10.0		
Pears, raw	5.7	97.5	231.8
Pears, processed	0.3	95	98.7
Pears, portion in juice	4.0	97.5	282.9
Quince, processed*	0.1 (0.048)	90	26.3
Other pome fruit, portion in juice	0.4	90	112.9

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
<b>2.1.4 Stone fruit</b>	17.6		
Apricots, total	5.9		
Apricots, raw	0.9	95	200.0
Apricots, processed	0.9	97.5	91.0
Apricots, portion in juice	4.1	97.5	188.8
Cherries, total	5.8		
Cherries, raw	0.5	95	187.5
Cherries, processed	1.2	97.5	133.2
Cherries, portion in juice	4.1	97.5	186.5
Peaches and nectarines, total	4.3		
Peaches and nectarines, raw	2.6	97.5	192.6
Peaches and nectarines, processed	1.4	97.5	181.8
Peaches, portion in juice	0.4	90	289.2
Plums, total	1.5		
Plums, raw	0.6	90	151.0
Plums, processed	0.6	97.5	184.1
Plums, portion in juice	0.4	95	225.2
<b>2.1.5 Berries and other small fruit</b>	31.8		
Table grapes, total	20.5		
Grapes, raw	4.3	97.5	211.5
Grapes, processed	4.2	97.5	162.9
Grapes, portion in juice	12.0	97.5	531.3
Strawberries, total	7.9		
Strawberries, raw	6.7	97.5	251.8
Strawberries, processed	1.0	97.5	25.0
Strawberries, portion in juice	0.2	90	74.8
Blackberries, total	0.1		
Blackberries, raw*	0.1 (0.017)	MAX	29.0
Blackberries, processed	0.1	97.5	15.6
Blackberries, portion in juice*	0.1 (0.018)	MAX	11.3
Raspberries, total	0.9		
Raspberries, raw	0.2	90	90.6
Raspberries, processed	0.4	97.5	40.8
Raspberries, portion in juice	0.4	95	193.6
Blueberries, total	0.2		
Blueberries, raw	0.1	90	50.0
Blueberries, processed	0.2	97.5	117.1
Blueberries, portion in juice*	0.1 (0.013)	90	13.2
Currants, total	1.3		
Currants, raw	0.2	MAX	150.0
Currants, processed	0.2	97.5	46.4
Currants, portion in juice	1.0	97.5	163.3
Cranberries, processed*	0.1 (0.021)	MAX	20.0
Gooseberries, total	0.1		
Gooseberries, raw*	0.1 (0.035)	MAX	100.0
Gooseberries, processed*	0.1 (0.033)	MAX	19.4
Other small fruits, portion in juice*	0.1 (0.004)	MAX	11.5
Rose hips, processed*	0.1 (0.022)	90	8.5
Elderberries, total	0.6		
Elderberries, processed*	0.1 (0.004)	90	7.5

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
Elderberries, portion in juice	0.6	97.5	258.7
Sloe, portion in juice	0.1	MAX	92.1
Sea buckthorn, portion in juice*	0.1 (0.012)	MAX	5.6
<b>2.1.6 Miscellaneous fruit</b>	40.8		
Pineapple, total	2.7		
Pineapple, raw	0.1	MAX	150.0
Pineapple, processed	0.2	95	79.8
Pineapple, portion in juice	2.3	97.5	85.9
Avocado, raw	0.1	MAX	78.0
Banana, total	25.0		
Banana, raw	23.5	97.5	239.2
Banana, processed	1.5	97.5	146.3
Dates, total*	0.1 (0.038)		
Dates, raw*	0.1 (0.014)	MAX	13.0
Dates in dried product*	0.1 (0.024)	MAX	27.3
Figs, processed	0.1	95	36.6
Pomegranate, raw*	0.1 (0.025)	MAX	40.0
Cape gooseberry, raw*	0.1 (0.011)	MAX	32.0
Kiwi, total	4.4		
Kiwi, raw	4.2	97.5	200.0
Kiwi, processed*	0.1 (0.027)	MAX	19.4
Kiwi, portion in juice	0.1	MAX	240.0
Litchi, raw	0.1	MAX	90.0
Mango, total	0.5		
Mango, raw	0.4	90	126.8
Mango, processed	0.1	90	21.6
Mango, portion in juice	0.1	90	28.6
Olives	0.1	97.5	43.7
Olive oil	0.8	97.5	17.8
Papayas, portion in juice*	0.1 (0.012)	MAX	6.9
Passion fruit, total	3.7		
Passion fruit, processed	0.1	95	16.8
Passion fruit, portion in juice	3.6	97.5	122.9
Other fruits, total	3.6		
Other fruits, raw	0.1		
Other fruits, processed	2.7		
Other fruits, portion in juice	0.8		
Acerola, total	0.2		
Acerola, raw	0.1	95	20.1
Acerola, portion in juice	0.1	MAX	86.6
Guava, total*	0.1 (0.024)	MAX	1.8
Guava, portion in juice*	0.1 (0.022)	MAX	12.4
Kaki or Japanese Persimmon, raw	0.2	MAX	92.0
Agave juice concentrate*	0.1 (0.02)	90	8.2
Aronia berry, processed*	0.1 (0.007)	MAX	5.0
<b>2.2 Vegetables</b>	78.1		
<b>2.2.1 Root and tuber vegetables</b>	18.1		
Carrots, total	16.6		
Carrots, raw	3.8	97.5	119.0
Carrots, processed	6.9	97.5	97.1

