



## March 2011 Green Mission News

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### External Article Links:

**- The Accelerated Worm Composting Station**

[http://www.petervangorder.com/worm\\_composting.html](http://www.petervangorder.com/worm_composting.html)

**- Americans waste enough food to feed more than 80 million people**

<http://www.dailyonder.com/wasted-dates-and-wasted-rice/2011/01/12/3122>

**- What does sustainable industry look like? Good & provocative question. Here is a sophisticated graphic.**

<http://www.interfaceglobal.com/Sustainability/Our-Journey/Interface-Model.aspx>

**- Gunther Hauk, of *Queen of the Sun* fame, his farms' website**

[www.spikenardfarm.org](http://www.spikenardfarm.org)

**- Plan S, Sustainable Living for the Long Term,**

[www.plan-s.org](http://www.plan-s.org)

**- Scientists warn of link between dangerous new pathogen and Monsanto's Roundup**

<http://www.thepeoplesvoice.org/TPV3/Voices.php/2011/02/20/scientists-warn-of-link-between-dangerou?tempskin=basic>

**- Polystyrene & Health Homepage**

[www.ejnet.org/plastics/polystyrene/health.html](http://www.ejnet.org/plastics/polystyrene/health.html)

<http://www.mindfully.org/Plastic/6th-Basic-Food-Group.htm>

### Full Length Articles Below:

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Published on Thursday, February 3, 2011 by [the Telegraph/UK](#)

## Global Food Prices Hit New Record High

Global food prices have hit a new record high, amid fears that the escalating cost of bread and meat is adding to the turmoil in the Middle East.

**by Harry Wallop**

The United Nations Food and Agriculture Organization (UN FAO) gave warning that the high prices, already above levels in 2008 which sparked riots, were likely to rise further.

Food prices are set to become an increasingly political issue as the world's poorest remain vulnerable to the volatile upward shift of basic needs. (Photo: HEATHCLIFF O'MALLEY)

The FAO measures food prices from an index made up of a basket of key commodities such as wheat, milk, oil and sugar, and is widely watched by economists and politicians around the world as the first indicator of whether prices will end up higher on shop shelves.

The index hit averaged 230.7 points in January, up from 223.1 points in December and 206 in November. The index highlights how food prices, which throughout most of the last two decades have been stable, have taken off in alarming fashion in the last three years. In 2000 the index stood at 90 and did not break through 100 until 2004.

Surging food prices have come back into the spotlight after they helped fuelled protests that toppled Tunisia's president in January. Food inflation has also been among the root causes of protests in Egypt and Jordan, raising speculation other nations in the region would secure grain stocks to reassure their populations.

Abdolreza Abbassian, an economist at the FAO, said: "The new figures clearly show that the upward pressure on world food prices is not abating.

"These high prices are likely to persist in the months to come. High food prices are of major concern especially for low-income food deficit countries that may face problems in financing food imports and for poor households which spend a large share of their income on food."

Experts point out that, in theory, the situation is not as bad as in 2007 to 2008, when the world faced a genuine shortage of food. This time around there are plenty of stocks, particularly wheat, that are being stored. In Britain arable farmers have been sitting on grain from last year's harvest and been able to sell wheat at £200 a ton, double the price of just a few years ago. Experts said that hoarding of food by some governments was making the problem worse. In the run-up to the 2007/2008 food price crisis, the World Bank estimated that some 870 million people in developing countries were hungry or malnourished. The FAO estimates that number has increased to 900 million.

Robert Zoellick, the president of the World Bank, urged global leaders to "put food first" and wake up to the need to curb increased price volatility.

"2008 should have been a wake-up call, but I'm not yet sure all the countries in the world that we need to support this have woken up to it," he said.

Indonesia, southeast Asia's biggest economy, last week bought 820,000 tonnes of rice, nearly five times what it had originally set out to buy, lifting rice prices - although rice is one commodity that remains well below its 2008 prices. It has also suspended import duties on rice, soybeans and wheat.

Algeria last week said it had bought almost a million tonnes of wheat, bringing its bread wheat purchases to at least 1.75 million since the start of January, and ordered an urgent speeding up of grain imports, a move aimed at building stocks.

Wayne Gordon, a grains analyst for Rabobank, said: "Some of the demand story is centred around high food prices then tend to lead to hoarding by a number of countries into their strategic reserves.

"So not only are they purchasing for current consumption, but they are also trying to build up strategic reserves, which basically are a bit of a double-barrelled demand event."

Severe drought in the Black Sea last year, heavy rains in Australia and dry weather in Argentina and anticipation of a spike in demand after unrest in north Africa and the Middle East has also helped drive grain prices even higher.

The FAO's Sugar Price Index soared to a record high of 420.2 points from 398.4 points in December.

Its Cereals Price Index, which includes prices of main food staples such as wheat, rice and corn, rose to an average of 244.8 points in January, the highest level since July 2008 but below its peak in April 2008, the data showed.

The Oils Price Index rose to 277.7 points in January from 263.0 points in December and came close to the June 2008 record level.

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*Published on Thursday, February 3, 2011 by [McClatchy Newspapers](#)*

## **Mexico, Cradle of Corn, Finds Its Noble Grain Under Assault**

**by Tim Johnson**

GUELATAO, Mexico — Yank the husks off ears of corn grown in the mountains of southern Mexico, and you may find kernels that are red, yellow, white, blue, black or even variegated.

A detail of a native corn plant or mazorca is shown by Aldo Gonzalez. From climate change to the assault by agricultural corporations like Monsanto, native corn species are under threat. (Heriberto Rodriguez/MCT)

It's only one measure of the diversity of the 60 or so native varieties of corn in Mexico. Another is the unusual adaptation of some varieties to drought, high heat, altitude or strong winds.

Plant specialists describe the native varieties of corn in Mexico as a genetic trove that might prove valuable should extreme weather associated with global warming get out of hand. Corn, one of the most widely grown grains in the world, is a key component of the global food supply. But experts say Mexico's native varieties are themselves under peril — from economics and genetic contamination — potentially depriving humans of a crucial resource.

Farmers are punished at the marketplace for selling native corn, and some types are dwindling from use. Perhaps more significantly, genetically modified corn is drifting southward and mingling with native varieties, potentially bringing unexpected aberrations and even possible extinction.

At stake may be more than just curious and exotic types of corn, grown in small fields alongside beans and then ground into tortillas after harvest.

"With climate change," said Aldo Gonzalez, an indigenous Zapotec engineer with long, flowing black hair who's at the forefront of protecting native varieties, "new diseases could occur, and the only place in the world where we can look for existing varieties that might be resistant is in Mexico.

"These varieties of corn might at some point save humanity."

Corn is not only a crucial crop in Mexico but also a symbol in a nation that's the birthplace of the grain. Maize likely originated from a grass-like, tasseled plant, teosinte, in southern Mexico.

Scientists say humans domesticated corn 7,000 to 10,000 years ago.

In the Popol Vuh, the sacred book of the ancient Mayans, gods create humans out of cornmeal, allowing the "people of corn" to flourish.

Through the centuries, varieties of corn adapted to different soils, altitudes, temperature conditions and water availability, and Gonzalez said the seed stock handed down in his village in this corner of the Sierra Juarez range in central Oaxaca state probably wouldn't grow well just a few miles distant.

"In the sierra here, there are varieties of corn that grow as high as 3,000 meters," Gonzalez said, or nearly 10,000 feet. "There are varieties that can be planted in swampy land or that you can plant in semidesert areas. They may not be very productive but they have allowed people to survive."

Native varieties of corn have fed humans for millennia in Mesoamerica.

"The elders understand the importance of various types of corn because they had their fields in different places under different conditions," said Lilia Perez Santiago, an agricultural engineer who works for a state forestry bureau.

Perez was among the activists behind a petition in 2000 to the Montreal-based Commission for Environmental Cooperation, a panel created under the North American Free Trade Agreement. The petition claimed that genetically modified corn, altered to be pest resistant or herbicide tolerant, had drifted to southern Mexico and begun contaminating native varieties.

