



Agro Services International Inc.

The Organic Hoax

Dr. Terrence Fullerton

Organic agriculture is being promoted as being healthier than conventional food production. There are many different production systems described as organic, but the central belief is that avoiding the use of artificial chemicals will produce healthier food and have less or no negative impacts on the environment. However, these claims are not backed up by facts.

Natural products.

Let us start with the common belief that natural products are healthy and artificial products are not. The following is a list of natural chemicals:

Cocaine Cyanide Nicotine PA, LF and EF (anthrax toxins)

Now let us look at some synthetic chemicals:

Ciprofloxacin (used to treat anthrax) Chlorine bleach (sanitizer) DEET (prevents insect borne diseases)

This clearly shows that not all natural chemicals are safe, and that there are many synthetic products that are routinely used to protect and improve our health.

In spite of this, the organic movement insists that nothing synthetic must be used in food production. But do they really follow this rule? A large number of synthetic chemicals are actually allowed in organic agriculture, but the industry is very quiet about it. The following are some of the synthetic chemicals that are allowed in food certified as organic following the USDA and/or the United Kingdom standards.

Fertilizers:

Magnesium sulfate, iron sulfate, copper sulfate, zinc sulfate, manganese sulfate, sulfuric and phosphoric acids (added to liquid fish fertilizers), basic slag.

Pesticides:

Copper sulfate, copper oxychloride, copper hydroxide, potassium permanganate, mineral oils, calcium polysulfide.

Animal Feed :

Monocalcium phosphate, dicalcium phosphate, magnesium sulfate, ferrous (II) carbonate, ferrous (II) sulphate monohydrate, calcium iodate anhydrous, calcium iodate hexahydrate, potassium iodide, cobaltous (II) sulphate monohydrate and/or heptahydrate, basic cobaltous (II) carbonate monohydrate, copper (II) oxide, basic copper (II) carbonate monohydrate, copper (II) sulphate pentahydrate, manganese (II) carbonate, manganous oxide, manganic oxide, manganous (II) sulfate, mono-and/or tetrahydrate zinc carbonate, zinc oxide, zinc sulphate mono- and/or hepta-hydrate, ammonium molybdate, sodium molybdate, sodium selenate, sodium selenite ascorbic acid, d-alphatocopheryl succinate, cyanocobalamin, pyridoxine hydrochloride, niacinamide.

Livestock pesticides, antibiotics and other drugs:

With the exception of organophosphates, **all synthetic pesticides antibiotics and drugs are allowed**. They cannot be used as growth stimulants and can only be used to cure, not prevent diseases, but these synthetic chemicals are regularly used in organic animal production.

Food Additives:

Ammonium carbonate, ammonium bicarbonate, ascorbic acid, mono, di and tri-basic calcium phosphate, potassium carbonate, potassium iodide, d-alpha-tocopheryl succinate, cyanocobalamin, pyridoxine hydrochloride, niacinamide, ferrous sulfate.

Cleaning Agents:

Chlorine dioxide, calcium hypochlorite, sodium hypochlorite, hydrogen peroxide, nitric acid, sulfuric acid, phosphoric acid, formaldehyde.

Selection of chemicals.

It is often suggested that the chemicals used in organic agriculture are selected based on safety. The fact is that the selections are arbitrarily made with no scientific or logical basis. The case of phosphates illustrates this perfectly.

Phosphates are essential to all life. Naturally occurring rock phosphates are accepted as organic fertilizers, but most of them do not release the nutrients to plants. The fertilizer industry therefore treats them with sulfuric acid to produce soluble calcium phosphates. These are not accepted as organic fertilizers. The same problem occurs with other nutrients ores such as manganese. However, when the manganese mineral is treated with sulfuric acid to release the nutrients, the resulting product is considered organic. Both the natural phosphate and manganese ores are treated in the same way, but one product is accepted, the other is not. To date, no one has offered a suitable explanation for this inconsistency.

Lets get back to the phosphates. The chemically processed calcium phosphates cannot be used as organic fertilizers but are allowed as organic additives in animal feed and in food for human consumption. What is the problem that occurs in the soil but does not occur in animals or humans? No one seems to know.

A large portion of the calcium phosphates added to animal feed passes through the animals unchanged and ends up in the manure. The soluble calcium phosphate in the manure is now accepted as an organic fertilizer even though it was not acceptable before feeding it to the animal.

Here is another example of illogical organic rules. The mineral sylvinitite is a natural mixture of potassium chloride and sodium chloride and is accepted as an organic fertilizer. High levels of sodium chloride can have detrimental effects on the soil, therefore the fertilizer industry removes it from sylvinitite by washing. The resulting potassium chloride is now environmentally safer than the original sylvinitite, but most European standards do not accepted it as an organic fertilizer.

The food preservatives benzoates, sorbates, propionic acid, fumaric acid and the flavor enhancer MSG are prohibited. These substances occur naturally in many foods, often at levels higher than

would be used as additives. The small amounts added to food are considered to be dangerous, but the high amounts of the same substances that occur naturally are accepted as safe.