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
Carrots, portion in juice	5.9	97.5	692.8
Root celery, total	0.7		
Root celery, processed	0.5	97.5	13.9
Root celery, portion in juice	0.2	MAX	213.4
Swede, processed*	0.1 (0.019)	MAX	44.4
Horseradish, processed*	0.1 (0.023)	97.5	0.4
Parsnip, processed	0.1	MAX	75.9
Parsley root, total	0.1		
Parsley root*	0.1 (0.023)	95	4.7
Parsley root, processed	0.1	97.5	3.8
Red radish, raw	0.2	95	50.2
White radish, total	0.1		
White radish, raw*	0.1 (0.048)	MAX	34.8
White radish, processed*	0.1 (0.009)	MAX	25.8
Beetroot, total	0.3		
Beetroot, raw*	0.1 (0.034)	MAX	26.7
Beetroot, processed	0.3	90	80.8
Black salsifies, processed*	0.1 (0.015)	MAX	23.6
<b>2.2.2 Bulb vegetables</b>	3.1		
Spring onion, raw	0.1	MAX	28.1
Garlic, total	0.1		
Garlic, raw*	0.1 (0.013)	97.5	2.7
Garlic, processed	0.1	97.5	3.0
Shallot, total*	0.1 (0.013)		
Shallot, raw*	0.1 (0.006)	95	4.8
Shallot, processed*	0.1 (0.006)	MAX	5.9
Onions, total	3.0		
Onions, raw	0.2	97.5	24.5
Onions, processed	2.7	97.5	19.9
<b>2.2.3 Fruiting vegetables</b>	35.8		
<b>2.2.3.1 Solanacea</b>	20.3		
Egg plant, processed	0.1	90	47.6
Peppers, total	4.7		
Peppers, raw	3.2	97.5	145.3
Peppers, processed	1.5	97.5	74.0
Peppers, portion in powder*	0.1 (0.025)	97.5	5.9
Tomatoes, total	15.6		
Tomatoes, raw	5.0	97.5	150.6
Tomatoes, processed	10.3	97.5	111.2
Tomatoes, portion in juice	0.3	MAX	281.6
<b>2.2.3.2 Cucurbits with edible peel</b>	10.5		
Cucumber, total	9.5		
Cucumber, raw	7.8	97.5	150.0
Cucumber, processed	1.6	97.5	106.3
Courgette, total	1.0		
Courgette, raw	0.1	90	80.0
Courgette, processed	0.9	97.5	99.3
<b>2.2.3.3 Cucurbits with inedible peel</b>	3.9		

