

WHY SHOULD THE WORLD WANT ORGANIC FARMING?

Dennis T. Avery, director of Hudson Institute's Center for Global Food Issues, argues the case against organic farming

An advisory committee to the U.S. Environmental Protection Agency has classified pyrethrum – the famous natural organic pesticide that comes from flowers – as a “likely human carcinogen.” In secret. Two years ago. It turns out that pyrethrum caused an above-normal number of tumors in high-dose rodent tests.

Organic consultant Charles Benbrook, sounding for all the world like a Monsanto pesticide salesman, says that pyrethrum is safe anyway, because it's applied at very low rates, and degrades very rapidly with little residue. The same could be said, of course, for many of the synthetic pesticides against which Benbrook and his fellow organic believers have campaigned so ardently for so many years.

The organic movement is now pleading, in effect, that the high-dose rat tests aren't a very good way to assess human risk. We agree.

The world has thus lost its last reason to want organic food. If pyrethrum is safe for consumers, then so are the rest of the pesticides approved for agricultural use by the world's various governments.

The organic trade associations in Great Britain and the United States, have recently admitted that they have no evidence of superior nutrition. The Soil Association admitted this to a House of Lords hearing in 1999. Katherine Di Matteo of America's Organic Trade Association admitted it to ABC-TV newsman John Stossel in February 2000.

Does organic taste better? In a blind taste test conducted by America's Consumer Reports magazine, consumers couldn't tell the difference between organic and conventional fruits and vegetables, let alone organic flour, organic meat or organic milk.

Consumers are no safer eating organic food, and may be less safe. The advent of *E. coli* O157:H7 has heightened the danger of fertilizing food crops with manure. Cattle manure is the major reservoir of O157, and that's a major source of nitrogen for organic farmers. The organic movement is trying to say that O157 is only found on “industrial” farms, but the U.S. Department of Agriculture researchers looking at this deadly bacterium say they've never tested a cattle herd without finding it – even on remote Canadian rangeland. An early study that claimed only grain-fed cattle shed O157 has been overtaken by new studies that show forage-fed cattle shed the virulent bug for an even longer period.

The organic pesticide rotenone has recently been “linked” (as the eco-activists love to say) with Parkinson's disease.

Dr. Bruce Ames, recently awarded America's National Science Medal by President Clinton, says 99.99% of the

carcinogens that humans ingest are natural compounds (many of them natural pesticides) that Mother Nature has put in our foods herself. Dr. Ames wonders why we want to worry so much about the other 0.01% when non-smoking cancer rates are declining in the very countries where pesticides are most widely used.

Copper sulfate, a widely used organic fungicide, is more toxic to people, small mammals, earthworms, birds, and fish than its synthetic counterpart, Mancozeb. It is also a permanent soil contaminant, like sulfur, another important organic fungicide. Some European vineyards are already in decline because of copper toxicity in the soil. (So much for the long-term sustainability of organic production.)

A recent study by our Center indicates that First World pesticide use would increase several-fold under an organic mandate because these and other organic pesticides must be applied frequently and at high rates. Sulfur is applied at nearly 35 pounds per acre, compared to 1.6 pounds per acre for synthetic fungicides, and copper at 4 pounds per acre. Oil, another major organic pesticide, is used at rates of up to 72 pounds per acre. A study of organic versus conventional agriculture by Cornell University found sulfur the most polluting factor in either farming system.

The Soil Association and the Organic Trade Association still claim that organic farming is better for the environment. They claim there are more birds and spiders in organic fields. But Alistair Leake of Britain's Cooperative Wholesale Association (one of the world's larger organic farming operations) told the House of Lords hearing, “It is the way that the uncropped areas, the hedges and edges, are managed rather than the farming regime itself, which appears to have most influence on species diversity. Wildlife likes the “unkempt bits,” and organic farms are not necessarily likely to have more untidy areas than conventional farms.” (Leake did note that the organic fields have more weeds, some of them flowering.)