Four years later, the panel recommended to Mexico that it suspend modified corn imports and adopt strict labeling rules to allow the public to identify food products that contained such corn. Mexico ignored the recommendations, arguing that the ruling came into conflict with its obligations to open markets under trade pacts.

In late 2009, the government permitted a subsidiary of a U.S. conglomerate, Monsanto, to test genetically modified corn on isolated plots of about 240 acres in Sinaloa and Tamaulipas states in the north.

The head of Monsanto Mexico, Jose Manuel Madero, said at a news conference two weeks ago that the federal government demands further tests before allowing commercial farming of the genetically altered corn.

Madero said modified corn was in use in 20 countries around the world and would help Mexico raise agricultural productivity, cut its reliance on food imports and slash the use of herbicides, thereby protecting the environment.

Several scientists have joined a Mexican grass-roots campaign, known as Sin Maiz No Hay Pais, or There Is No Country Without Corn, to oppose the import or harvest of genetically changed corn.

"We have a nationwide survey that shows genetic contamination in Guanajuato, Yucatan, Veracruz and Oaxaca (states). We also know of some large-scale plantings in Chihuahua," said Elena Alvarez-Buylla Roces, a molecular geneticist at the National Autonomous University of Mexico.

She said lab analysis showed that some native varieties already carried altered genes.

"There is no possibility of coexistence without contamination," Alvarez-Buylla said. "One gene can make a large difference. Do we want to run the risk?"

Black-market brokers already sell genetically modified seed corn to farmers in the north of Mexico, opponents say, and bags of unmarked genetically altered corn have been found in the far south.

"The bags of corn are not secure. During transport, some bags break open and fall out. So there are many possible ways of contamination," Perez said.

The vast majority of farmers of native varieties select seeds each year to save for the next harvest, thus making what Alvarez-Buylla described as "active, dynamic genetic elements" prone to aberrations from genetic drift of altered corn.

Scientists don't know which varieties could prove useful for climate change.

"We don't really know if there is a variety with the most promise. Promise for what?" Alvarez-Buylla said, adding that future climate conditions are unknowable.

While the government maintains seed banks for native corn, Alvarez-Buylla said, "This is not a diversity that can be preserved in a laboratory."

Some farmers already are abandoning certain native varieties, unable to make a living harvesting their small plots.

"They get a price penalty for not growing uniform, large volumes of corn that the tortilla manufacturers want," said Timothy A. Wise, a rural policy expert at the Global Development and Environment Institute at Tufts University in Massachusetts.

Economic realities that make it increasingly unviable for farmers to grow native varieties may be as big a peril as genetic contamination, Wise said.

"If that traditional knowledge isn't passed from generation to generation and those farmers stop farming, then that seed variety is lost for economic reasons," he said.

In Mexico's cities, consumers have little taste for the native varieties of corn in their own country, offering no price advantage for the small farmers who are nurturing the nation's corn diversity.

"In urban areas," Gonzalez said, "they don't know about the varieties. All they know is that the dining room table must have tortillas on it."

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*Published on Wednesday, February 2, 2011 by [The Hill](#)*

## **Scientists ask Congress to Put Aside Politics, Take 'Fresh Look' at Climate Data**

**by Andrew Restuccia**

More than a dozen scientists took aim at climate skeptics in a letter to members of Congress late last week, calling on lawmakers to put aside politics and focus on the science behind climate change.

A remote weather station. "Climate change deniers cloak themselves in scientific language, selectively critiquing aspects of mainstream climate science," the scientists said. "Sometimes they present alternative hypotheses as an explanation of a particular point, as if the body of

evidence were a house of cards standing or falling on one detail; but the edifice of climate science instead rests on a concrete foundation." (Photograph: Cliff Leight/Getty Images)

In the Jan. 28 letter, 18 scientists from various universities and research centers called on lawmakers to take a "fresh look" at climate change.

"Political philosophy has a legitimate role in policy debates, but not in the underlying climate science," the scientists said in the letter. "There are no Democratic or Republican carbon dioxide molecules; they are all invisible and they all trap heat."

The letter comes as cap-and-trade is all but dead on Capitol Hill and Republicans, bolstered by their new majority in the House, have promised to hold hearings on climate science and the administration's climate policies. Republicans and some Democrats are also hoping to block or delay the Environmental Protection Agency's pending climate regulations.

The scientists took aim at climate skeptics. "Climate change deniers cloak themselves in scientific language, selectively critiquing aspects of mainstream climate science," the scientists said. "Sometimes they present alternative hypotheses as an explanation of a particular point, as if the body of evidence were a house of cards standing or falling on one detail; but the edifice of climate science instead rests on a concrete foundation."

They also urged on Congress to hold hearings on climate science in order to form a better understanding of the latest research.

"Congress should, we believe, hold hearings to understand climate science and what it says about the likely costs and benefits of action and inaction," the scientists wrote. "It should not hold hearings to attempt to intimidate scientists or to substitute ideological judgments for scientific ones."

Here is the full letter:

January 28, 2011

To the Members of the U.S. House of Representatives and the U.S. Senate:

The Importance of Science in Addressing Climate Change

As you begin your deliberations in the new 112th Congress, we urge you to take a fresh look at climate change. Climate change is not just an environmental threat but, as we describe below, also poses challenges to the U.S. economy, national security and public health.

Some view climate change as a futuristic abstraction. Others are unsure about the science, or uncertain about the policy responses. We want to assure you that the science is strong and that there is nothing abstract about the risks facing our Nation. Our coastal areas are now facing increasing dangers from rising sea levels and storm surges; the southwest and southeast are increasingly vulnerable to drought; other regions will need to prepare for massive flooding from the extreme storms of the sort being experienced with increasing frequency. These and other consequences of climate change all require that we plan and prepare. Our military recognizes that the consequences of climate change have direct security implications for the country that will only become more acute with time, and it has begun the sort of planning required across the board.

The health of Americans is also at risk. The U.S. Climate Impacts Report, commissioned by the George W. Bush administration, states: "Climate change poses unique challenges to human health. Unlike health threats caused by a particular toxin or disease pathogen, there are many ways that climate change can lead to potentially harmful health effects. There are direct health impacts from heat waves and severe storms, ailments caused or exacerbated by air pollution and airborne allergens, and many climate-sensitive infectious diseases."

As with the fiscal deficit, the changing climate is the kind of daunting problem that we, as a nation, would like to wish away. However, as with our growing debt, the longer we wait to address climate change, the worse it gets. Heat-trapping carbon dioxide is building up in the

atmosphere because burning coal, oil, and natural gas produces far more carbon dioxide than is absorbed by oceans and forests. No scientist disagrees with that. Our carbon debt increases each year, just as our national debt increases each year that spending exceeds revenue. And our carbon debt is even longer-lasting; carbon dioxide molecules can last hundreds of years in the atmosphere.

### The Science of Climate Change

It is not our role as scientists to determine how to deal with problems like climate change. That is a policy matter and rightly must be left to our elected leaders in discussion with all Americans. But, as scientists, we have an obligation to evaluate, report, and explain the science behind climate change.

The debate about climate change has become increasingly ideological and partisan. But climate change is not the product of a belief system or ideology. Instead, it is based on scientific fact, and no amount of argument, coercion, or debate among talking heads in the media can alter the physics of climate change.

Political philosophy has a legitimate role in policy debates, but not in the underlying climate science. There are no Democratic or Republican carbon dioxide molecules; they are all invisible and they all trap heat.

The fruits of the scientific process are worthy of your trust. This was perhaps best summed up in recent testimony before Congress by Dr. Peter Gleick, co-founder and director of the Pacific Institute and member of the U.S. National Academy of Sciences. He testified that the scientific process "is inherently adversarial - scientists build reputations and gain recognition not only for supporting conventional wisdom, but even more so for demonstrating that the scientific consensus is wrong and that there is a better explanation. That's what Galileo, Pasteur, Darwin, and Einstein did. But no one who argues against the science of climate change has ever provided an alternative scientific theory that adequately satisfies the observable evidence or conforms to our understanding of physics, chemistry, and climate dynamics."