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
Squash/Pumpkins, processed	0.2	90	110.3
Melons, raw	0.8	95	235.1
Watermelon, raw	2.9	97.5	367.7
<b>2.2.3.4 Sweet corn, processed</b>	1.1	97.5	169.4
<b>2.2.4 Brassica vegetables</b>	7.9		
<b>2.2.4.1 Flowering brassicas</b>	3.8		
Cauliflower, total	2.1		
Cauliflower, raw*	0.1 (0.003)	MAX	9.7
Cauliflower, processed	2.1	97.5	121.1
Broccoli, total	1.8		
Broccoli, raw*	0.1 (0.014)	MAX	41.0
Broccoli, processed	1.8	97.5	115.1
<b>2.2.4.2 Head cabbages</b>	2.1		
Brussels sprouts, processed	0.4	90	122.0
Head cabbages, total	1.4		
Head cabbage species, raw*	0.1 (0.006)	MAX	10.0
Head cabbage species, processed	1.4	97.5	114.8
Pointed cabbage, processed*	0.1 (0.007)	MAX	16.5
Sauerkraut	0.3	95	92.5
Sauerkraut, portion in juice*	0.1 (0.007)	MAX	20.7
<b>2.2.4.3 Leafy brassicas</b>	0.3		
Chinese cabbage, total	0.1		
Chinese cabbage, raw	0.1	MAX	38.0
Chinese cabbage, processed	0.1	MAX	75.9
Kale, processed	0.1	MAX	132.7
<b>2.2.4.4 Kohlrabi</b>	1.7		
Kohlrabi, raw	0.6	95	161.8
Kohlrabi, processed	1.2	97.5	106.4
<b>2.2.5 Leaf vegetables and fresh herbs</b>	5.5		
<b>2.2.5.1 Lettuce and similar</b>	1.4		
Endive, raw	0.2	90	82.4
Lamb's lettuce, raw	0.1	90	41.2
Cress, total*	0.1 (0.02)		
Cress, raw*	0.1 (0.018)	97.5	0.9
Cress, processed*	0.1 (0.002)	90	1.2
Dandelion, processed*	0.1 (0.009)	MAX	16.8
Arugula, total*	0.1 (0.041)		
Arugula, raw*	0.1 (0.025)	MAX	50.0
Arugula, processed*	0.1 (0.016)	MAX	13.4
Other lettuce species, raw	1.0	97.5	86.9
Other lettuce species, processed*	0.1 (0.019)	MAX	33.5
<b>2.2.5.2 Spinach and related species</b>	3.4		
Chard, total*	0.1 (0.046)		
Chard, raw*	0.1 (0.011)	MAX	30.0
Chard, processed*	0.1 (0.035)	MAX	36.0
Spinach, processed	3.3	97.5	146.3

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
Turnip greens, processed*	0.1 (0.047)	MAX	67.0
<b>2.2.5.3 Watercress*</b>	0.1 (0.004)		
Watercress, raw*	0.1 (0.003)	MAX	3.2
Watercress, processed*	0.1 (0.002)	MAX	4.7
<b>2.2.5.4 Chicory leaves, raw*</b>	0.1 (0.045)	MAX	44.6
<b>2.2.5.5 Fresh herbs</b>	0.7		
Basil, total	0.1		
Basil, raw	0.1	97.5	11.1
Basil, processed*	0.1 (0.035)	97.5	6.3
Mugwort, processed*	0.1 (0.000)	MAX	0.1
Summer savory, processed*	0.1 (0.014)	95	5.1
Borage, processed*	0.1 (0.003)	95	0.6
Dill, total*	0.1 (0.046)		
Dill, raw*	0.1 (0.025)	97.5	1.0
Dill, processed*	0.1 (0.021)	97.5	5.6
Oregano, total*	0.1 (0.029)		
Oregano, raw*	0.1 (0.003)	97.5	0.6
Oregano, processed*	0.1 (0.025)	97.5	4.1
Tarragon, total*	0.1 (0.003)		
Tarragon, raw*	0.1 (0.002)	95	1.1
Tarragon, portion in dried product*	0.1 (0.000)	90	0.1
Chervil, total*	0.1 (0.028)		
Chervil, raw*	0.1 (0.023)	97.5	0.9
Chervil, processed*	0.1 (0.005)	97.5	1.2
Lovage, total*	0.1 (0.029)		
Lovage, raw*	0.1 (0.019)	97.5	0.9
Lovage, processed*	0.1 (0.01)	97.5	0.8
Marjoram, raw*	0.1 (0.022)	MAX	0.1
Marjoram, portion in dried product*	0.1 (0.022)	97.5	5.2
Parsley, total	0.2		
Parsley, raw	0.1	97.5	2.2
Parsley, processed	0.2	97.5	7.2
Salad burnet, raw*	0.1 (0.015)	97.5	0.8
Rosemary, total*	0.1 (0.007)		
Rosemary, raw*	0.1 (0.003)	97.5	0.6
Rosemary, processed*	0.1 (0.003)	95	4.9
Sage, total*	0.1 (0.004)		
Sage, raw*	0.1 (0.004)	97.5	0.6
Sage, processed*	0.1 (0.001)	MAX	0.4
Sorrel, total*	0.1 (0.003)		
Sorrel, raw*	0.1 (0.003)	MAX	3.2
Sorrel, processed*	0.1 (0.001)	MAX	0.5
Chives, total	0.1		
Chives, raw	0.1	97.5	3.9
Chives, processed*	0.1 (0.02)	97.5	2.3
Thyme, total*	0.1 (0.041)		
Thyme, raw*	0.1 (0.013)	97.5	1.1
Thyme, processed*	0.1 (0.029)	97.5	6.1
Lemon balm, total*	0.1 (0.015)		



Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
Lemon balm, raw*	0.1 (0.015)	97.5	0.8
Lemon balm, portion in dried product*	0.1 (0.000)	90	0.1
Peppermint*	0.1 (0.001)	MAX	2.0
Wild garlic*	0.1 (0.000)	MAX	0.2
<b>2.2.6 Legume vegetables</b>	4.5		
Beans (pods and succulent immature seeds), processed	1.1	97.5	106.6
Beans, shelled, processed	0.4	95	107.0
Peas (pods and succulent immature seeds), total*	0.1 (0.026)		
Peas, raw*	0.1 (0.024)	MAX	19.0
Peas, processed*	0.1 (0.002)	MAX	6.9
Peas, shelled, processed	2.1	97.5	72.3
Soybean sprouts, total*	0.1 (0.019)		
Soybean sprouts, raw*	0.1 (0.016)	MAX	45.0
Soybean sprouts, processed*	0.1 (0.004)	MAX	5.4
Alfalfa sprouts, raw*	0.1 (0.004)	MAX	5.0
Mungo bean sprouts total*	0.1 (0.011)		
Mungo bean sprouts, raw*	0.1 (0.004)	MAX	5.0
Mungo bean sprouts, processed*	0.1 (0.007)	MAX	7.7
Chick peas, processed*	0.1 (0.005)	MAX	13.2
Lentils fresh, processed	0.7	95	100.4
<b>2.2.7 Stem vegetables</b>	1.8		
Artichokes, processed*	0.1 (0.013)	MAX	26.1
Bamboo shoots, processed*	0.1 (0.009)	MAX	7.7
Fennel, total	0.2		
Fennel, raw*	0.1 (0.009)	MAX	20.0
Fennel, processed	0.2	95	65.7
Leek, total	1.0		
Leek, raw*	0.1 (0.016)	MAX	9.0
Leek, processed	1.0	97.5	50.1
Rhubarb, total	0.2		
Rhubarb, raw	0.1	MAX	115.0
Rhubarb, processed	0.1	95	71.9
Asparagus, processed	0.3	97.5	155.4
Celery, total*	0.1 (0.05)		
Celery, raw*	0.1 (0.005)	MAX	8.5
Celery, processed*	0.1 (0.045)	90	20.8
<b>2.2.8 Mushrooms</b>	1.3		
Chinese mushroom*	0.1 (0.048)	MAX	68.7
Field mushrooms, total	0.9		
Field mushrooms, raw*	0.1 (0.044)	MAX	33.5
Field mushrooms, processed	0.9	97.5	61.3
Other cultivated mushrooms, processed	0.3	95	82.6
Shiitake, processed*	0.1 (0.033)	MAX	44.6
Wild grown mushrooms, processed*	0.1 (0.023)	MAX	29.1
<b>2.3 Pulses</b>	0.1		
Peas, portion in dried product*	0.1 (0.035)	MAX	31.0
Lentils dry, processed	0.1	90	26.9