New York State has just given us some additional information about bird deaths from pesticides. Thanks to the fear of the West Nile virus (which kills birds and attacks people) New Yorkers in the past year or so have picked up every dead bird they could find and sent it to the state wildlife pathology laboratory for autopsy. The lab says it has found virtually none of the deaths due to accidental pesticide poisoning. The birds died from parasites, bacterial infections and old age, but not from farm chemicals. The myth, of course, was that billions of birds were being poisoned, and we couldn't count them because predators ate the bodies.

The world's biggest danger to wildlife has nothing to do with pesticides. The real danger is that human farming will take so much land that the forests will be cleared and the wild species plowed down. Organic farmers refuse to use elemental nitrogen, taken from the air, to replace the N taken out of the soil by their growing crops. The world's conventional farmers use about 80 million tons per year of N taken from the air (through an industrial process using natural gas). Dr. Vaclav Smil of the University of Manitoba recently estimated that it would take 5 to 6 billion additional cattle to create this much nitrogen organically. (The world has about 1.3 billion cattle today.) To feed the additional cattle, we'd probably have to clear at least half of the world's remaining 16 million square miles of forest – and forests house most of the estimated 30 million wildlife species.

Mr. Leake says that the CWA gets 44% less wheat per acre from its organic fields than from its conventional fields. (Most studies have found that overall organic yields are 40–50% lower.) What if Western Europe decided to grow all its food organically (instead of only 2% of it) and its yields dropped by 44%? The region would immediately lose its exportable farm surplus – and to get its current food supply would have to clear additional cropland equal to all the forests in Germany, France, Denmark, and Great Britain!

Is that how the organic movement and Greenpeace propose to protect the world's wildlife?

Organic believers say that organic yields might be equally high if the same amount of research had been invested in their farming system as in modern conventional farming. That's most unlikely.

- The most basic constraint on higher yields is soil fertility, and the organic movement was founded to reject chemical nitrogen, the first (and still one of the most important) of farming's scientific breakthroughs.
- Synthetic pesticides represented the next big breakthrough in high-yield farming, and organic farmers rode to prominence by asserting (without credible evidence) that synthetic pesticides caused cancer.
- Then conventional farmers invented conservation tillage. By giving up plowing, and keeping the soil covered with crop residues, conservation tillage radically improves soil tilth, stimulates far more earthworms and soil bacteria, and cuts soil erosion by 65 to 95% – all while producing some of the highest crop yields ever. Organic farmers also reject conservation tillage, because it depends on herbicides instead of plowing for weed control. Organic

farmers continue to practice “bare earth” farming, with plows, mechanical cultivators – and erosion.

- Antibiotics and veterinary medicines allow conventional farmers to move toward confinement feeding. This takes the creatures out of the hot summer sun and the cold winter winds, making them apparently 20% more comfortable based on their feed conversion ratios. Putting 3 billion hogs outdoors in 2050 (and growing the extra feed) might take about 500,000 square miles of wildlife habitat away from Nature. But organic farmers refuse to use the medications, and mostly refuse to use the confinement feeding systems.
- Now, science has advanced to genetic engineering. Nothing is more heartening to rational conservationists since the world will need nearly three times as much farm output in 2050 to feed perhaps 9 billion affluent people – and their pets. And we're already farming 37% of the world's land area. Biotechnology is our best hope for tripling crop and livestock yields again.
- Researchers at Washington State University recently put a corn gene into a rice plant, to increase the rate of photosynthesis in rice – and get 35% more rice per acre. What could be more important in saving the world's tropical forests? But when the U.S. Department of Agriculture proposed to allow biotech products within its new definition of organic food, it was deluged with hundreds of thousands of protests from the organic movement.

What high-yield research could we expect this movement to accept? Organic farmers have rejected every scientific farming advance since hybrid seeds, and proudly proclaimed that this made their food “better.”

Today's organic farmers could not feed the human population or protect the wildlife. They have a history of rejecting new technology. Their produce costs nearly twice as much as conventional produce, an intolerable burden for poor families trying to protect their kids from cancer by keeping lots of fruits and vegetables on the table.

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FEEDBACK

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