### National Academy of Sciences

What we know today about human-induced climate change is the result of painstaking research and analysis, some of it going back more than a century. Major international scientific organizations in disciplines ranging from geophysics to geology, atmospheric sciences to biology, and physics to human health - as well as every one of the leading national scientific academies worldwide - have concluded that human activity is changing the climate. This is not a "belief." Instead, it is an objective evaluation of the scientific evidence.

The U.S. National Academy of Sciences (NAS) was created by Abraham Lincoln and chartered by Congress in 1863 for the express purpose of obtaining objective expert advice on a range of complex scientific and technological issues. Its international reputation for integrity is unparalleled. This spring, at the request of Congress, the NAS issued a series of comprehensive reports on climate change that were unambiguous.

The NAS stated, "Climate change is occurring, is caused largely by human activities . . . and in many cases is already affecting a broad range of human and natural systems." This conclusion comes as no surprise to the overwhelming majority of working climate scientists.

### Climate Change Deniers

Climate change deniers cloak themselves in scientific language, selectively critiquing aspects of mainstream climate science. Sometimes they present alternative hypotheses as an explanation of a particular point, as if the body of evidence were a house of cards standing or falling on one detail; but the edifice of climate science instead rests on a concrete foundation. As an open letter from 255 NAS members noted in the May 2010 Science magazine, no research results have produced any evidence that challenges the overall scientific understanding of what is happening to our planet's climate and why.

The assertions of climate deniers therefore should not be given scientific weight equal to the comprehensive, peer-reviewed research presented by the vast majority of climate scientists.

The determination of policy sits with you, the elected representatives of the people. But we urge you, as our elected representatives, to base your policy decisions on sound science, not sound bites. Congress needs to understand that scientists have concluded, based on a systematic review of all of the evidence, that climate change caused by human activities raises serious risks to our national and economic security and our health both here and around the world. It's time for Congress to move on to the policy debate.

#### How Can We Move Forward?

Congress should, we believe, hold hearings to understand climate science and what it says about the likely costs and benefits of action and inaction. It should not hold hearings to attempt to intimidate scientists or to substitute ideological judgments for scientific ones. We urge our elected leaders to work together to focus the nation on what the science is telling us, particularly with respect to impacts now occurring around the country.

Already, there is far more carbon in the air than at any time in human history, with more being generated every day. Climate change is underway and the severity of the risks we face is compounded by delay.

We look to you, our representatives, to address the challenge of climate change, and lead the national response. We and our colleagues are prepared to assist you as you work to develop a rational and practical national policy to address this important issue.

Thank you for your attention.

Sincerely,

John Abraham, University of St. Thomas

Barry Bickmore, Brigham Young University

Gretchen Daily,\* Stanford University

G. Brent Dalrymple,\* Oregon State University

Andrew Dessler, Texas A&M University

Peter Gleick,\* Pacific Institute

John Kutzbach,\* University of Wisconsin-Madison

Syukuro Manabe,\* Princeton University

Michael Mann, Penn State University

Pamela Matson,\* Stanford University

Harold Mooney,\* Stanford University

Michael Oppenheimer, Princeton University

Ben Santer, Lawrence Livermore National Laboratory

Richard Somerville, Scripps Institution of Oceanography

Kevin Trenberth, National Center for Atmospheric Research

Warren Washington, National Center for Atmospheric Research

Gary Yohe, Wesleyan University

George Woodwell,\* The Woods Hole Research Center

\*Member of the National Academy of Sciences  
# # #

## The GMO Battle: Does Whole Foods Support Monsanto's Genetically Engineered Alfalfa?

By: Rich Ralph | February 1, 2011

<http://www.fitnessgoop.com/2011/02/the-gmo-battle-does-whole-foods-support-monsanto's-genetically-engineered-alfalfa/>

If you're a health nut like I am, you've likely already heard about the allegation that Whole Foods Market has apparently surrendered to the agricultural giant, Monsanto, and agreed to support the introduction of genetically modified alfalfa into our ecosystem. Genetically modified organisms (specifically, those which are being created for the sole purpose of human consumption) is one area of Holistic Nutrition in which I am exceptional passionate.

So the recent turmoil has prompted me to write this piece and hopefully explain the occurrences for those who may otherwise not be aware.

First of all, the controversy brewing in the United States over genetically modified alfalfa is not a new subject. It has simply reached a critical cross-road and the developments that have been unfolding over the last week or so have begun to aim a spotlight on the topic.

Monsanto, a corporation driven purely by financial gain with no regard for the human or environmental impact of its products, continues to push for the introduction of more genetically modified organisms. Why is this important to them? Because they hold the patents to the seeds. But why would farmers want to use these seeds? Because they are genetically modified to be resistant to RoundUp herbicide, meaning the farms can spray their crops to kill off other organisms, but allow the alfalfa to survive. But there's a catch (actually, there's many catches, but I'm just writing an article, not a book). Genetically modified organisms will not properly reproduce for future generations. With traditional farming practices, farmers would breed crops and keep the best seeds in order to have successful subsequent growing years. They would also practice crop rotation techniques to allow the soil to regenerate and replenish the nutrients used by the previous year's crops. But this art is slowly dying as a direct result of the greed of Monsanto.

Once a farmer begins using Monsanto seeds, they are essentially hooked for life. They cannot easily go back to using traditional methods because the cross-contamination of their seeds with those from Monsanto results in an infringement of the patent and trademark laws. Many farmers who have never even used Monsanto seeds have fallen victim to these laws due to the cross-pollination effect of wind, that occurs naturally. Percy Schmeiser is probably the most famous of these farmers. His crops were contaminated when a truck drove passed his property carrying Monsanto seeds. Monsanto came after Percy claiming he was in violation of using their patented product intentionally. Once genetically modified organisms have been unleashed into the environment, there is no way to control them or take them back. They will spread. Nature knows no borders.

As I mentioned, the battle of genetically modified food is not new. Monsanto has been trying to get approval from the USDA to allow them to provide farmers with alfalfa seeds for many years.

Fortunately, there has been enough public protest and companies, such as Whole Foods, to stand up and fight against this abomination. Currently, 93% of soy, 86% of corn, 93% of cotton and 93% of canola (rapeseed) seed planted in the US in 2010 was genetically engineered. If we continue to allow more GM food to be grown, there will be little we can do to avoid consuming it even if we don't want it. Not only will crops become cross-contaminated, but organic livestock (which would otherwise be GMO-free) could be fed genetically modified grains, threatening the integrity of the organic meat and dairy industries. We will inevitably be consuming more gmo in one form or another, without knowledge or consent.

As I mentioned, some companies like Whole Foods have attempted to stand up and be the voice for the public. Whole Foods has always been opposed to all GMO... until recently, it would seem. The USDA put forth a proposal to allow GM alfalfa to finally make its way to farmland. According to Whole Foods, the USDA presented the industry with two options: total deregulation of Genetically Engineered alfalfa, or deregulation with some conditions to facilitate coexistence and protection of non-GE farmers. Wholefoods reluctantly opted for the latter.

The options presented by the USDA were essentially to either allow Monsanto full control to do as they want completely unregulated, or to allow Monsanto to do what they want, but implement some regulation and attempt to control Genetically engineered alfalfa so it can co-exist with non-GMO varieties.

This is where the recent controversy really takes off. Upon hearing this news, the Organic Consumers Association immediately published an article detailing how Whole Foods Market (as well as Organic Valley, and Stonyfield Farm) surrendered to Monsanto and began supporting genetic modification. The information spread through the industry like wildfire. Within hours, Whole Foods was being bombarded with vicious attacks from loyal customers.

