



Evidenced Based Organic Food Shopping

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Before we discuss whether or not we should buy organic foods let's look at the definition of organic food. Organic Food is food that is raised without chemicals and processed without additives. Under standards adopted by the U.S. Agriculture Dept. (USDA) in 2000, synthetic fertilizers, pesticides, and antibiotics may not be used in raising organic foods. The use of irradiation, biotechnology, and sewer-sludge fertilizer is also banned. Food whose ingredients are at least 95% organic by weight may carry the "USDA ORGANIC" label; products containing only organic ingredients are labeled 100% organic. According to many sources there is no harm in consuming foods bathed in chemical fertilizers, pesticides, and sewer sludge. Nor is there harm in consuming animals boosted with growth hormones and antibiotics and fed same species body parts. Okay the same species feed has been banned since the large scale publication of mad cow disease, also known as Creutzfeldt-Jakob disease, and its lesser known variant organisms. For example an article published in the August 9, 2008 edition of Science Daily clearly states that, "New research in the latest issue of the Society of Chemical Industry's (SCI) Journal of the Science of Food and Agriculture shows there is no evidence to support the argument that organic food is better than food grown with the use of pesticides and chemicals." As you can see the journal from the chemical industry unequivocally states there is no harm in consuming chemical fertilizers, pesticides, and sewer sludge. Another publication prints just the opposite. In a March, 2008 study published in State of Science Review titled, "New Evidence Confirms the Nutritional Superiority of Plant-Based Organic Foods," a review of over 40 new studies documents the nutritional superiority of organic foods. Interestingly the "scientific evidence" as published in different journals with far different political and economic interests has more than anything clearly illustrated the polarity of positions and interests on the subject. Say that we fall somewhere in the middle of these two extremes, what then? How do we carefully analyze the evidence and decide in practical terms when to buy organic and when to buy

commercially produced items. In a study by the U.S. Department of Agriculture and the Federal Food and Drug Administration the top 49 most popular fruits and vegetables were analyzed and ranked for pesticide contamination. The results were based on an analysis of 89,000 tests for pesticides on these foods, conducted from 2000 to 2008. Nearly all the studies on which the guide is based tested produce after it had been rinsed or peeled. Contamination was measured in 6 different ways; percent of samples tested with detectable pesticides, percent of samples with two or more pesticides, average number of pesticides found on a single sample, average amount (level in parts per million) of all pesticides found, maximum number of pesticides found on a single sample, and total number of pesticides found on the commodity. For each metric, the foods were ranked based on their individual USDA test results, then normalized the scores on a 1-100 scale (with 100 being the highest). To get a commodity's final score, the six normalized scores from each metric were added to calculate a final score. The full Shopper's Guide list (attached) shows the fruits and vegetables in order of these final scores. The 12 most contaminated foods include seven fruits and five vegetables. The fruits in rank order beginning with most contaminated are: peaches, strawberries, apples, domestic blueberries, nectarines, cherries and imported grapes. Vegetables in the same ranking include celery, sweet bell peppers, spinach, kale, and collard greens. The top 12 least contaminated foods include six fruits and six vegetables. In rank order beginning with least contaminated fruits include avocados, pineapples, mangoes, kiwi, domestic cantaloupe, and watermelon. Since it's hard to envision avocados in our fruit category, let's add grape fruit to our good list of fruits. Using the same least contaminated first ranking our vegetable ranking is onions, sweet corn, sweet peas, asparagus, cabbage, and eggplant. Armed with this scientific data you will be able to optimize healthy choices and minimize spending which results in both physical and financial well being.

Good luck out there.

<http://www.foodnews.org/fulllist.php>

<http://www.sciencedaily.com/releases/2008/08/080807082954.htm>

http://www.organic-center.org/science.nutri.php?action=view&report_id=126

The Full List: 49 Fruits and Veggies

Rank	Fruit or Veggie
1 (Best)	Onions
2	Avocado
3	Sweet Corn (<i>Frozen</i>)
4	Pineapples
5	Mango (<i>Subtropical and Tropical</i>)

- 6 Sweet Peas (*Frozen*)
- 7 Asparagus
- 8 Kiwi Fruit (*Subtropical and Tropical*)
- 9 Cabbage
- 10 Eggplant
- 11 Cantaloupe (*Domestic*)
- 12 Watermelon
- 13 Grapefruit
- 14 Sweet Potatoes
- 15 Honeydew Melon
- 16 Plums (*Domestic*)
- 17 Cranberries
- 18 Winter Squash
- 19 Broccoli
- 20 Bananas
- 21 Tomatoes
- 22 Cauliflower
- 23 Cucumbers (*Domestic*)
- 24 Cantaloupe (*Imported*)
- 25 Grapes (*Domestic*)
- 26 Oranges
- 27 Red Raspberries
- 28 Hot Peppers
- 29 Green Beans (*Imported*)
- 30 Cucumbers (*Imported*)
- 31 Summer Squash
- 32 Plums (*Imported*)
- 33 Pears
- 34 Green Beans (*Domestic*)
- 35 Carrots
- 36 Blueberries (*Imported*)
- 37 Lettuce
- 38 Grapes (*Imported*)
- 39 Potatoes
- 40 Kale / Collard Greens
- 41 Cherries
- 42 Spinach
- 43 Sweet Bell Peppers
- 44 Nectarines
- 45 Blueberries (*Domestic*)
- 46 Apples
- 47 Strawberries

48 Peaches
49 (Worst)