

# The Dirty Dozen

## A Shopper's Guide to Pesticides in Produce

When you're grocery shopping, it's easy to find labels and pick foods that help you reduce cholesterol and saturated fat, avoid antibiotics, or steer clear of artificial colors, flavors and sweeteners. But when it comes to pesticides, consumers have been left in the dark. Now there's help.

The Shopper's Guide to Pesticides in Produce lists the 12 popular fresh fruits and vegetables that are consistently the most contaminated with pesticides and those 15 fruits and vegetables that consistently have low levels of pesticides. If you are concerned about pesticides in your diet, this handy wallet card can help you choose produce that lowers exposure to pesticides for you and your family.

For the most contaminated items, we suggest substituting organically grown produce whenever possible. When this is not an option, we still recommend eating lots of fresh fruits and vegetables but use this guide to buy those that typically have fewer pesticides.

### 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.

### 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.

### 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.



*Whether it be celery, scoring highest in pesticide contamination, or onions, scoring lowest in pesticide contamination, substituting potentially unsafe produce with organic produce is a great way to avoid pesticides in produce.*

### How This Guide Was Developed

The produce ranking was developed by analysts at the not-for-profit Environmental Working Group (EWG) based on the results of nearly 96,000 tests for pesticides on produce collected by the U.S. Department of Agriculture and the U.S. Food and Drug Administration between 2000 and 2008. A detailed description of the criteria used in developing the rankings (<http://www.foodnews.org/methodology.php>) is available as well as a full list of fresh fruits and vegetables that have been tested (see below).

Environmental Working Group's SHOPPER'S GUIDE TO	
PESTICIDES in PRODUCE	
DIRTY DOZEN	CLEANEST 15
Buy These Organic to avoid pesticides	Lowest in Pesticides
STARTING WITH THE WORST...	STARTING WITH THE BEST...
Celery Peaches Strawberries Apples Blueberries Nectarines Bell Pepper Spinach Kale Cherries Potatoes Grapes (imported)	Onions Avocado Sweet Corn Pineapples Mango Sweet Peas Asparagus Kiwi Cabbage Eggplant Cantaloupe Watermelon Grapefruit Sweet Potatoes Honeydew Melon
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