Pesticide Use

One of the selling points of organic agriculture is that it does not use pesticides. The fact is that organic agriculture uses a range of pesticides including synthetic chemicals. Some of these chemicals are actually more harmful than the ones that are not allowed.

It was noted before that several synthetic copper chemicals are used in organic agriculture as fungicides. Although small amounts of copper are essential for life, it is a toxic element at higher levels. There have been reports of people committing suicide by ingesting it. Vineyard sprayers have experienced liver disease from exposure to it. It is corrosive to the skin and eyes and is absorbed through the skin. It causes reproductive problems in birds, hamsters and rats. It has been shown to induce heart disease in the offspring of pregnant hamsters that were exposed to it. It has caused endocrine tumors in chickens. Copper sulfate and similar fungicides have been poisonous to sheep and chickens on farms at normal application rates.

Copper fungicides are environmentally unfriendly. They are very toxic to fish and aquatic invertebrates, such as crab, shrimp and oysters. There are cases where most animal life in soil, including large earthworms, have been eliminated by the extensive use of copper-containing fungicides in orchards. It is strongly bioaccumulated and is very persistent. Once a soil is contaminated with copper, there is no practical way to remove it.

The organic insecticide rotenone has been found to be toxic to pigs, rats and dogs and is very toxic to fish. It causes skin and eye irritations. Inhalation of the dust causes respiratory problems and convulsions in humans. It causes reproductive problems in rats and guinea pigs.

One of the most popular organic pesticides, neem, is toxic to non-target species including crustaceans and tadpoles. Neem has been shown to cause the brain disease toxic encephalopathy in children. In mice, it causes chromosomal abnormalities in bone marrow cells and damages the DNA of sperm.

Are there any other problems with organic pesticides? We really do not know simply because they are not regulated like the “synthetic” ones. Many organic products have never been tested for safety, but they are used under the guise that they are “natural” and are therefore not “chemicals”.

Environmental Effects

Organic agriculture is claimed to be environmentally friendly, but this is difficult to accept even if we ignore the effects of organic copper fungicides on soils.

In South America, 140 million hectares (346 million acres) of land have become degraded and infertile due to traditional agricultural practices that use little or no external “chemical” inputs. An additional 100 million hectares (247 million acres) of rainforest have been cleared mainly to compensate for the loss of agricultural land; the deforested area increases every year.

In contrast, 4 million hectares (10 million acres) of farm land has been returned to forest in North

America over the last decade. This land has become available for forestry because modern agricultural methods, including agrochemicals, have allowed growers to achieve their production goals on less land. It has been estimated that if organic production is adopted throughout the USA, an additional 170 million hectares of forest would need to be cleared and planted to maintain today's level of food production.

Health.

Organic food can solve a number of imaginary health problems, but can it solve any of the real health problems that affect us?

In the "World Health Report 2002", the World Health Organization listed the main preventable health risks globally as:

Childhood and maternal underweight; unsafe sex; high blood pressure; tobacco; alcohol; unsafe water, sanitation and hygiene; high cholesterol; indoor smoke from solid fuels; iron deficiency and overweight/obesity.

Which of these can be solved by organic agriculture? Definitely not the malnutrition problem which occurs primarily in countries that do not widely use agrochemicals. What about the problems related to obesity? Is food high in organic fat healthier than food high in non-organic fat? Is organic cholesterol less dangerous than non-organic cholesterol?

Is smoking organic tobacco and drinking organic alcohol less harmful than using the non-organic products? Apparently some people think so. Today, you can buy not only organic tobacco and alcohol, but also organic marijuana.

Cancer

It is claimed that organic foods do not contain cancer causing chemicals. The fact is that small amounts of many natural cancer causing agents are found in common foods. These include:

Acetaldehyde, Acrylamide, Aflatoxin, Allyl isothiocyanate, Aniline, Benzaldehyde, Benzene, Benzo(a)pyrene, Benzofuran, Benzyl acetate, Caffeic acid, Catechol, Coumarin, 1,2,5,6-dibenz(a)anthracene, Estragole, Ethyl alcohol, Ethyl acrylate, Ethyl benzene, Ethyl carbamate, Furan and furan derivatives, Furfural, Heterocyclic amines, Hydrazines Hydrogen peroxide, Hydroquinone, d-limonene, 4-methylcatechol, Methyl eugenol, Psoralens, Quercetin glycosides, Safrole

While this may seem frightening, the levels of these chemicals and pesticide residues found in food are too low to affect health. So what steps should be taken to prevent cancer? The World Health Organization and the American Cancer Society suggest that to reduce your risks of getting cancer you must avoid tobacco use, exercise regularly and eat a diet rich in fruits and vegetables. At no point does either organization recommend organic anything as a way of preventing cancer.

Those who promote organic agriculture may have good intentions, but their position is based on wishful thinking and emotion, not facts. No chemical, organic or synthetic, is perfectly safe. Under the wrong conditions, every substance is harmful. We need to understand the properties of all the products available to us and make sensible use of these resources whether they are natural or synthetic.

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© Agro Services International Inc.
205 East Michigan Avenue
Orange City, Florida, 32763-2332
Tel 386 775 6601 Fax 386 775 9890
E-mail agro@agroservicesinternational.com
www.agroservicesinternational.com