

Countdown to Copenhagen
November 2009 Update



COOL FOODS
C A M P A I G N
Countdown to Copenhagen & Beyond

THIS IS ISSUE TWO in a series of newsletters produced by the Center for Food Safety and Navdanya International to focus on the critical links between food systems and climate change. We will distribute additional issues in the run up to the Copenhagen meeting of the United Nation's Framework Convention on Climate Change (UNFCCC) to foster discussion about the potential for ecological food systems to become a major solution to climate change.

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According to studies by the Rodale Institute, if U.S. cropland (based on 434 million acres) were converted to regenerative, organic farming methods, we could reduce nearly 25 percent of our total GHG emissions.

Global Climate Negotiators Are Ignoring What's On Their Plates

THE LEADERS OF INDUSTRIALIZED NATIONS are talking about bringing their expertise and technical prowess as solutions to what's become the environmental issue of our time. But in all that's being discussed, from high-tech solutions to the burgeoning trade in carbon credits, could it be that the Copenhagen delegates are ignoring the impact of what's already on their plates?

World leaders meeting in September at the United Nations climate summit took stock of the sobering reality that an effective global pact on climate change very likely will not be achieved, as anticipated, in Copenhagen this December. Many proposed solutions in the Countdown to Copenhagen negotiations—officially known as the United Nations Framework Convention on Climate Change (UNFCCC)—are highly technical and expensive fixes. *However, a potent solution is being overlooked—a transition toward ecological, organic agriculture.* Transforming our food systems wouldn't cost governments exorbitant amounts of money and wouldn't require elaborate—and in some cases, untested—technologies that are currently the main focus of UNFCCC climate negotiations and many national policies.

Agriculture is the only human activity based on photosynthesis that has the potential to be fully renewable. Multifunctional, biodiverse farming and localized food systems are essential for ensuring food security in an era of climate change. A rapid global transition to such systems is an imperative, both for mitigating climate change and for ensuring food security.

The U.S. Avoids the High Jump

The United States, looked to for leadership in setting the bar in global climate discussions, appears to be unwilling to take a high jump.

The International Panel on Climate Change (IPCC) has estimated that developed countries need to reduce greenhouse gas (GHG) emissions 25–40 percent below 1990 levels by 2020. However, the U.S. is nowhere near committing to such reductions. Legislation currently being debated—the Clean Energy Jobs and American Power Act (Kerry–Boxer) in the Senate and the House-passed American Clean Energy and Security Act (Waxman–Markey)—will not accomplish the needed emission reduction targets. Also, both fall short of policies already being implemented by other industrial nations.

Additionally, the U.S.'s Johnny–Come–Lately reputation among other nations, including allies in the climate negotiations, is heightened by our inability to commit to earlier assurances to developing countries that we would contribute significant financial resources for touted clean technology transfers. In any case, U.S. actions, or rather inactions, have substantially lowered the bar for a meaningful agreement in Copenhagen.

Industrial Agriculture—Perilous for the Planet

One of the reasons the U.S. is hampered from taking bolder action is because, since the financial collapse, the billions of dollars needed for constructing and transferring technologies are melting away as fast as the glaciers in the Himalayas. In order to break the apparent deadlock, new approaches, new ways of thinking are needed.

Industrial agriculture is a polluter that has largely been ignored. Even though research concludes that industrial agriculture is one of the major contributors to global warming, neither international nor U.S. domestic policies are adequately addressing this sector. The figures are stunning—at least 60 percent of all nitrous oxide (N_2O) emissions, the most potent GHG, are caused by industrial agriculture, primarily from the use of synthetic nitrogen fertilizer. Nearly 50 percent of methane (CH_4), the second strongest GHG, is due to industrial farming

practices, much of this from intensive livestock operations.¹ The IPCC tells us that industrial agriculture methods contribute at least 14 percent of GHG emissions. However, when calculating the total energy backpack of the current food system, this figure could be as high as 25 to 30 percent of emissions. Massive production and use of chemical pesticides, herbicides, and fertilizers; concentrated and unsanitary livestock operations; food transport; intensive water usage; and land conversion from biodiverse ecosystems to giant, monoculture food plantations—these practices are perilous for our food security and the planet.

A Major Problem Can Become a Major Solution

Given that industrial methods are a major part of the global warming problem, why not turn agriculture around to make it a major climate solution?

