

Organic Farming, Geo-engineering and Global Warming

Organic Farming Changes Agriculture from a Huge Carbon Source to a "Carbon Destroyer"

By [Washington's Blog](#)

Global Research, May 02, 2015

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Region: [Asia](#)

Theme: [Environment](#)

In-depth Report: [Climate Change](#)

Science China Press [reports](#) (via the American Association for the Advancement of Science):

Approximately 35% of global greenhouse gases (GHGs) come from agriculture. Some argue that humans can reverse global warming by sequestering several hundred billion tons of excess CO₂ through regenerative, organic farming, ranching and land use. Increasing the soil's organic content will not only fix carbon and reduce emissions, it will also improve the soil's ability to retain water and nutrients and resist pests and droughts.

To mitigate GHG emissions and retain soil fertility, organic agriculture might be a wise choice for decreasing the intensive use of synthetic fertilizers, protecting environments, and further improving crop yields. Recent research showed that replacing chemical fertilizer with organic manure significantly decreased the emission of GHGs. Organic farming can reverse the agriculture ecosystem from a carbon source to a carbon sink. [i.e. organic farming ties up and binds or "sequesters" carbon, instead of emitting any carbon. In other words, organic farming pulls carbon out of the environment and locks it in the soil.]

To explore the potential of farmlands acting as a carbon sink without yield losses, Jiang Gaoming, a professor at the Chinese Academy of Sciences' Institute of Botany, conducted an experiment on a temperate eco-farm in eastern rural China. Crop residues were applied to cattle feed and the composted cattle manure was returned to cropland with a winter wheat and maize rotation. Crop yield and greenhouse gas (GHG) emissions were carefully calculated according to the Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories 2006.

This study showed that replacing chemical fertilizer with organic manure significantly decreased the emission of GHGs. Yields of wheat and corn also increased as the soil fertility was improved by the application of cattle manure. Totally replacing chemical fertilizer with organic manure decreased GHG emissions, which reversed the agriculture ecosystem from a carbon source (+ 2.7 t CO₂-eq. hm⁻² yr⁻¹) to a carbon sink (- 8.8 t CO₂-eq. hm⁻² yr⁻¹).

Making full use of crop residues as forage for cattle, collecting and composting cattle manure, and replacing part of the chemical fertilizer input with organic manure have been successfully shown to be ideal choices to reduce energy waste and cut GHG emissions without crop yield losses. A combination of organic manure and chemical fertilizer demonstrated the best result in improving soil quality and crop yields, while decreasing GHG emissions. Solely utilizing chemical fertilizer on the farmland not only led to increased GHG

emissions, but also deteriorated the quality of the soil.

Similarly, a different team of Chinese scientists publishing in 2013 in the prestigious American scientific journal Proceedings of the National Academy of Sciences [found](#):

N fertilizer ... in China during the past 3 decades ... is estimated to have contributed to a net gain in soil organic carbon of 85 Tg per year. Nevertheless, our data show that N fertilizer-related GHG emissions are several times greater in magnitude than soil organic carbon gains. For China to reduce the gap between GHG emissions and soil carbon sequestration and to move toward low GHG emission agriculture, it is necessary to examine the entire N chain to identify potential emission reductions.

Decades of excessive N use have contributed to a variety of environmental problems, including large GHG emissions and serious water pollution. Our life cycle analysis shows the significance of the carbon footprint associated with the N fertilizer chain in China. GHG emissions tripled from 1980 to 2010, with the amount growing from 131 to 452 Tg CO₂-eq·y⁻¹, and, if unabated, to 564 Tg CO₂-eq·y⁻¹ by 2030. China needs a combination of reforms in the fertilizer industry and changes in management practices and technologies at the farm level to minimize excessive N use in the field. Our scenario analysis indicates it is feasible to reduce GHG emissions by 20–43% from a “business as usual” scenario by 2020 if an appropriate range of mitigation measures are introduced covering both N fertilizer manufacture and its agricultural use.

Fracking Is *Bad* for the Environment

The myth that “green revolution” farming practices – such as the use of large quantities of nitrogen fertilizers – is harmless is just *one of the myths* that have hampered our ability to address climate.

For example, “clean natural gas” from fracking has been touted for years as a cure for global warming. But scientists say that fracking pumps out a lot of methane ... into both [our drinking water](#) and [the environment](#). Methane is a powerful greenhouse gas: [72 times](#) more potent as a warming source than CO₂. As such, fracking actually [increases – rather than decreases – global warming](#). (The fracking boom is also causing [other harmful effects](#).)

So Are Nukes ...

