

## 4. What about organic produce - is it better for you?

First of all, what is organic. Unfortunately, big business has seen organic as a major marketing opportunity and has in many ways moved away from the the basic philosophy of this concept. In its barest form, it is food, either animal or plant-based which has been produced without chemical fertilizers, antibiotics, herbicides, hormones and the like, with no genetically modified organisms. The original concept included the idea that food would be produced locally, on small farms where all animals were treated humanely, especially with animals having access to the outdoors.

These latter concerns have been pushed aside by big business so that factory farms can now produce certified organic food, so long as they abide by the no man-made fertilizers, no chemicals and no genetically modified organisms. Many who hold to the narrower original meaning of organic would probably be outraged by the use of industrial farming methods. What are the negatives of industrial scale organic farming? The following table is from data in Michael Pollan's book "An Omnivore's Dilemma" (Pollan 06-2):

Activity	Problems
Intensive animal production	Inhumane treatment of animals. Despite nominally being able to have access to outdoors, in reality, because of the danger of infections, they are kept inside.
Weed control	Pre-planting irrigation followed by ploughing is wasteful of water and fuel. More ploughing is used to control weeds than conventional methods and thus increases fuel use and erosion and reduces useful soil bacteria. Use of flame torches to burn weeds consumes fossil fuel.
Transport of mulching material	Mulching is an essential part of the organic fertilizing process. If this mulch is transported from afar, then this substantially increases the fossil fuel use.
Centralized	This often means that organic produce is transported huge distances to be centrally

production	transported huge distances to be centrally distributed.
Fence to fence cropping	This eliminates habitat for birds and insects and reduces biodiversity.

Further to this is the labelling of processed foods which are sourced from organically certified basic ingredients as organic themselves is debatable. Is high fructose corn syrup made from organic corn, organic? Hardly. Are TV dinners made from organically sourced basic foods which have then been industrially taken apart and then reassembled into processed foods organic? Again, hardly. One of the great problems of processed foods is that such processing removes many of the basic health providing ingredients such as fibre. However, this is not how much of the legislative process has seen it. So do we get any value from such foods over conventionally produced foods?

The answer is probably yes. Such foods use around two thirds of the amount of fossil fuel in their production. The land is probably better off without chemical fertilizers and herbicides.

There is further evidence that organically grown foods have higher levels of anti-oxidants and other such health improving nutrients. There are two mechanisms involved. The first is insect attack causes plants to reactively produce defensive compounds which just so happen to be the same compounds that are useful to humans. A second possible mechanism is that plants grown by conventional means using chemical fertilizers are metabolically less able to put produce these health giving compounds (Pollan 06-1). Work presented at the February 2006 AAAS conference by Neal Davies of Washington State University showed the various polyphenol compounds in apples was from 5 to 100% higher in those that were organically grown compared to conventional methods (Davies 06).

What are the health benefits of eating organic? There is a lot of information to show that organically produced food has a lot more potentially health giving compounds such as vitamin C, polyphenols and flavinoids, resveratrol and so on. There is also good evidence to show that levels of pesticides such as the organophosphates are less in those that eat organic. A good review of this can be found at the World's Healthiest Foods web site [www.whfoods.org](http://www.whfoods.org). There is also some evidence in laboratory animals that organic food increases longevity in them. However, hard evidence in humans is hard to come by. As most people who eat organically produced food are far more likely to eat a healthy fruit and vegetable diet anyway, any further improvement to

health and life expectancy is likely to be relatively small and hence will require very large studies which will be difficult to do. At present, these don't appear to have been done.

However one health benefit that is clear to all: organic farming whether it be industrial or traditional is good for the world. If you have a preference go for the traditionally produced organic produce through farmer's markets, they are by far the best for the world. Don't forget those who regard themselves as beyond organic: the grass farmers. They incorporate all that is good about traditional organic except that they may access some animal feeds not grown organically. These producers are truly in harmony with the world's environment. See the section on [animal care](#).

## References:

**(Pollan 06-2)** Michael Pollan. An Omnivore's Dilemma. 2006 Bloomsbury, Chapter 9, Big organic, p 134.