Organic Food and Popular Myth – ‘chemical free,’ forget it!

by eve *Saturday, Sep 1 2012, 10:29am*
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> I have long been a believer and proponent of wild food as the healthiest food for human consumption – it stands to reason does it not? No chemical treatments whatsoever and an entirely natural (nature ‘certified’) organic environment. However, it has been a very long time since urban and rural populations went ‘walk-about’ gathering wild food and following seasonal pickings. So we are faced today with the reality of the intensive commercial production of organic and non-organic food.

It should be borne in mind that ‘organic’ food is now a multi-billion dollar industry which has attracted large multi-national corporations that follow government guidelines in the production of vast amounts of government certified/’approved’ organic foods.

But are these foods free of dangerous chemicals, pesticides and fertilisers? The short answer is a definite NO! And that exposes an enduring myth regarding ‘organic’ food sold to consumers today. It matters not whether a pesticide is naturally occurring when used in the concentrations and frequency they are used today. No-one should be surprised to learn that natural pesticides (that were never meant to be ingested) are deleterious to the health -- in some cases natural chemicals used in the organic food industry are highly carcinogenic/toxic, more so than some of their synthetic counterparts.

Understand that it is not in the interests of the ‘health food’ industry to publicise the real truth about organic foods and shatter long enduring myths – the industry survives largely on myths, assumptions, fads and fantasy and no business wishes to negatively impact their bottom line. So the responsibility falls on the consumer, ‘caveat emptor’ (buyer beware) applies at all times!

The following is a short informative report from Berkeley University, California; however, interested readers should consult their local government authority on local requirements, certifications and approved chemical agents allowed in the industry. Consumers should also be aware that regulations can vary wildly from nation to nation and state to state so labels can be deceiving!

But all is not lost; recent urban agricultural projects have resulted in small urban gardens producing relatively large amounts of fresh natural food -- these gardens are tended by local growers who control what fertilisers and/or pesticides are used, or not used, whatever the case may be. Community co-ops from garden to consumer offer the best alternative when quality control and price is an issue.

Report follows:

About Organic Produce

Organic produce has become increasingly popular in recent years, as consumers have grown more health conscious and environmentally aware. Many stores and supermarkets now have large sections devoted to organic fruits and vegetables.

What makes produce "organic"?

Contrary to what most people believe, "organic" does not automatically mean "pesticide-free" or "chemical-free". In fact, under the laws of most states, organic farmers are allowed to use a wide variety of chemical sprays and powders on their crops.

So what does organic mean? It means that these pesticides, if used, must be derived from natural sources, not synthetically manufactured. Also, these pesticides must be applied using equipment that has not been used to apply any synthetic materials for the past three years, and the land being planted cannot have been treated with synthetic materials for that period either.

Most organic farmers (and even some conventional farmers, too) employ mechanical and cultural tools to help control pests. These include insect traps, careful crop selection (there are a growing number of disease-resistant varieties), and biological controls (such as predator insects and beneficial microorganisms).

Organic produce and personal health

When you test synthetic chemicals for their ability to cause cancer, you find that about half of them are carcinogenic.

Until recently, nobody bothered to look at natural chemicals (such as organic pesticides), because it was assumed that they posed little risk. But when the studies were done, the results were somewhat shocking: you find that about half of the natural chemicals studied are carcinogenic as well.

This is a case where everyone (consumers, farmers, researchers) made the same, dangerous mistake. We assumed that "natural" chemicals were automatically better and safer than synthetic materials, and we were wrong. It's important that we be more prudent in our acceptance of "natural" as being innocuous and harmless.

Organic pesticides versus synthetic pesticides

Clearly, the less we impact our environment, the better off we all are. Organic farming practices have greatly advanced the use of non-chemical means to control pests, as mentioned earlier.

Unfortunately, these non-chemical methods do not always provide enough protection, and it's necessary to use chemical pesticides. How do organic pesticides compare with conventional pesticides?

A recent study compared the effectiveness of a rotenone-pyrethrin mixture versus a

synthetic pesticide, imidan. Rotenone and pyrethrin are two common organic pesticides; imidan is considered a "soft" synthetic pesticide (i.e., designed to have a brief lifetime after application, and other traits that minimize unwanted effects). It was found that up to 7 applications of the rotenone- pyrethrin mixture were required to obtain the level of protection provided by 2 applications of imidan.

It seems unlikely that 7 applications of rotenone and pyrethrin are really better for the environment than 2 applications of imidan, especially when rotenone is extremely toxic to fish and other aquatic life.

It should be noted, however, that we don't know for certain which system is more harmful. This is because we do not look at organic pesticides the same way that we look at conventional pesticides. We don't know how long these organic pesticides persist in the environment, or the full extent of their effects.

When you look at lists of pesticides allowed in organic agriculture, you find warnings such as, "Use with caution. The toxicological effects of [organic pesticide X] are largely unknown," or "Its persistence in the soil is unknown." Again, researchers haven't bothered to study the effects of organic pesticides because it is assumed that "natural" chemicals are automatically safe.

Why haven't we heard this before?

For obvious reasons, organic farmers have done little, if anything, to dispel the myth that "organic = chemical/pesticide-free". They would only stand to lose business by making such a disclosure.

Pesticide manufacturers have little concern in the matter. To them, "synthetic pesticides sold" and "organic pesticides sold" are both "pesticides sold".

As for conventional farmers, they are not really in a position to be critical. It would not be in their interest to draw attention to chemical and pesticide use.

What does all of this mean?

The purpose in writing this article is not to discourage you from buying organic produce.

It is only meant to let you know what you are or aren't getting when you make such a purchase. Unless you know your grower personally, there is no guarantee that your produce has been grown without pesticides or other chemicals. It's a point to consider, given the substantially higher cost of organic foods.

There are many choices and decisions that we, as consumers, are asked to make. Hopefully, this has provided some new information that you will find helpful.

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A formatted MS Word version of this document may be downloaded at:
http://www.ocf.berkeley.edu/~lhom/organics.doc

The data describing the carcinogenicity of natural and synthetic compounds are

referenced in Gold, L.S., et al. (1992) _Science_ Vol. 258, pp. 261-265.

Many thanks go to the Organic Crop Improvement Association for their cooperation in this study. The OCIA has chapters in AZ, AR, CA, CO, FL, IL, IN, IA, KS, MD, MI, MN, MO, MT, NE, NM, NC, ND, OH, PA, SD, UT, and WI. Thanks are also extended to the California Certified Organic Farmers, the Ohio Ecological Food and Farm Association, and Oregon Tilth Certified Organic. (The appropriate information has not yet been obtained from the Natural Organic Farmers Association (NOFA), but it is almost certain that all facts stated here apply to their products as well.) The following state Departments of Agriculture have also been very helpful: AL, AK, AZ, CA, CO, DE, FL, HI, IA, LA, MD, MI, MS, MO, ND, OK, SC, TN, VA, and WA. States with no laws governing organic products include Alabama, Delaware, Hawaii, Mississippi, and Tennessee.

See also recent UK Telegraph story.

Freshness is the most important factor governing nutrient content

http://www.ocf.berkeley.edu/~lhom/organictext.html
