Sustainable Farming Can Feed the World?

The oldest and most common dig against organic agriculture is that it cannot feed the world’s citizens; this, however, is a supposition, not a fact. And industrial agriculture isn’t working perfectly, either: the global food price index is at a record high, and our agricultural system is wreaking havoc with the health not only of humans but of the earth. There are around a billion undernourished people; we can also thank the current system for the billion who are overweight or obese.

Yet there is good news: increasing numbers of scientists, policy panels and experts (not hippies!) are suggesting that agricultural practices pretty close to organic — perhaps best called “sustainable” — can feed more poor people sooner, begin to repair the damage caused by industrial production and, in the long term, become the norm.

On Tuesday, Olivier de Schutter, the United Nations’ special rapporteur on the Right to Food, presented a report entitled “Agro-ecology and the Right to Food.” (Agro-ecology, he said in a telephone interview last Friday, has “lots” in common with both “sustainable” and “organic.”) Chief among de Schutter’s recommendations is this: “Agriculture should be fundamentally redirected towards modes of production that are more environmentally sustainable and socially just.” (To access a press release about the launch of the report, click here (pdf). To read the full report click here (pdf).)

Agro-ecology, he said, immediately helps “small farmers who must be able to farm in ways that are less expensive and more productive. But it benefits all of us, because it decelerates global warming and ecological destruction.” Further, by decentralizing production, floods in Southeast Asia, for example, might not mean huge shortfalls in the world’s rice crop; smaller scale farming makes the system less susceptible to climate shocks. (Calling it a system is a convention; it’s actually quite anarchic, what with all these starving and overweight people canceling each other out.)

Industrial (or “conventional”) agriculture requires a great deal of resources, including disproportionate amounts of water and the fossil fuel that’s needed to make chemical fertilizer, mechanize working the land and its crops, running irrigation sources, heat buildings and crop dryers and, of course, transportation. This means it needs more in the way of resources than the earth can replenish. (Fun/depressing fact: It takes the earth 18 months to replenish the amount of resources we use each year. Looked at another way, we’d need 1.5 earths to be sustainable at our current rate of consumption.)

Agro-ecology and related methods are going to require resources too, but they’re more in the form of labor, both intellectual — much research remains to be done — and physical: the world will need more farmers, and quite possibly less mechanization. Many adherents rule out nothing, including in their recommendations even GMOs and chemical fertilizers where justifiable. Meanwhile, those working towards improving conventional agriculture are borrowing more from organic methods. (Many of these hybrid systems were discussed convincingly in Andrew Revkin’s DotEarth blog last week.)

Currently, however, it’s difficult to see progress in a country where, for example, nearly 90 percent of the corn crop is used for either ethanol (40 percent) or animal feed (50 percent). And most of the diehard adherents of industrial agriculture — sadly, this usually includes Congress, which largely ignores these issues — act as if we’ll somehow “fix” global warming and the resulting climate change. (The small percentage of climate-change deniers are still arguing with Copernicus.) Their assumption is that by increasing supply, we’ll eventually figure out how to feed everyone on earth, even though we don’t do that now, our population is going to be nine billion by 2050, and more supply of the wrong things — oil, corn, beef — only worsens things. Many seem to naively believe that we won’t run out of the resources we need to keep this system going.

There is more than a bit of silver-bullet thinking here. Yet anyone who opens his or her eyes sees a natural world so threatened by industrial agriculture that it’s tempting to drop off the grid and raise a few chickens.

To back up and state some obvious goals: We need a global perspective, the (moral) recognition that food is a basic
right and the (practical) one that sustainability is a high priority. We want to reduce and repair environmental damage, cut back on the production and consumption of resource-intensive food, increase efficiency and do something about waste. (Some estimate that 50 percent of all food is wasted.) A sensible and nutritious diet for everyone is essential; many people will eat better, and others may eat fewer animal products, which is also a eating better.

De Schutter and others who agree with the goals of the previous paragraph say that sustainable agriculture should be the immediate choice for underdeveloped countries, and that even developed countries should take only the best aspects of conventional agriculture along on a ride that leaves all but the best of its methods behind. Just last month, the U.K.’s government office for science published “The Future of Food and Farming,” which is both damning of the current resource-intensive system (though it is decidedly pro-GMO) and encouraging of sustainable, and which led de Schutter to say that studies demonstrate that sustainable agriculture can more than double yields in just a few years.

No one knows how many people can be fed this way, but a number of experts and studies — including those from the U.N. Food and Agriculture Organization, the University of Michigan and Worldwatch — seem to be lining up to suggest that sustainable agriculture is a system more people should choose. For developing nations, especially those in Africa, the shift from high- to low-tech farming can happen quickly, said de Schutter: “It’s easiest to make the transition in places that still have a direction to take.” But, he added, although “in developed regions the shift away from industrial mode will be difficult to achieve,” ultimately even those countries most “addicted” to chemical fertilizers must change.

“We have to move towards sustainable production,” he said. “We cannot depend on the gas fields of Russia or the oil fields of the Middle East, and we cannot continue to destroy the environment and accelerate climate change. We must adopt the most efficient farming techniques available.”

And those, he and others emphasize, are not industrial but sustainable.

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