In an attempt to explain their position, Whole Foods has released a few statements and responded to countless angry inquiries. Their decision was not one that was made lightly. As I mentioned, Whole Foods has made it very clear that they do not support the USDA's choice to allow for the introduction for Genetically Engineered alfalfa. However, they were forced to make a decision between the 2 options listed above, or else sacrifice their seat at the table and have no voice at all. The position in which Whole Foods was placed was not an easy one.

And so the dilemma continues to move forward. Thousands of angry consumers feel helpless. Many are upset with Whole Foods and argue that the company should have taken a harder stance in their position and not allow the USDA to bully them into making a decision between 2 evils. Why couldn't Whole Foods have simply said "No, we do not support either of these options" and continue fighting the battle against GMO through other means? Or perhaps it was the right decision for them to keep their voice with the USDA so they can continue to fight from the inside? These are incredibly difficult questions to answer and begin to get very political, too.

There are many aspects of genetically modified food which could be discussed. For now, though, this article is merely intended to explain why there seems to be so much controversy surrounding this subject at the moment.

Want to read more:

\* <http://blog.wholefoodsmarket.com/2011/01/no-regulations-ge-alfalfa/>

\* <http://redgreenandblue.org/2011/01/30/stonyfield-farm-takes-a-swing-at-monsanto-and-the-oca/>

\* [http://www.organicconsumers.org/articles/article\\_22449.cfm](http://www.organicconsumers.org/articles/article_22449.cfm)

\* <http://www.organicvalley.coop/community/organicsense/article/article/gm-alfalfa-whats-happening-now>

\* [http://www.facebook.com/vancouvernutritionist#!/note.php?note\\_id=485295751970&id=24922591487](http://www.facebook.com/vancouvernutritionist#!/note.php?note_id=485295751970&id=24922591487)

### **How you can be help and take action:**

Despite the efforts and recommendations of Whole Foods (and other organic companies), the USDA fully deregulated GE alfalfa on January 27, 2011. This means that farmers can plant the Frankenfood with no restrictions. But the fight is not over. President Obama has the power to overrule the USDA's decision, and it's important that he do so in order to protect the organic meat and dairy industry.

Please sign this petition to voice your opinion:

[http://www.change.org/petitions/ask\\_president\\_obama\\_to\\_protect\\_organic\\_and\\_stop\\_monsanto\\_s\\_ge\\_alfalfa](http://www.change.org/petitions/ask_president_obama_to_protect_organic_and_stop_monsanto_s_ge_alfalfa)

Here are some other resources for you to help:

If you're interesting in helping organize or coordinate a Millions Against Monsanto and Factory Farms Truth-in-Labeling campaign in your local community, sign up here:

\* <http://www.organicconsumers.org/monsanto/index.cfm>

To pressure Whole Foods Market and the nation's largest supermarket chains to voluntarily adopt truth-in-labeling practices sign here, and circulate this petition widely:

\* [http://www.organicconsumers.org/articles/article\\_22309.cfm](http://www.organicconsumers.org/articles/article_22309.cfm)

What do you think Whole Foods should have done (or should do now)?

*About the Author:*

*Rich Ralph - As a Registered Holistic Nutritionist in Vancouver, Rich took his passion for health and wellness to the extreme in 2007 when he became the first man to successfully roller-blade across Canada, from Newfoundland to British Columbia, in support of cancer research. He is committed to educating and en...*

*View Rich Ralph, RHN's Website*

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February 1, 2011, 10:28 PM

<http://opinionator.blogs.nytimes.com/2011/02/01/a-food-manifesto-for-the-future/?src=me&ref=general>

## **A Food Manifesto for the Future**

By MARK BITTMAN

For decades, Americans believed that we had the world's healthiest and safest diet. We worried little about this diet's effect on the environment or on the lives of the animals (or even the workers) it relies upon. Nor did we worry about its ability to endure — that is, its sustainability. That didn't mean all was well. And we've come to recognize that our diet is unhealthful and unsafe. Many food production workers labor in difficult, even deplorable, conditions, and animals are produced as if they were widgets. It would be hard to devise a more wasteful, damaging, unsustainable system.

Here are some ideas — frequently discussed, but sadly not yet implemented — that would make the growing, preparation and consumption of food healthier, saner, more productive, less damaging and more enduring. In no particular order:

- \* End government subsidies to processed food. We grow more corn for livestock and cars than for humans, and it's subsidized by more than \$3 billion annually; most of it is processed beyond recognition. The story is similar for other crops, including soy: 98 percent of soybean meal becomes livestock feed, while most soybean oil is used in processed foods. Meanwhile, the marketers of the junk food made from these crops receive tax write-offs for the costs of promoting their wares. Total agricultural subsidies in 2009 were around \$16 billion, which would pay for a great many of the ideas that follow.

- \* Begin subsidies to those who produce and sell actual food for direct consumption. Small farmers and their employees need to make living wages. Markets — from super- to farmers' — should be supported when they open in so-called food deserts and when they focus on real food rather than junk food. And, of course, we should immediately increase subsidies for school lunches so we can feed our youth more real food.

- \* Break up the U.S. Department of Agriculture and empower the Food and Drug Administration. Currently, the U.S.D.A. counts among its missions both expanding markets for agricultural products (like corn and soy!) and providing nutrition education. These goals are at odds with each other; you can't sell garbage while telling people not to eat it, and we need an agency devoted to encouraging sane eating. Meanwhile, the F.D.A. must be given expanded powers to ensure the safety of our food supply. (Food-related deaths are far more common than those resulting from terrorism, yet the F.D.A.'s budget is about one-fifteenth that of Homeland Security.)

- \* Outlaw concentrated animal feeding operations and encourage the development of sustainable animal husbandry. The concentrated system degrades the environment, directly and indirectly, while torturing animals and producing tainted meat, poultry, eggs, and, more recently, fish. Sustainable methods of producing meat for consumption exist. At the same time, we must educate and encourage Americans to eat differently. It's difficult to find a principled nutrition and health expert who doesn't believe that a largely plant-based diet is the way to promote health and attack chronic diseases, which are now bigger killers, worldwide, than communicable ones. Furthermore, plant-based diets ease environmental stress, including global warming.

- \* Encourage and subsidize home cooking. (Someday soon, I'll write about my idea for a new Civilian Cooking Corps.) When people cook their own food, they make better choices. When families eat together, they're more stable. We should provide food education for children (a new form of home ec, anyone?), cooking classes for anyone who wants them and even cooking assistance for those unable to cook for themselves.

\* Tax the marketing and sale of unhealthful foods. Another budget booster. This isn't nanny-state paternalism but an accepted role of government: public health. If you support seat-belt, tobacco and alcohol laws, sewer systems and traffic lights, you should support legislation curbing the relentless marketing of soda and other foods that are hazardous to our health — including the sacred cheeseburger and fries.

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\* Reduce waste and encourage recycling. The environmental stress incurred by unabsorbed fertilizer cannot be overestimated, and has caused, for example, a 6,000-square-mile dead zone in the Gulf of Mexico that is probably more damaging than the BP oil spill. And some estimates indicate that we waste half the food that's grown. A careful look at ways to reduce waste and promote recycling is in order.

\* Mandate truth in labeling. Nearly everything labeled "healthy" or "natural" is not. It's probably too much to ask that "vitamin water" be called "sugar water with vitamins," but that's precisely what real truth in labeling would mean.

\* Reinvest in research geared toward leading a global movement in sustainable agriculture, combining technology and tradition to create a new and meaningful Green Revolution.

I'll expand on these issues (and more) in the future, but the essential message is this: food and everything surrounding it is a crucial matter of personal and public health, of national and global security. At stake is not only the health of humans but that of the earth.

This column appeared in print on February 2, 2011. It will appear in Opinionator regularly.

###

Published on Monday, February 7, 2011 by [OtherWords](#)

## **Key Hand Sanitizer Ingredient May Cause More Harm than Good**

**Triclosan can impair thyroid function, upset estrogen and testosterone levels, and promote problems that could interfere with fetal development.**

by Wenonah Hauter

Every year, U.S. consumers spend an estimated \$1 billion on household and personal care products to shield themselves from a host of unseen germs. Yet many items marketed for their so-called "anti-bacterial" properties contain an ingredient perhaps more insidious than the microorganisms they're designed to combat: triclosan.

