Factory farms the only way to ‘feed the world’? Not so, argues Science paper

by Tom Philpott
11 May 2011 7:21 PM

To "feed the world" by 2050, we'll need a massive, global ramp-up of industrial-scale, corporate-led agriculture. At least that's the conventional wisdom.

Even progressive journalists trumpet the idea (see here, here, and here, plus my ripostes here and here). At least one major strain of President Obama's (rather inconsistent) agricultural policy is predicated on it. And surely most agricultural scientists and development specialists toe that line ... right?

Well, not really. Back in 2009, Seed Magazine organized a forum predicated on the idea that a "scientific consensus," analogous to the one on climate change, had formed around the desirability of patent-protected genetically modified seeds. If I must say so, my own contribution to that discussion shredded that notion. If anything, a pro-GMO consensus has formed among a narrow group of microbiologists -- the people who conduct gene manipulations to develop novel crops. But no such accord exists among scientists whose work takes them out of the laboratory and into farm fields and ecosystems: soil experts, ecologists, development specialists, etc.

The latest evidence against any consensus around Big Ag as world savior: In a paper [PDF] just published in Science, a team of researchers led by the eminent Washington State University soil scientist John P. Reganold urges a fundamental rethinking of the U.S. ag-research system, which is "narrowly focused on productivity and efficiency" at the expense of public health and ecological resilience; and of the Farm Bill, which uses subsidies not to support a broad range of farmers but rather to "mask market, social, and environmental factors associated with conventional production systems."
The Reganold team's *Science* article distills their much longer report published last year by the prestigious National Research Council. While conventional wisdom holds that scientists who study agriculture think only lots of GMOs and agrichemicals can feed us going forward, Reganold's team has quite a different set of recommendations in mind: "organic farming, alternative livestock production (e.g., grass-fed), mixed crop and livestock systems, and perennial grains."

They are by no means the only high-level researchers to reach such conclusions. Earlier this year, the U.N.'s special rapporteur on food, Olivier De Schutter, conducted "an extensive review of the recent scientific literature" and concluded that the case for Big Ag had been way overblown [PDF]. Defying agrichemical industry dogma about how organic agriculture produces low yields, De Schutter declared, "Small-scale farmers can double food production within 10 years in critical regions by using ecological methods."

Also this spring, another branch of the United Nations, the U.N. Environment Program, released yet another report making the case for organic and other low-input ag techniques (I wrote about it at the bottom of this post).

And as far back as 2008, the largest-ever assessment of attitudes within the scientific community came out squarely against industrial agriculture as the true and only way to "feed the world" going forward. The International Assessment of Agricultural Knowledge, Science, and Technology for Development (IAASTD), a three-year study released in 2008, engaged 400 scientists from around the globe under the aegis of the World Bank and the U.N.'s Food and Agriculture Organization. Far from pinning hopes for humanity's future on the products of a few agrichemical firms, the IAASTD focuses on building resilience and health in communities through sustainable-ag techniques it groups under the rubric of the term "agroecology."

Now, I would never insist that there is a consensus among scientists that only organic ag can feed the world. There are clearly scientists, not all of them linked financially to the agrichemical industry, who would passionately argue against that proposition. But there is by no means a consensus in the other direction. What we have is a debate -- one being snuffed out by the illusion of a consensus. As global population grows and climate change proceeds apace, making agriculture ever more tricky, food policy may well emerge as the question of our time. It's time to air out that debate.

Tom Philpott is Grist’s senior food and agriculture writer. You can follow his Twitter feed at twitter.com/tomphilpott.