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
<b>2.4 Oilseeds and vegetable fats</b>	10.4		
Oilseeds	3.1		
Peanuts, total	0.3		
Peanuts	0.3	97.5	29.1
Peanuts, portion in oil*	0.1 (0.007)	MAX	3.6
Pumpkin seeds	0.1	97.5	20.2
Linseed, total	0.1		
Linseed	0.1	97.5	4.4
Linseed in Oil*	0.1 (0.012)	MAX	17.3
Poppy seed*	0.1 (0.04)	95	16.0
Palm kernels, portion in fat	0.1	90	48.8
Rape seed, portion in oil	0.1	95	18.0
Safflower seeds, portion in oil	0.2	95	59.6
Mustard seeds*	0.1 (0.038)	97.5	3.2
Sesame seeds, total	0.1		
Sesame seeds	0.1	97.5	23.4
Sesame seeds, portion in oil*	0.1 (0.008)	MAX	11.3
Soyabeans, total	0.6		
Soyabeans	0.1	90	28.2
Ground products from soyabeans	0.1	97.5	21.3
Soyabeans, portion in oil	0.4	97.5	37.3
Sunflower seeds, total	1.4		
Sunflower seeds	0.3	97.5	11.8
Sunflower seeds, portion in oil	1.1	97.5	49.7
Margarine	3.4	97.5	18.4
Other vegetable oils and fats	3.9	97.5	21.7
<b>2.5 Potatoes</b>	41.4		
Potatoes, processed	38.9	97.5	218.8
Powder for smash potatoes	2.5	97.5	220.2
<b>2.6 Tea</b>	0.1		
Tea Camelia sinensis*	0.1 (0.049)	97.5	3.7
Tea Camelia sinensis, portion in instant-tea powder*	0.1 (0.007)	97.5	1.0
<b>2.7 Tealike products</b>	0.7		
Mint, Peppermint, dry	0.1	97.5	5.0
Mate*	0.1 (0.001)	MAX	2.7
Herbal tea in general, dry, portion in tea	0.1		
Fruit in general	0.5	97.5	8.0
Dried fruit, portion in tea	0.5	MAX	5.2
Dried fruit, portion in instant tea powder*	0.1 (0.011)	97.5	7.8
<b>2.8 Cereals (including products from milling and crushing)</b>	89.9		
Buckwheat, total *	0.1 (0.03)		
Buckwheat*	0.1 (0.014)	95	7.2
Buckwheat, processed*	0.1 (0.004)	MAX	9.0
Buckwheat flour*	0.1 (0.012)	MAX	17.9
Barley, total	0.2		
Barley	0.1	97.5	8.0
Barley, processed*	0.1 (0.008)	MAX	7.8
Barley flour (and crushed barley)	0.1 (0.025)	90	8.6

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
Barley bran (and hulled barley)	0.1	95	19.1
Oat, total	3.3		
Oat	0.1	95	34.7
Oat, processed*	0.1 (0.009)	MAX	8.8
Oat flour (and crushed oat)	0.1	95	57.5
Oat bran	3.1	97.5	64.3
Sorghum, total	0.3		
Sorghum wholemeal and bran,	0.1	90	21.6
Sorghum, processed	0.2	90	54.3
Sorghum flour*	0.1 (0.035)	90	25.3
Maize, total	2.4		
Maize*	0.1 (0.012)	MAX	15.4
Maize, processed	0.2	95	101.00
Maize flour and semolina	2.2	97.5	69.4
Rye, total	12.8		
Rye	0.4	97.5	15.6
Rye, processed*	0.1 (0.008)	MAX	7.8
Rye flour	12.3	97.5	57.8
Rye bran*	0.1 (0.049)	90	16.3
Rice, total	4.3		
Rice	1.3	97.5	95.2
Rice, processed	2.7	97.5	56.9
Rice flour	0.3	97.5	35.7
Wheat, total	66.4		
Wheat, wholemeal and bran	1.1	97.5	31.8
Wheat, processed*	0.1 (0.015)	95	5.9
Wheat flour (and crushed wheat)	65.2	97.5	190.9
Spelt grain, total	0.2		
Spelt grain, wholemeal and bran	0.2	97.5	44.6
Spelt grain, processed*	0.1 (0.004)	MAX	10.1
<b>2.9 Cereal products (without produce from milling and crushing)</b>	0.2		
Raw bran	0.06	97.5	2.69
Gluten*	0.1 (0.004)	90	1.1
Grain sprouts, raw*	0.1 (0.001)	MAX	2.0
Other cereal products	0.1		
Malted products	0.1	97.5	2.5
Coffee substitute: barley malt, portion in dried product*	0.1 (0.035)	95	5.2
<b>2.10 Spices</b>	0.6		
Aniseed*	0.1 (0.000)	90	0.2
Fennel seeds, total	0.1		
Fennel seed	0.1	97.5	11.6
Fennel seed, portion in Instant-tea powder*	0.1 (0.003)	MAX	4.1
Cloves*	0.1 (0.003)	97.5	0.4
Ginger*	0.1 (0.003)	95	1.3
Cardamom*	0.1 (0.001)	97.5	0.2
Coriander*	0.1 (0.000)	97.5	0.2
Caraway*	0.1 (0.003)	97.5	0.9
Nutmeg*	0.1 (0.008)	97.5	0.2
Pepper*	0.1 (0.044)	97.5	0.7
Pimento allspice*	0.1 (0.000)	97.5	0.1