Invented by the chemical company Ciba in the 1960s to kill germs in medical settings, triclosan now appears in an array of popular hand-sanitizers, soaps, toothpastes, deodorants, cosmetics, clothing, and children's toys. Yet a mounting body of scientific evidence shows that the chemical

is no more effective at killing germs than plain soap and water. And it may cause more harm than good.

While triclosan has been shown to kill most of the bacteria it encounters, both good and bad, bacteria that survive emerge stronger and thus harder to eradicate. Triclosan can also irritate skin and it has been linked to higher rates of allergies and hay fever among children. Lab studies have found that triclosan can impair thyroid function, upset estrogen and testosterone levels, and promote problems that could interfere with fetal development.

Scientists have also grown critical of the chemical's potential effects on the environment. Triclosan can now be found in rivers, streams, and the sewage sludge that's often used to fertilize crops. It's toxic to algae, phytoplankton, and other aquatic life. Its absorption by these organisms means it can spread through the food chain. Even consumers who avoid triclosan still risk exposure to the chemical.

Our exposure to triclosan is so widespread that it lurks not only in our soap, but in our own bodies. Studies have found traces of it in urine, breast milk, and umbilical cord blood. While these effects are known, the U.S. government has failed to protect consumers from triclosan's potential hazards. The Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) share responsibility for regulating the marketing claims companies make about products containing triclosan, but neither agency restricts use of the chemical in consumer products.

Although the federal government remains apathetic towards triclosan's risks, momentum is building elsewhere to ban the chemical in consumer products. Advocacy groups, such as Food & Water Watch and Beyond Pesticides, submitted a petition to the FDA in July 2009 warning these products don't prevent illness and have the potential to harm human health and the environment.

Last year, Rep. Ed Markey (D-MA)--who at the time served as the House Energy and Environment Subcommittee Chairman--sent letters to the EPA and FDA requesting information about the health and environmental impacts of the chemical. He also urged these agencies to ensure that products containing it live up to their claims of killing germs without adversely affecting human health. Later that year, Representatives Louise Slaughter (D-NY), Betty McCollum (D-MN), and Raul Grijalva (D-AZ) urged the FDA to ban triclosan altogether.

Recently, a class action lawsuit was brought against Dial Corporation, a leading manufacturer of products containing triclosan, for false claims that triclosan-containing products kill 99.9 percent of germs.

Ciba has pulled its EPA registrations for triclosan in some products, and Colgate Palmolive has even removed the chemical from its antibacterial "Softsoap" product line. While these developments are a positive step, they don't go far enough.

In addition to banning triclosan, we need to ensure that a different, equally harmful chemical doesn't replace it. Under current law, chemicals are innocent until proven guilty, constituting a failure to protect consumers and the planet from their potential dangers. We should use triclosan as an example of why we need to reform our regulation of toxic chemicals.

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[www.foodandwaterwatch.org](http://www.foodandwaterwatch.org)

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Published on Friday, February 18, 2011 by [The Independent/UK](#)

## It's Time Man Stopped to Consider Earth's Health

by [Michael McCarthy](#)

Are there any limits on what humans can do? Asked rhetorically, the question invites the smiling, triumphant answer, No!, complete with happy-clappy exclamation mark. But to ask it the other way – that is, to ask it simply, in all seriousness – seems to me something that doesn't happen any more. In fact, the absence of this question seems to be a great gap at the heart of our current creed, which we might term liberal secular humanism, as we approach one of the climaxes of human history, which is the coming clash between humans as a species, and the Earth which is our only home.

I wrote about this three weeks ago, asking how much room there will be in the 21st century world for non-human creatures, using as an example the future fate of insects, which may well have to be sacrificed wholesale, if intensive farming has to be doubly intensified to feed nine billion people by 2050. I wasn't suggesting for a second that anyone should go hungry; but I was suggesting there will be serious consequences for the planet of this intensification, and of many other aspects of the exploding scale of the human enterprise, as it threatens to overwhelm the Earth's natural systems in the decades to come. There was an animated reader response to this, so I should like to return to it.

Climate change is only the most dramatic (and controversial) of these consequences. There are many others visible already, about which there is no dispute, ranging from the worldwide collapse of fish stocks to the disappearance of wildlife abundance from the British countryside. Liberal secular humanism certainly acknowledges these disturbing trends; it is greatly concerned about them, shakes its head sadly and strives to prevent them; but what it does not do, is put the whole picture together.

It does not allow the conclusion to which the rapidly increasing degradations of the natural world are all pointing: that a fundamental conflict is looming between the Earth and Man (I use the term in the biological sense of the species *Homo sapiens*).

This failure to recognise the fundamental nature of the clash will, at the very least, greatly handicap our response to it. I think it arises from our current creed's greatest failing, its deficit of spirituality, by which I mean a failure to see existence as anything other than human-centred. Liberal secular humanism, which you could argue has been our belief system since the Second World War, has a single, honourable aim: to improve human welfare. It wants people everywhere to be happy, and free from want and fear and disease, and to live fulfilled lives. What it doesn't do is allow that there might just be a problem, an intrinsic problem, with people as a species. That is absolute anathema.

You can understand why: poverty is terrible enough without suggesting that people as a whole are in some way flawed. Yet for the Greeks, the founders of our culture, this idea was central to their morality.

There was a continual problem with Man. Man was glorious, almost God-like, and continually striving upwards; yet only the Gods were actually Up There, and if Man tried to get too high, as he often did, the Gods would destroy him. The Gods represented Man's limits.

The principal fault of Oedipus in Sophocles' Oedipus Rex, remember, was not that he murdered his father and married his mother; those were incidentals of his fate. His real fault was that he thought he knew everything, he had answered the riddle of the Sphinx, he was Mr Clever. The Gods showed him that he wasn't (and in the greatest of all tragic ironies, he puts out his eyes to punish himself for having been blind to his true situation, which now he can see).

In the modern consensus, in liberal secular humanism, this spiritual view of Man of having limits, of not being able to do everything he chooses, and of potentially being a problem creature, is missing entirely. There is no trace of it whatsoever. Still less, of course, is there any trace of the more recent, Christian version of it, which is Original Sin. Just the opposite: in our current creed, Man is not Fallen, Man is Good; so, as they used to say of General Motors and America, what's Good for Man is necessarily Good for the Planet.

Except that it isn't. What's Good for Man may wreck the planet, and with the mushrooming expansion of humans numbers, increasingly seems likely to. Yet so forceful is our creed that it stamps on the very formation of the thought that Man may be the Earth's problem child. Suggest it and you will be met with a sigh, and a knowing chuckle; or even more likely, indignant confrontation. So the fundamental conflict which is coming between Us and the Earth, this major moment of history, which evidence everywhere increasingly points to, is not recognised in our dominant belief system; and thus is not addressed.

We humans have always thought ourselves different in kind from other creatures, principally for our use of language and our possession of consciousness. There is another reason, which is becoming clearer; we are the only species capable of destroying our own home (which you might think of as Original Sin in its ecological version).

It seems to me that moral account needs to be taken of this, in the heart of what we believe and understand about ourselves; all the indignant denial of it – as the noble struggle continues to raise so many people from misery to decent life – will not prevent it from being so.

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Published on Wednesday, February 16, 2011 by CommonDreams.org

## Calling All Farmers

by Danielle Nierenberg and Elena Davert

Although cell phones have become our constant companions and personal play-things, in many parts of the world, having access to a cell phone means more than being able to check email or update a Facebook status at a moment's notice. For rural farmers in sub-Saharan Africa, phones can be simple, yet essential, tools for keeping their businesses alive. In an era driven by the immediacy of information, aid programs cannot underestimate the value of cell phones in developing countries as they begin to connect parts of the world initially left out of globalization.

