

Environmental Working Group's
SHOPPER'S GUIDE TO
PESTICIDES
in PRODUCE

DIRTY DOZEN **CLEANEST 12**
 Buy These Organic Lowest in Pesticides

WORST	Peaches	Onions	BEST
	Apples	Avocado	
	Sweet Bell Peppers	Sweet Corn (Frozen)	
	Celery	Pineapples	
	Nectarines	Mango	
	Strawberries	Asparagus	
	Cherries	Sweet Peas (Frozen)	
	Pears	Kiwi Fruit	
	Grapes (Imported)	Bananas	
	Spinach	Cabbage	
	Lettuce	Broccoli	
	Potatoes	Papaya	

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Why Should You Care About Pesticides?

There is growing consensus in the scientific community that small doses of pesticides and other chemicals can adversely affect people, especially during vulnerable periods of fetal development and childhood when exposures can have long lasting effects. Because the toxic effects of pesticides are worrisome, not well understood, or in some cases completely unstudied, shoppers are wise to minimize exposure to pesticides whenever possible.

What's the Difference?

An EWG simulation of thousands of consumers eating high and low pesticide diets shows that people can lower their pesticide exposure by almost 90 percent by avoiding the top twelve most contaminated fruits and vegetables and eating the least contaminated instead. Eating the 12 most contaminated fruits and vegetables will expose a person to about 15 pesticides per day, on average. Eating the 12 least contaminated will expose a person to less than 2 pesticides per day. Less dramatic comparisons will produce less dramatic reductions, but without doubt using the Guide provides people with a way to make choices that lower pesticide exposure in the diet.

Will Washing and Peeling Help?

Nearly all of the data used to create these lists already considers how people typically wash and prepare produce (for example, apples are washed before testing, bananas are peeled). While washing and rinsing fresh produce may reduce levels of some pesticides, it does not eliminate them. Peeling also reduces exposures, but valuable nutrients often go down the drain with the peel. The best option is to eat a varied diet, wash all produce, and choose organic when possible to reduce exposure to potentially harmful chemicals.

How Was This Guide Developed?

The produce ranking was developed by analysts at the not-for-profit Environmental Working Group (EWG) based on the results of nearly 43,000 tests for pesticides on produce collected by the U.S. Department of Agriculture and the U.S. Food and Drug Administration between 2000 and 2004. A detailed description of the criteria used in developing the rankings as well as a full list of fresh fruits and vegetables that have been tested is available at www.foodnews.org.



FOODNEWS from ENVIRONMENTAL WORKING GROUP**Test Results: Complete Data Set**

Rank (worst to best)	Commodity	Combined Score	Percentage of Samples Tested with Detectable Pesticides	Percentage of Samples With Two or More Pesticides	Average Number of Pesticides Found on a Sample	Average Amount (in ppm*) of All Pesticides Found	Maximum Number of Pesticides Found on a Single Sample	Number of Pesticides Found on the Commodity in Total
1	Peaches	100	96.6%	86.6%	3.1	1.134	9	42
2	Apples	89	92.1%	78.9%	2.5	0.901	9	37
3	Sweet Bell Peppers	86	81.5%	62.2%	2.4	0.138	11	64
4	Celery	85	94.1%	79.8%	3.0	0.413	9	30
5	Nectarines	84	97.3%	85.3%	3.0	0.576	7	26
6	Strawberries	82	92.1%	69.1%	2.2	0.843	8	35
7	Cherries	75	91.4%	75.8%	2.8	0.290	7	25
8	Pears	65	87.2%	47.4%	1.6	0.544	6	32
9	Grapes - Imported	65	85.3%	53.4%	1.7	0.291	7	32
10	Spinach	60	70.0%	31.2%	1.1	1.240	6	24
11	Lettuce	59	58.9%	33.0%	1.3	0.108	9	49
12	Potatoes	58	81.0%	18.0%	1.0	1.655	4	18
13	Carrots	57	81.7%	48.3%	1.6	0.046	6	31
14	Green Beans	53	65.4%	39.0%	1.3	0.187	6	34
15	Hot Peppers	53	55.0%	27.5%	1.0	0.290	6	51
16	Cucumbers	52	72.5%	31.7%	1.2	0.057	6	40
17	Raspberries	47	47.9%	23.3%	0.9	0.906	6	21
18	Plums	45	56.2%	10.2%	0.7	1.359	4	17
19	Grapes - Domestic	43	61.4%	21.8%	0.9	0.107	6	29
20	Oranges	42	83.3%	28.8%	1.2	0.084	4	15
21	Grapefruit	40	62.3%	22.6%	0.9	0.530	5	9
22	Tangerines	38	66.7%	33.3%	1.2	0.375	3	4
23	Mushrooms	37	60.2%	22.3%	0.9	0.158	5	16
24	Cantaloupe	34	54.9%	20.1%	0.8	0.028	4	21
25	Honeydew Melon	31	59.2%	14.2%	0.8	0.012	4	16
26	Tomatoes	30	46.9%	13.5%	0.6	0.029	5	16
27	Sweet Potatoes	30	58.4%	10.0%	0.7	0.198	3	17
28	Watermelons	28	29.4%	14.0%	0.5	0.028	6	18
29	Winter Squash	27	39.8%	12.6%	0.6	0.019	5	16
30	Cauliflower	27	72.4%	8.1%	0.8	0.004	3	4
31	Blueberries	24	27.5%	10.0%	0.4	0.327	4	11
32	Papaya	21	23.5%	5.0%	0.3	0.053	4	19

33	Broccoli	18	28.1%	3.2%	0.3	0.004	3	19
34	Cabbage	17	17.9%	4.8%	0.2	0.121	3	18
35	Bananas	16	41.7%	2.0%	0.4	0.029	2	7
36	Kiwi	14	15.3%	3.4%	0.2	0.160	3	8
37	Sweet Peas - Frozen	11	22.9%	2.3%	0.3	0.010	2	5
38	Asparagus	11	6.7%	0.6%	0.1	0.026	2	19
39	Mango	9	7.1%	0.5%	0.1	0.057	2	13
40	Pineapples	7	7.7%	0.6%	0.1	0.002	2	7
41	Sweet Corn - Frozen	2	3.8%	0.0%	0.0	0.005	1	3
42	Avocado	1	1.4%	0.0%	0.0	0.001	1	2
43	Onions	1	0.2%	0.0%	0.0	0.000	1	2

Note: We ranked a total of 46 different fruits and vegetables but grapes are listed twice because we looked at both domestic and imported samples.

* ppm means parts per million

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