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Organic vs. Commercially Grown Fruits and Vegetables

Commercially grown fruits and vegetables are less expensive, are prettier to look at, contain approximately 10-50% of the nutrients found in organic produce, are often depleted in enzymes, and are contaminated with a variety of herbicides, pesticides and other agricultural chemicals.

In comparing organically and commercially grown wheat, researchers found the organic wheat contained 20-80% less metal residues (aluminum, cadmium, cobalt, lead, mercury), and contained 25-1300% more of specific nutrients (calcium, chromium, copper, iodine, magnesium, manganese, molybdenum, nickel, phosphorus, potassium, selenium, sulfur, and zinc).

Journal of Applied Nutrition, Vol. 45, #1, 1993.

1: J Agric Food Chem. 2003 Sep 10;51(19):5671-6.

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Effect of diets based on foods from conventional versus organic production on intake and excretion of flavonoids and markers of antioxidative defense in humans.

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Different food production methods may result in differences in the content of secondary metabolites such as polyphenolic compounds. The present study compared conventionally (CPD) and organically produced (OPD) diets in a human crossover intervention study (n = 16) with respect to the intake and excretion of five selected flavonoids and effect on markers of oxidative defense. The urinary excretion of quercetin and kaempferol was higher after 22 days of

intake of the OPD when compared to the CPD ($P < 0.05$). The excretions of flavonoids in urine as a percentage of intake (0.6-4%) were similar after both interventions. Most markers of antioxidative defense did not differ between the diets, but intake of OPD resulted in an increased protein oxidation and a decreased total plasma antioxidant capacity compared to baseline ($P < 0.05$). Some varietal difference was seen in the study, and because selection of more resistant varieties is of central importance to organic farming, it cannot be excluded that the observed effects originate from these differences. **The food production method affected the content of the major flavonoid, quercetin, in foods and also affected urinary flavonoids and markers of oxidation in humans.**

Publication Types:

- Clinical Trial
- Randomized Controlled Trial

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COMMERCIAL VS ORGANIC FOOD

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SCIENTISTS PROVE SUPERIOR NUTRITIVE VALUE OF ORGANIC FOOD!

Researchers at Rutgers University set out to disprove the claim that "Organic Is Better". They purchased selections of produce at supermarkets and health food stores and analyzed for mineral content. Organic foods were those grown without the use of chemical pesticides or artificial fertilizers. Non-organic foods, referred to here as "commercial," were grown with a variety of chemicals that enhance growth or destroy pests, many of which are known or suspected carcinogens (cancer-causing) and which cause greater erosion to the environment and wildlife. The idea that organic crops are nutritionally superior has been accepted largely on faith. There has been very little hard evidence to support this supposition. Rutgers researchers expected the organic produce to be maybe slightly higher in comparison, but the results were astounding! The amount of iron in the organic spinach was 97% more than the commercial spinach, and the manganese was 99% greater in the organic. Many essential trace elements were completely absent in the commercial produce whereas they were abundant, comparatively, in their organically grown counterparts.

MAJOR MINERALS

Milliequivalents per 100 Grams Dry Weight: Trace Elements, Parts per Million Dry Matter

MINERAL --	PHOSPHOROUS	MAGNESIUM
SNAP BEANS:		
ORGANIC	10.45	0.36
COMMERCIAL	4.04	0.22
CABBAGE		
ORGANIC	10.38	0.38
COMMERCIAL	6.12	0.18
LETTUCE		
ORGANIC	24.48	0.43
COMMERCIAL	7.01	0.22
TOMATOES		
ORGANIC	14.2	0.35
COMMERCIAL	6.07	0.16
SPINACH		
ORGANIC	28.56	0.52
COMMERCIAL	12.38	0.27
MINERAL:--	SODIUM	MANGANESE

SNAP BEANS

ORGANIC	40.5	60.0
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COMMERCIAL	15.5	14.8
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CABBAGE

ORGANIC	60.0	43.6
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COMMERCIAL	17.5	13.6
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LETTUCE

ORGANIC	71.0	49.3
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COMMERCIAL	16.0	13.1
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TOMATOES

ORGANIC	23.0	59.2
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COMMERCIAL	4.5	4.5
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SPINACH

ORGANIC	96.0	203.9
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COMMERCIAL	47.5	46.9
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MINERAL:--

COPPER**ASH****SNAP BEANS**

ORGANIC	99.7	8.6
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COMMERCIAL	29.1	0.9
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CABBAGE

ORGANIC	148.3	20.4
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COMMERCIAL	33.7	0.8
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LETTUCE		
ORGANIC	176.5	12.2
COMMERCIAL	53.7	0.0
TOMATOES		
ORGANIC	148.3	6.5
COMMERCIAL	58.8	0.0
SPINACH		
ORGANIC	237.0	69.5
COMMERCIAL	84.0	0.0
MINERAL:	CALCIUM	POTASSIUM
SNAP BEANS		
ORGANIC	73.0	60.0
COMMERCIAL	10.0	2.0
CABBAGE		
ORGANIC	42.0	13.0
COMMERCIAL	7.0	2.0
LETTUCE		
ORGANIC	37.0	169.0
COMMERCIAL	6.0	1.0
TOMATOES		
ORGANIC	36.0	68.0
COMMERCIAL	3.0	1.0

SPINACH

ORGANIC	88.0	117.0
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COMMERCIAL	12.0	1.0
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MINERAL --:

BORON**IRON****SNAP BEANS**

ORGANIC	227.0	69.0
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COMMERCIAL	10.0	3.0
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CABBAGE

ORGANIC	94.0	48.0
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COMMERCIAL	20.0	0.4
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LETTUCE

ORGANIC	516.0	60.0
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COMMERCIAL	9.0	3.0
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TOMATOES

ORGANIC	1938.0	53.0
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COMMERCIAL	1.0	0.0
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SPINACH

ORGANIC	1584.0	32.0
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COMMERCIAL	49.0	0.3
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MINERAL:--

COBALT**SNAP BEANS**

ORGANIC	0.26
COMMERCIAL	0.0
CABBAGE	
ORGANIC	0.15
COMMERCIAL	0.0
LETTUCE	
ORGANIC	0.19
COMMERCIAL	0.0
TOMATOES	
ORGANIC	0.63
COMMERCIAL	0.0
SPINACH	
ORGANIC	0.25
COMMERCIAL	0.2