Thanks to the advent of the smart phone, you're probably reading this during your morning commute or as you wait in line at the store, and your "Crackberry" will most likely be the last thing you see before you go to bed. And in Africa, cell phone subscriptions have been increasing steadily as well— nearly fivefold in the past decade—putting phones into the hands of the entrepreneurial farmer. In the most isolated communities, phones have now become the most efficient method to acquire supplies, contact clients, gather information about the market, and promote their product.

Cell phones also play a key role in the farming process by delivering important information to rural farmers who are otherwise isolated from the internet or other forms of expert advice. For example, during the first stages of planting, deciding how much fertilizer to use in the fields can be difficult. Use too little, and the crop may not receive enough nutrients; use too much, and farmers end up wasting money and polluting near-by water sources.

Roland Buresh from the International Rice Research Institute has worked with his colleagues to develop a set of over-the-phone diagnostic questions that help farmers find a happy medium. Farmers can answer questions about the size of their field, last year's yield, state of the land, and so on, using the phone's keypad, while a computer calculates these factors in a standard algorithm. The farmer then receives a brief text message describing the correct type and amount of fertilizer to use. The efficiency would put American Idol's call- and text-in systems to shame.

These types of personalized phone questionnaires have also branched out to include other helpful resources as well. National weather services can now deliver forecasts via text message to help farmers prepare for upcoming weather conditions. Farmers can also find out how much their crop is selling for in the city markets and decide whether or not it is worth it to travel from their village into the city. This prevents farmers from making the trek only to discover that the prices are too low for them to make a profit.

One of the newest mobile innovations, however, has been using cell phones as a banking tool. Mobile Transactions, a financial services company for the "unbanked," allows customers to use their phones like an ATM card. Through this mobile program, farmers without bank accounts can use their phones to pay for supplies, manage agricultural inputs, collect and store information about customers, and build credit. By working with USAID's PROFIT program, Mobile Transactions has also helped agribusiness agents better communicate with individual farmers. This partnership helps agents better understand the farmers they're working with and provides insight into the tools, inputs, and education each farmer and community needs. Instead of reinventing the wheel, funders and the development community may want to reevaluate the potential of resources that so many developing countries are already starting to take advantage of. It can be as simple as providing advice where it is easily accessible, just a speed dial away.

*Danielle Nierenberg is co-project director of the Worldwatch Institute's Nourishing the Planet project ([www.NourishingthePlanet.org](http://www.NourishingthePlanet.org) ).*

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Published on Wednesday, February 16, 2011 by Inter Press Service

## Link Confirmed Between Warming and Heavy Storms

### Report: Global Energy 'Transition' Would Reap Financial Windfall

by Stephen Leahy

UXBRIDGE - Human-induced heating of the planet has already made rainfall more intense, leading to more severe floods, researchers announced Wednesday.

The Energy Report by Ecofys, a leading energy consulting firm in the Netherlands, is the first to show that 95 percent of all energy can be renewable by 2050, while offering comfortable lifestyles for a growing global population and allowing a tripling of the global economy. Two new studies document significant impacts with just a fraction of the heating yet to come from the burning of fossil fuels. Fortunately, another new report shows the world can end its addiction to climate-wrecking fossil-fuel energy by 2050.

"Warmer air contains more moisture and leads to more extreme precipitation," said Francis Zwiers of the University of Victoria.

Extreme precipitation and flooding over the entire northern hemisphere increased by seven percent between 1951 and 1999 as a result of anthropogenic global warming. That represents a "substantial change", Zwiers told IPS, and more than twice the increase projected by climate modeling.

Zwiers and Xuebin Zhang of Environment Canada used observations from over 6,000 weather stations to measure the impact of climate warming on the intensity of extreme precipitation for the first time. The study was published Wednesday in the journal Nature.

The planet is currently 0.8 degrees C hotter from the burning of fossil fuels. However, global temperatures had not yet started to increase in 1951, the first year of rainfall data Zwiers and Xuebin examined. By 1999, global temperatures had climbed by about 0.6 degrees C. The average temperature increase over that 50-year period is relatively small compared to the present but major impacts have been documented in terms of storm and flood damage even with this small increase in temperatures.

This suggests that the Earth's climatic system may be more sensitive to small temperature increases than previously believed.

The global costs of extreme weather events shot up from less than five billion dollars a year during the 1950s to 45 billion dollars a year during the 1990s, according to Munich Re, a major reinsurance company in Germany. Not all of this increase is due to climate change. Some is due to population and infrastructure growth and better disaster reporting. However, the number of significant floods has tripled in the past 30 years.

Those costs came during a time when the planet was cooler than present - a period of "relatively weak anthropogenic forcing", Zwiers said. But as temperatures climbed, there was a sharp increase in intense rainfall events during the 1990s, suggesting an acceleration in

flooding and damaging rainfall. Zwiars said it is too soon to know if the 1990s increase represents a new trend.

Global temperatures are guaranteed to increase further from today's 0.8 degrees C to at least 1.0 degree C by 2020. This will boost the amount of water vapour and heat in the atmosphere, which are the fuel for even more and harder rainfall events.

Scientists have long known extreme events would increase with a hotter planet but have maintained that a single flood or storm could not be explicitly linked to climate change. Now another study published Wednesday in *Nature* lays odds they've found the "smoking gun" behind Britain's severe flooding in 2000.

During the fall of 2000, the UK experienced some of its most damaging floods and wettest weather since the first records began in 1766. Using the distributed computing power from thousands of personal computers around the world, researchers at Oxford University and others determined that human emissions of greenhouse gases had more than doubled the odds of the devastating 2000 flood.

"We simulated a parallel world in which there were no greenhouse gas emissions," said lead researcher Pardeep Pall of Oxford University.

Thousand of computer simulations were tested against reality and the results revealed that climate change more than doubled the odds of the 2000 flooding, Pall said at a press conference.

"This study was 20 times more demanding than anything we've tried before. It is not easy to precisely say what caused what when it comes to a single weather event," added Myles Allen of Oxford University.

The UK Met Office is developing new methods for assessing extreme weather events and determining the factors that caused them in hopes of improving predictions. In future, the Met Office may be able to predict such events and explain why they happened, said Allen. With human-induced heating of the planet expected by many to reach at least 2.4 degrees C in the coming decades, extreme events of the recent past will seem very tame indeed. However, this calamitous future can be avoided with a rapid transition to a renewable global energy system.

A detailed new study demonstrates that 95 percent of global energy needs can be met with renewables utilising today's technologies alone.

The Energy Report by Ecofys, a leading energy consulting firm in the Netherlands, is the first to show that 95 percent of all energy can be renewable by 2050, while offering comfortable lifestyles for a growing global population and allowing a tripling of the global economy.

"We can do this by using and improving the technologies that are already at hand," said Manon Janssen, CEO of Ecofys. "It is a business opportunity, as much as it is a technological challenge."

Ecofys spent two years preparing the report in partnership with the World Wildlife Fund. Paramount will be major increases in energy efficiency in all sectors so that by 2050 energy use is 15 percent less than the energy use in 2005. And this is all possible with existing technology,

the report noted. Emissions from burning fossil fuels for energy will fall more than 80 percent by 2050, offering a real chance of keeping global temperatures below 2 degrees C, the report said. While the transition will be costly, the savings from lower energy use will amount to a five- to six-trillion-dollar "windfall" for humanity by 2050.

The move to renewable energy is already well underway in places like California, where the cost of generating solar energy is now as cheap as fossil fuels, said Justin Gerdes, a California journalist specialising in energy issues.

"Renewables already benefit from lower upfront costs to install - especially onshore wind - compared to huge one- gigawatt fossil fuel or nuclear plants," Gerdes said. "And, then, of course, the renewables have no cost for fuel."

And this is happening in the U.S., where climate change is a non-issue politically and there is no price or cap on carbon emissions.

"In short, this can happen," Gerdes said.

