

Food for Thought

Our experts agree that conventional farming methods play a vital role in an abundant food supply and healthy environment.

Interviews by Mark Jost

How is the ag industry addressing public concerns about the effects of using fertilizers and pesticides on the environment?

Leonard Gianessi, director, Crop Protection Research Institute: The Environmental Protection Agency (EPA) has regulations on how these products can be developed, distributed and utilized. When used properly according to directions on the product label, pesticides present low risk and offer great benefits. CropLife America has provided funds to the Public Health Forum (a consortia of chemical trade associations that address public health and risk assessment issues) to help the ag industry use online resources to educate the public on the benefits of crop protection products. CropLife has helped fund research to study the public's perception of pesticides. Feedback from the research shows that it's possible to make a case for the continued use of science-based risk assessment to regulate these products and to keep them available.

Alex Avery, director of research and education, Center for Global Food Issues at the Hudson Institute: The ag industry tries hard to communicate the commendable efforts of producers to reduce fertilizer and pesticide inputs and minimize leaching and runoff. Yet there is room for improvement. I'd like to see more proactive outreach from the mainstream farm community

to school-age children (and their teachers) in urban/suburban areas. Why are there not mainstream demonstration farms in the major metropolitan areas of the U.S.? Youth can also learn a lot about food production challenges from planting their own gardens in urban and suburban areas.

How do conventional farming methods benefit the environment?

Gianessi: Herbicides enable growers to manage weeds without tilling the soil. This practice reduces erosion by leaving the soil largely undisturbed, saves 337 million gallons in tractor fuel annually in the United States and prevents an estimated 356 billion pounds of disturbed soil from eroding into rivers and streams. And by using herbicides to eradicate spreading noxious weeds, land managers have restored habitats for beneficial species and for several endangered species populations as well.

Avery: Absolutely! The significantly higher productivity of conventional farming methods, including producing nitrogen fertilizer synthetically and preventing crop losses to insects, saves millions of square miles of wildlife habitat. Because farmers can produce more using less land, all of these modern farming methods are key parts of the overall wildlife conservation equation.

How important are crop inputs to an adequate and sustainable world food supply?

Gianessi: Pesticides are the first defense against pathogenic

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microbes that destroy crops and sometimes infect humans and animals with disease. Without fungicide treatments, 95 percent of the U.S. grape crop would rot, and 86 percent of apples, 62 percent of watermelons and 54 percent of peaches would be seriously damaged by fungal pathogens.

Avery: They're essential. Without synthetic nitrogen fertilizer, for instance, we could feed just over half of our current global population. Worse, we would lose massive amounts of topsoil from erosion without fertilizers and herbicides. Without insecticides and fungicides, we would lose roughly one-third to two-thirds of our harvest every year to insects and plant diseases. We would be farming the highway medians and our own yards in our attempts to overcome the losses from nature's hoards.

What checks and balances are in place to make sure the food we get at our local market is safe?

Gianessi: Starting at the product registration level, the United States has one of the most robust approval systems on the planet in the form of the federal pesticide law, FIFRA [Federal Insecticide, Fungicide & Rodenticide Act]. Pesticide registrants submit detailed data packages to the EPA to help demonstrate the safe use of these products, based on a variety of exposure scenarios and product use categories. FIFRA also mandates that these tests follow Good Laboratory Practices, which include EPA inspections of laboratories. In addition to examining pesticides before they are registered, the government samples food to ensure that pesticide residues are within legal limits. All this is on top of many private food industry monitoring programs.

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Avery: All pesticides undergo massive testing before they are allowed to be used, with residue allowances established by detailed studies and set much lower than levels shown to cause no harm to animals in laboratory tests. We now know through Food and Drug Administration and Centers for Disease Control and Prevention testing that natural bacteria are a far graver risk. These food-borne illness outbreaks aren't new; it is only recently that we have begun paying serious attention to them through the new tools of genetic fingerprinting and linking labs via the Internet.

Are there food safety and environmental costs to using only natural techniques and products?

Gianessi: Because conventional farming tools can improve yields, organic farmers may have to plant more acres of arable farmland to see the same yields as their conventional counterparts. Additionally, the increasing reach of the global economy and just-in-time supply chain practices can result in infectious agents like salmonella and *E. coli* on imported products.

Avery: Yes. When a farmer uses animal manure as the primary fertilizer of a fruit or vegetable crop, there are naturally higher risks from pathogens in the manure. When a farmer doesn't use insecticides to protect a grain crop, there is more insect damage, and consequently higher levels of cancer-causing natural fungal toxins. When a farmer relies only on legume crop rotation to restore soil fertility, yields are lower overall. Any decision we make that reduces productivity of an acre of land increases pressures on habitat and biodiversity.

For More Information

If you would like to learn more about the benefits of modern agriculture in feeding a growing global population, go to www.syngenta.com, click on “Corporate Responsibility,” select “Publications,” and then scroll to “Straight Answers.” You also can go to www.croplifefoundation.org or www.cgfi.org.



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