

## Big Ag Wins Kudos for Being Green

More: [Environment](#), [Agriculture](#), [climate change](#), [organic](#)

By **STETT HOLBROOK** Fri, Jul 16, 2010

[A A A](#) [Comments \(0\)](#) [Print](#) [ShareThis](#)



Sustainable farming could feed the world, scientists say. Photo by Curtis Cartier.

Researchers at Stanford University are trumpeting new findings that they say show agriculture's so-called green revolution has greatly reduced forest clear-cutting and resulting climate-warming emissions—an unforeseen benefit to industrial agriculture. Because agricultural "advancements" like fertilizers, genetically engineered crops and pesticides have boosted yields, there has been less need to slash and burn for additional fields, and this has meant fewer carbon emissions, the report says.

The study, titled "Greenhouse Gas Mitigation by Agricultural Intensification," was published last month in the Proceedings of

the National Academy of Sciences and posits that advances in high-yield industrial agriculture over the latter part of the 20th century have prevented massive amounts of greenhouse gases from entering the atmosphere—the equivalent of 590 billion metric tons of carbon dioxide. The researchers estimate that if not for increased yields, additional greenhouse gas emissions from clearing land for farming would have been equal to as much as a third of the world's total output of greenhouse gases since the dawn of the Industrial Revolution in 1850.

The report goes a step beyond highlighting the environmental benefits of high-yield, industrial agriculture and dismisses traditional methods. "Our results dispel the notion that modern intensive agriculture is inherently worse for the environment than a more 'old-fashioned' way of doing things," said Jennifer Burney, lead author of the paper.

Needless to say, many food policy analysts are taking issue with that assumption. While reducing greenhouse gasses is great, they argue, reliance on the "green revolution" and technological solutions is inherently unsustainable because it is based on massive inputs of fertilizers and pesticides, GMO technology, corporate ownership of seeds, global transportation and the destruction of biodiversity.

In Oakland, the Institute for Food and Development Policy/Food First has some very different ideas about agriculture and global warming. In a comprehensive report titled "Smallholder Solutions to Hunger, Poverty and Climate Change," the organization lays out an alternative to the destructive methods of the green revolution that have the potential to feed people and greatly reduce greenhouse gas emissions. "Although conventional wisdom assumes small family farms are backward and unproductive, agroecological research has shown that given a chance, small farms are much more productive than large farms," the report says. "Small, ecological farms help cool the planet and provide many important ecosystem services; they are a reservoir for biodiversity, and are less vulnerable to pests, disease and environmental shock."

The report cites research by the University of Michigan that examined 293 examples comparing alternative and conventional (i.e., chemical dependent) agriculture from 91 studies and concluded that ecological agriculture could increase global food production by as much as 50 percent—without relying on the petroleum inputs that fueled the green revolution. Additional research has suggested that the conversion of 10,000 small-to-medium-size farms to organic production would store carbon in the soil equal to talking 1,174,400 cars off the road.

To be fair, the researchers say intensive, large-scale agriculture should be prominent among several strategies to reduce global greenhouse gases emissions. But since there's plenty of research showing that small-scale, ecological agriculture is as productive or more so than destructive, petroleum-dependent industrial agriculture, some are saying it's time to dump the green revolution in favor a truly revolutionary approach.

[A A A](#) [Comments \(0\)](#) [Print](#) [ShareThis](#)

Comments (0)

[Subscribe](#) [Follow Us](#) [Become a Fan](#)



CaBrightSpot.com Arts by Google

### Most Discussed

- [Smoking Ban Enacted in Santa Cruz](#)
- [Raft of Rules for Group's Santa Cruz Apartments](#)
- [Junkie Town: Santa Cruz's Heroin Problem](#)
- [Reform Needed in the Court System Regarding Child Custody](#)
- [Santa Cruz County Investors Think Local](#)
- [UCSC Researcher Finds Albatross Tragedy](#)
- [The Adult Day Health Care Domino Effect](#)
- [Pension Tensions in Santa Cruz](#)
- [Santa Cruz Writer Recalls Kent State Shootings](#)
- [UCSC Postpones Cage-Free Policy](#)

### Ads by Google

[Agriculture.com](#)  
Official Site Of Agriculture.com Articles, Weather, Markets & More  
[www.Agriculture.com](#)

[Better Carbon](#)  
Quick, easy, and accurate footprint estimate based on your community  
[www.bettercarbon.com](#)

[Footprint Calculator](#)  
Calculate and purchase offsets to lessen air travel. Start now.  
[www.less.ca](#)



[Post a comment](#)

There are no comments for this entry yet.

---

Post a comment

Name: \*

Email: \*

Message: \*

Submit the word you see below:

Remember me on this computer

Notify me of follow-up comments

[Cancel](#) [SUBMIT COMMENT](#)

Ads by Google

<a href="#">Carbon Dioxide Emissions</a> Learn how to save 30% off your energy costs from the experts! schneider-electric.com	<a href="#">AB 32 Implementation Info</a> Cleantech Is Putting CA To Work! News On Clean Energy Economy & Jobs www.CaBrightSpot.com	<a href="#">Fueled with sun and wind</a> Siemens answers for the future of electro mobility. Learn more! www.siemens.com/eMobility
---	--	--

---

**SantaCruz.com**

[Contact us](#)

Copyright © 2009 SantaCruz.com: All rights reserved. [Terms & Conditions](#). [Privacy Policy](#).