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Published on Sunday, February 20, 2011 by Inter Press Service

## **Permafrost Melt Soon Irreversible Without Major Fossil Fuel Cuts**

by Stephen Leahy

UXBRIDGE - Thawing permafrost is threatening to overwhelm attempts to keep the planet from getting too hot for human survival.

Ice melts in the source region of China's Yellow River outside of Maduo on the Qinghai-Tibet plateau, known as the "Roof of the World", in 2010. Global warming could cause up to 60 percent of the world's permafrost to thaw by 2200 and release huge amounts of carbon into the atmosphere that would further speed up climate change, a study released Wednesday warned. Without major reductions in the use of fossil fuels, as much as two-thirds of the world's gigantic storehouse of frozen carbon could be released, a new study reported. That would push global temperatures several degrees higher, making large parts of the planet uninhabitable.

Once the Arctic gets warm enough, the carbon and methane emissions from thawing permafrost will kick-start a feedback that will amplify the current warming rate, says Kevin Schaefer, a scientist at the National Snow and Ice Data Center (NSIDC) in Boulder, Colorado. That will likely be irreversible.

And we're less than 20 years from this tipping point. Schaefer prefers to use the term "starting point" for when the 13 million square kilometres of permafrost in Alaska, Canada, Siberia and parts of Europe becomes a major new source of carbon emissions.

"Our model projects a starting point 15 to 20 years from now," Schaefer told IPS.

The model used a 'middle of the road' scenario with less fossil fuel use than at present. Even at that rate, it found that between 29 and 60 percent of the world's permafrost will thaw, releasing an extra 190 gigatonnes of carbon by 2200. The study is the first to quantify when and how much carbon will be released and was published this week in the meteorological journal *Tellus*.

"The amount of carbon released is equivalent to half the amount of carbon that has been released into the atmosphere since the dawn of the industrial age," Schaefer said.

The additional carbon from permafrost would increase the average temperatures in the Arctic by eight to 10 degrees C, the study reported. Not only would this utterly transform the Arctic, it would also increase the planet's average temperature by about three degrees C, agrees Schaefer.

And this increase would be on top of the three to six degrees C from continuing to burn fossil fuels over the next 100 years. The Earth's normal average temperature is 14C, so heating up the entire planet another six to nine degrees C would be like increasing our body temperatures from the normal 37C to a deadly fever of 53 to 60 degrees C.

As catastrophic as all this is, Schaefer acknowledges his study underestimates what is likely to happen. The model does not measure methane releases, which are 40 times as potent in terms of warming as carbon. Methane could have a big impact on temperatures in the short term, he says.

"There would be a lot of methane emissions. We're working on estimating those right now," he said.

The model also does not include emissions from the large region of underwater permafrost. IPS previously reported that an estimated eight million tonnes of methane emissions are bubbling to the surface from the shallow East Siberian Arctic shelf every year.

If just one percent of the Arctic undersea methane (also called methane hydrates) reaches the atmosphere, it could quadruple the amount of methane currently in the atmosphere, Vladimir Romanovsky of the University of Alaska in Fairbanks previously told IPS.

Nor does the model account for a process called thermokarst erosion, acknowledges Schaefer. This is a widely observed process where meltwater erodes the permafrost and exposes it to warmer temperatures and speeding up the thaw. "We can't model that yet but it could contribute to major releases of carbon and methane," he said.

None of this has been taken into account by politicians and policy makers looking to cut humanity's carbon emissions with the agreed on target of keeping global temperatures below two degrees C.

Nor is there a wide appreciation for the fact there is no 'reverse gear'. Even if all fossil fuel use stopped today, global temperatures would continue to rise and permafrost would thaw for another 20 to 30 years, Schaefer estimates. And once the permafrost carbon is released, "there is no way to put it back into the permafrost".

Even if there was a way to lower the Earth's human-induced fever, it would take a century or more for thawed permafrost to reform, he said.

Permafrost has been warming and thawing since the 1980s. A 2009 study reported that the southernmost permafrost limit had retreated 130 kilometres over the past 50 years in Quebec's James Bay region. The major loss of sea ice in the Arctic allows the Arctic Ocean to become much warmer, which in turn has increased temperatures of coastal regions an average of three to five degrees C warmer than 30 years ago.

More ominously, large parts of the eastern Arctic were 21C higher above normal for a month in the dead of winter this year, as previously reported by IPS.

However, while on the edge of a most dangerous precipice, there is a safer path available. A new energy analysis demonstrates that fossil fuel energy could be virtually phased out by 2050 while offering comfortable lifestyles for all. The Energy Report by Ecofys, a leading energy consulting firm in the Netherlands, shows that humanity could meet 95 percent of energy needs with renewables utilising today's technologies.

"The Energy Report shows that in four decades we can have a world of vibrant economies and societies powered entirely by clean, cheap and renewable energy and with a vastly improved quality of life," said WWF Director General Jim Leape.

WWF worked on the report with Ecofys.

"The report is more than a scenario – it's a call for action. We can achieve a cleaner, renewable future, but we must start now," Leape said in a statement.

# # #

Published on Wednesday, February 23, 2011

## Local and Organic Food and Farming: The Gold Standard

by [Will Allen](#) and [Ronnie Cummins](#) and [Kate Desterberg](#)

More and more consumers and corporations are touting the benefits of “local” foods, often described as “sustainable,” “healthy,” or “natural.” According to the trade publication, Sustainable Food News, local as a marketing claim has grown by 15 percent from 2009 to 2010, and it's likely that number will increase in the coming year.<sup>1</sup> Even supermarket giant and junk food purveyor Wal-Mart, with total sales in 2009 of \$405 billion, has jumped on the bandwagon. It has pledged to reduce food miles and increase its purchase of “local” fruits and vegetables to include 9% of its produce by 2015. <sup>2</sup>

Those who espouse local food are now called “locavores.” But, beyond the greenwashing and co-opting of the term by Wal-Mart, the supermarket chains, and factory farms and feedlots, what does “local” food and farming really mean? What is the impact of non-organic local food and farming on public health, nutrition, soil, water, marine life, biodiversity, and climate?

Jessica Prentice coined the term locavore for World Environment Day in 2005 to promote local eating, and local consumption in general. Her goal was to challenge people to obtain as much food as possible from within a one hundred mile radius. Her success was more than she imagined. In 2007 the New Oxford American Dictionary selected “locavore” as its word of the year. Local had arrived!

Then, the highly respected author Barbara Kingsolver published *Animal, Vegetable, Miracle* emphasizing the value of eating locally, and the concept spread like wildfire. <sup>3</sup> While the eat local/buy local concept is increasingly popular, looking beyond the label or the marketing claims, it is obvious that “local” is a rather fuzzy concept, lacking in most cases a concrete definition or a set of principles and guidelines.

By contrast, the organic system of food production has legal definitions, a handbook of rules, permitted and prohibited substances, acceptable practices, an inspection process, and labels to

guide the consumers. Local has none of these guidelines, rules, inspections or protections. It has the cachet of popularity without any guarantee of safety or sustainability.

Some chemical farmers, and even poultry, egg, pork, dairy, or beef operators feeding their animals genetically modified (GMO) grains, claim that local is better than organic, because it stimulates the local economy and reduces the distance (food miles) that food travels between the farm or feedlot and your table. But does so-called local farming, utilizing toxic pesticides, GMO seeds and feed, chemical fertilizers, and animal drugs mean that the food is safe and sustainable? Obviously not. We believe that there shouldn't have to be a choice between local and safe organic; but rather that consumers should look for food that is not only local or regionally produced, but food that is also organic and therefore safe and sustainable. Local and chemical, or local using GMO seeds and feed, is nothing more than greenwashing. Organic and local is the new gold standard!

The locavore phenomenon brings up several important concerns including: food miles, chemically grown food, greenhouse gas emissions, factory farming, genetically engineered animal feed, and the value of organic labeling. All of these crucial issues relate to the central question: what should be in your market basket?

Does Local Mean Safe?