As the late Edward R. Goldsmith, author of seminal writings about ecosystems—including the critical link between agriculture and climate change—often stated: “When doing something that causes harm, one must do the exact opposite in order for things to change.” *In other words, if we make a U-turn away from harmful industrial agriculture practices toward ecological, organic systems, we can significantly change the course of climate change.*

The potential for rapid change is exciting. For example, studies by the Rodale Institute² project that the planet’s 3.5 billion tillable acres could sequester *nearly 40 percent of current CO₂ emissions* if converted to “regenerative” organic agriculture practices. The same 10-year research project concluded that if U.S. cropland (based on 434 million acres) were converted to organic farming methods, *we could reduce nearly 25 percent of our total GHG emissions.*

Many other studies have drawn similar conclusions. In India, research shows that organic farming practices increase carbon absorption in soils by up to 55 percent (even higher when agro-forestry is added into the mix), and water holding capacity is increased by 10 percent.³ A study of 20 commercial farms in California found that organic fields had 28 percent more carbon in the soil than industrial farms.⁴

Organic Farming—Can It Feed the World?

The inevitable criticism raised by proponents of industrial agriculture when one discusses organic farming is that we can’t afford to worry about environmental hazards given the need to feed our burgeoning world population. Agribusiness corporations have been telling us that in order to feed the world, we need to convert more fully to industrial methods.

But despite being broadly reported and accepted, that position is untenable. First, global warming and other environmental problems caused by industrial agriculture practices will guarantee that we won’t be able to feed a hungry world. Second, contrary to general belief and prejudice, crop yields from industrial fields do not consistently produce

more food. In fact, it is a myth that ecological organic agriculture yields less than conventional agriculture.

A comprehensive study of 293 crop comparisons of industrial and organic agriculture demonstrates that organic farm yields are roughly comparable to industrial farm yields in developed countries and result in much higher yields in developing countries.⁵

The World Bank and United Nations *International Assessment of Agricultural Knowledge, Science and Technology for Development*⁶ concluded that a fundamental overhaul of the current food and farming system is needed to get us out of the growing food (and fuel) crisis. They recommend that small-scale farmers and agro-ecological methods— not industrialization—are the keys to a viable food security. Additionally, numerous studies unequivocally state that our survival depends on the resiliency and biodiversity of organic farm systems free of fossil fuels and chemical dependency.⁷

A New Way Forward

Given the figures, the U.S. and other countries can make a giant step toward reducing GHG emissions by transitioning away from industrial food systems and toward ecological systems. Simply eliminating or greatly reducing use of synthetic nitrogen fertilizers and instead using manures and cover crops will dramatically reduce GHG emissions. Putting this into practice would require much smaller amounts of financing than building massive infrastructures and developing sophisticated technologies. Transforming the way we grow our food is a simpler, cheaper, and highly effective approach.

Perhaps when First Lady Michelle Obama planted the White House garden, she knew that growing food without chemicals was not only producing nutritious, healthy food, but was also taking a bite out of climate change. Small gardens are a step, but, of course, we need large-scale change in the way we grow our food. To move in the right direction, we need to take the great U-turn and transition toward food systems that are regenerative, living carbon systems versus non-renewable, dead fossil-carbon systems. We need to provide incentives and resources to farmers in the U.S., as well as around the globe, to make this U-turn and reinvigorate agricultural livelihoods and communities. It’s time to create a new food and climate future.

1 <http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter8.pdf>

2 <http://coolfoodscountdown.org/reportsandreferences/mitigation-cool-foods-as-a-climate-solution/>—Scroll down to *Regenerative Organic Farming: A Solution to Global Warming*

3 Vandana Shiva. *Soil Not Oil: Environmental Justice in an Age of Climate Crisis*. 2008.

4 view referenced data at http://www.cnr.berkeley.edu/~christos/articles/cv_organic_farming.html; full study is available for purchase at <http://www.jstor.org/ps/2269357>

5 view press release at <http://www.ns.umich.edu/htdocs/releases/story.php?id=5936>; the full study is available for purchase through <http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=1091304>

6 <http://coolfoodscountdown.org/reportsandreferences/big-picture-views/>

7 <http://coolfoodscountdown.org/reportsandreferences/adaptation-ensuring-food-and-energy-security/> and <http://coolfoodscountdown.org/reportsandreferences/organic-crops-and-foods/>