Commodity	Long-term intake	Short-term intake	
	Mean diet (g/d)	Percentile	Diet (g)
Vanilla pods, total	0.3		
Vanilla pods	0.3	97.5	11.4
Vanilla pod extract*	0.1 (0.000)	MAX	0.1
Juniper berries*	0.1 (0.001)	MAX	1.2
Cinnamon*	0.1 (0.027)	97.5	3.0
Bay leaf*	0.1 (0.014)	97.5	1.0
Caper*	0.1 (0.018)	97.5	4.6
Saffron*	0.1 (0.000)	MAX	0.1
Paprika*	0.1 (0.01)	97.5	2.3
Chilli (Cayenne pepper)*	0.1 (0.001)	90	0.2
Curcuma*	0.1 (0.000)	MAX	0.3
Cumin*	0.1 (0.000)	MAX	0.1
Curry*	0.1 (0.013)	97.5	1.9
Lavender*	0.1 (0.000)	MAX	1.0
<b>2.11 Other plant/vegetable commodities</b>			
Cocoa mass	2.1	97.5	15.0
Cocoa butter	0.8	97.5	6.6
Cocoa powder	1.8	97.5	13.3
Raw coffee*, total	0.1 (0.002)		
Raw coffee*	0.1 (0.000)	90	0.3
Raw coffee, portion in instant powder*	0. (0.002)	MAX	4.1
Starch	1.6	97.5	14.8
Amaranth	0.1	95	15.2
Molasses	0.3	97.5	8.08
Wine	0.2	97.5	5.86
Quinoa*	0.1 (0.028)	MAX	28.00
Coconut oil	0.9	97.5	10.23
Palm oil	0.2	97.5	15.33
Corn oil*	0.1 (0.05)	97.5	18.47
Grape kernel oil*	0.1 (0.000)	MAX	1.03
Soya products	0.2	97.5	60.72
Maple syrup	0.1	95	25.95
Maple syrup, portion in cream*	0.1 (0.005)	MAX	10.25
Corn syrup*	0.1 (0.007)	MAX	10.00
Liquorice juice concentrate*	0.1 (0.006)	95	1.34
Fig syrup*	0.1 (0.021)	97.5	15.00
Elder berry blossoms	0.1	MAX	68.30
Water chestnut*	0.1 (0.008)	97.5	12.00
Vine leaf, processed*	0.1 (0.002)	MAX	5.00
Carob*	0.1 (0.019)	90	32.78

## Notes

<sup>1</sup> The following corrections to Table 1 have been made vis a vis the version published in the Bundesgesundheitsblatt:

- Long-term intake of cucurbits with inedible peel 3.9 g/d
- Long-term intake of maize, total 2.4 g/d

\* Consumption < 0.1 g/d was set at 0.1 g/d for simplicity

Percentile If the number of consumers was more than 40, the 97.5 percentile is given. This percentile constitutes the value which is only exceeded by 2.5% of consumers.  
If the number of consumers was between 20 and 39, the 95 percentile was used, for between 10 and 19 consumers the 90 percentile.  
In the case of less than 10 consumers, the maximum value is given in the table (MAX), for approximate estimate only.

TP Dry product

## References

- 1 Banasiak U, Hesecker H, Sieke C, Sommerfeld C, Vohmann C (2005). Abschätzung der Aufnahme von Pflanzenschutzmittel-Rückständen in der Nahrung mit neuen Verzehrsmengen für Kinder. Bundesgesundheitsbl – Gesundheitsforsch – Gesundheitsschutz 2005 48:84-98.