Numerous scientists have also pushed nuclear power as a *must* to stop global warming. But it turns out that nuclear is [not a low-carbon source of energy ... and funding nuclear crowds out the development of better sources of alternative energy](#).

Mark Jacobson – the head of Stanford University’s Atmosphere and Energy Program, who has written numerous books and hundreds of scientific papers on climate and energy, and testified before Congress numerous times on those issues – [notes](#) that nuclear puts out much more pollution (including much more CO₂) than windpower, and 1.5% of all the nuclear plants built have melted down. More information [here](#), [here](#) and [here](#).

Jacobson also [points out](#) that it takes at least 11 years to permit and build a nuclear plant,

whereas it takes *less than half* that time to fire up a wind or solar farm. Between the application for a nuclear plant and flipping the switch, power is provided by *conventional* energy sources ... currently 55-65% coal.

And a former NRC Commissioner [says](#) that trying to solve global warming by building nuclear power plants is like trying to solve global hunger by serving everyone caviar.

Scam and Trade

One of the main solutions to global warming which has long been pushed by the powers that be - cap and trade - is a scam. Specifically:

- The economists who invented cap-and-trade [say](#) that it won't work for global warming
- Many environmentalists [say](#) that carbon trading won't effectively reduce carbon emissions
- Our bailout buddies over at Goldman Sachs, JP Morgan, Morgan Stanley, Citigroup and the other Wall Street behemoths are buying heavily into carbon trading (see [this](#), [this](#), [this](#), [this](#) and [this](#)).

As University of Maryland professor economics professor and former Chief Economist at the U.S. International Trade Commission Peter Morici [writes](#):

Obama must ensure that the banks use the trillions of dollars in federal bailout assistance to renegotiate mortgages and make new loans to worthy homebuyers and businesses. Obama must make certain that banks do not continue to squander federal largess by padding executive bonuses, acquiring other banks and pursuing new high-return, high-risk lines of businesses in merger activity, carbon trading and complex derivatives. Industry leaders like Citigroup have announced plans to move in those directions. Many of these bankers enjoyed influence in and contributed generously to the Obama campaign. Now it remains to be seen if a President Obama can stand up to these same bankers and persuade or compel them to act responsibly.

In other words, the same companies that made billions off of derivatives and other scams and are now getting bailed out on your dime are going to make billions from carbon trading.

War Is the BIGGEST Source of Carbon

The U.S. military is the [biggest producer of carbon on the planet](#).

Harvey Wasserman [notes](#) that fighting wars more than wipes out any reduction in carbon from the government's proposed climate measures.

Writing in 2009 about the then-proposed escalation in the Afghanistan war, Wasserman said:

The war would also come with a carbon burst. How will the massive emissions created by 100,000-plus soldiers in wartime be counted in the 17% reduction

rubric? Will the HumVees be converted to hybrids? What is the carbon impact of Predator bombs that destroy Afghan families and villages?

The continuance of fighting all over the Middle East and North Africa completely and thoroughly undermines the government's claims that there is a global warming emergency and that reducing carbon output through cap and trade is needed to save the planet.

I can't take anything the government says about carbon footprints seriously until the government ends the [unnecessary wars ... all over the globe](#).

So whatever you think of climate change, all people can agree that ending the wars is important. Anyone who supports "[humanitarian war](#)" by the U.S. is supporting throwing a lot of carbon into the air. (War also [destroys the economy](#).)

Geoengineering: More Harm Than Good?

Many of the "geoengineering" solutions being proposed would [cause more harm than good](#).

Some people are pushing geoengineering because they say "we have to *do something*". But we should not do anything that doesn't have a net benefit ... and most geoengineering proposals would have adverse health and environmental impacts, and could even boomerang and increase warming.

So What *Should* We Do?

As noted above, switching from synthetic nitrogen farming to organic farming will dramatically reduce carbon output.

In addition, top climate scientists [say](#) that soot plays [a huge role in the melting of snow and ice](#). The director of Stanford's Atmosphere and Energy Program and professor of civil and environmental engineering (Mark Jacobson) [believes](#) that soot is the *primary* cause of melting arctic ice, and [says](#):

Controlling soot may be the only way to significantly slow Arctic warming over the next two decades ...

Reducing soot will be cheaper than the "decarbonation" which many policy-makers have proposed. And it would increase the health of [millions of people worldwide](#).

Using specific [smart combinations of solar, wind and geothermal](#) energy will also greatly reduce the carbon load.

Finally, we must [decentralize power generation and storage](#). That would empower people and communities, produce less carbon, prevent nuclear disasters like Fukushima, reduce the dangers of peak oil (and thus [prevent future oil spills like we had in the Gulf](#)), and have many other positive effects.

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