Despite the increasing popularity of the eat-local movement, many people do not understand that "local" does not necessarily mean that food is organic or even safe. Chemically grown foods produced locally may be cheaper than organic and may aid the local economy. But they pollute the ground water, kill the soil food web, and decrease the soil's ability to sequester climate-destabilizing greenhouse gasses, broadcast pesticides into the air, poison farmworkers, and incrementally poison consumers with toxic residues on their foods. "Local" pesticides, genetically modified organisms (GMOs), and chemical fertilizers are just as poisonous as those used in California, Mexico, Chile, or China.

Frequently, local chemical farmers claim that they only use "less toxic" pesticides or herbicides such as Monsanto's Roundup. Unfortunately, "less toxic" is a dangerously relative term! Roundup is a powerful weed-killer, and is now sprayed so heavily on the nation's 150 million acres of genetically engineered crops that it is poisoning our water supplies, killing the soil, and creating superweeds that can only be killed with super-toxic herbicides such as 2,4 D, arsenic and paraquat. Farmers in the U.S. have used everything from arsenic, lead, cyanide, fluorine, DDT, and nerve poisons since the 1860s, and they still use massive amounts. More than 80% of all the pesticides currently used in vegetable, fruit, and flower production are nerve poisons that were used on insects and also on concentration camp victims during the first and second World Wars.

### **Are Pesticides Poison?**

Organophosphate pesticides or nerve poisons have been linked to Attention Deficit Hyperactivity Disorder (ADHD) in children. Organophosphate nerve poisons were found in the urine and saliva of Seattle preschool children who were eating conventional (chemical) and local food from off the shelf. When the kids stopped eating chemical food and ate organic food the organophosphates disappeared from their saliva and urine. When the children returned to the chemical diet, the nerve poisons showed up in their urine and saliva again.<sup>4</sup> Nerve poisons, whether they are used on foods that are locally, nationally, or internationally produced and distributed are dangerous hazards, especially for growing children and at-risk populations. They need to be driven off the market, as soon as possible.

Does "Pesticide Free" Mean Safe or Sustainable?

Often, growers at farmers markets will say, "I don't use pesticides, I only use chemical fertilizers." Sadly, what many people do not realize is that chemical fertilizers are extremely hazardous. A high percentage of these fertilizers seep into our wells and municipal drinking

water, or else run off into our streams, rivers, and finally end up in the ocean. Two-thirds of the nation's drinking water is contaminated with hazardous levels of nitrogen fertilizer. Non-organic farmers and feedlot operators are literally poisoning us and our children with the collateral damage of chemical fertilizers. High nitrogen and phosphorous levels in rivers and oceans kill fish and other marine wildlife. When this enormous amount of excess nitrogen enters the ocean it causes dead zones and oceanic acidification.

Some "pesticide free" growers will argue that since they only use chemical fertilizers, their produce is cleaner. Their food may not have high pesticide residues. But, remind them that cleaner isn't clean! And inform your local chemical farmer that their toxic fertilizer is polluting our drinking water, trashing the oceans, killing the soil's ability to sequester greenhouse gases, destabilizing the nitrogen cycle of plants, and emitting billions of pounds of deadly greenhouse gasses every year. Synthetic nitrogen fertilizer is perhaps the most potent greenhouse gas emitter in the U.S. To produce each pound of fertilizer, 6.6 pounds of nitrous oxide (N<sub>2</sub>O) are emitted. Nitrous oxide accounts for a full ten percent of all climate-destabilizing greenhouse gases.

Nitrous oxide is extremely hazardous. It depletes the ozone layer in the upper atmosphere (thereby increasing skin cancer for humans). It increases ozone pollution levels at the ground level (fueling the current epidemic of asthma and respiratory diseases.) Poisonous nitrate fertilizers leaching into our rural wells and municipal drinking water supplies (where it combines into a super-toxic brew with pesticides) are a biological time bomb, a major cause of cancer, infertility, hormone disruption, and birth defects.

Perhaps most deadly of all, nitrate fertilizer kills our living soils and soil microorganisms, decreasing their ability to sequester (through plant photosynthesis) excess greenhouse gasses in the soil. Even after a century of industrial farmers dumping hundreds of billions of pounds of chemical fertilizers on farmlands, our living soils still contain two to three times as much carbon as the atmosphere, with the practical capacity to clean and safely sequester a considerable amount of greenhouse gases over the next 40 years. In other words, our living soils can save us—but only if we stop the widespread use of nitrate fertilizers, GMO crops, and pesticides and replace these deadly chemicals and mutant organisms with organic compost, compost tea, and cover crops, augmented by the biological power and fertility generated by organic, carefully planned, high-density rotational grazing of animals.

The energy-intensive manufacturing of nitrate fertilizers requires the use of massive amounts of natural gas, a resource in short supply, that will increasingly be needed to take us through the transition from fossil fuels to alternative energy. We can no longer afford to waste natural gas in order to uphold the profits of Cargill, Monsanto, and Food Inc. We can no longer afford to have chemical-intensive food and farming greenwashed as "local."

U.S. non-organic farmers used an average of 24 billion, 661 million pounds of synthetic nitrogen fertilizer per year from 1998 to 2007. That means that more than one hundred sixty-two billion, seven hundred sixty-two million pounds of nitrous oxide (N<sub>2</sub>O) are released each year in the process of manufacturing that fertilizer. 5 Also released is the CO<sub>2</sub> from transporting the fertilizer. Since 70% of synthetic nitrogen is imported, the transportation cost is increasingly higher each year. Beyond production and transportation emissions, enormous quantities of N<sub>2</sub>O get released when the 24.66 billion pounds of synthetic nitrogen is applied to farmland every year. Nitrous oxide is 310 times more damaging as a greenhouse gas than carbon dioxide. Every year, U.S. farmers use enough synthetic nitrogen to fill more than 12,330, railroad boxcars with a capacity of 200,000 pounds each.

Consequently, farmers and supermarkets that tout their products as local and pesticide-free, while still using synthetic fertilizers, are engaged in greenwashing. Non-organic farms poisoning the environment with chemical fertilizers are a far cry from safe or environmentally friendly, even though they promote themselves as pesticide-free and local.

**"Local" Factory Farms and CAFOs: Destroying Public Health and Climate Stability**

According to Wal-Mart and Food Inc.'s definition of local (anything produced within a 400-mile radius), meat, dairy, and eggs, reared on a diet of GMO grains, slaughterhouse waste, and antibiotics, qualify as "local." According to the USDA, the majority of the nation's non-organic meat, dairy and eggs are now produced on massive factory farms, euphemistically called Confined Animal Feeding Operations (CAFOs). 6 CAFOs are typically overcrowded, filthy, disease ridden, and inhumane, not only for the hapless animals imprisoned inside their walls, but also for the typically non-union, exploited, immigrant workers who toil in these hellish facilities. According to the EPA, the legal definition of a CAFO is a farm or a feedlot where large numbers of animals are confined and reared, beef – 1000 head; dairy – 700 head; swine – 2500 pigs weighing more than 55 lbs; poultry – 125,000 broilers or 82,000 laying hens or pullets. <http://www.answers.com/topic/afo-cafo#ixzz19jX45FZM>

Unfortunately meat, dairy, or eggs coming from CAFOs in North America are not required by law to be labeled as such. Greenwashing CAFO products as "natural" or "local" is a major source of profits for Wal-Mart, Cargill, Conagra, Perdue, Land O' Lakes, Kraft, McDonald's, KFC, Monsanto and chemical/GMO farmers and ranchers. Organic consumers, farmers, and retailers need to educate the public about the hazards and inhumanity of factory farms and CAFOs. These animal factories, where GMO feed and drugs are force-fed to most of the nation's livestock and poultry, are not only poisoning consumers, but are also generating massive amounts of climate-destabilizing greenhouse gases, especially methane, which is 72 times more destructive per ton than CO<sub>2</sub>. Methane (CH<sub>4</sub>) pollution is responsible for approximately 14% of human-induced global warming.

Where does methane pollution come from? Methane pollution mainly comes from factory farms and the overproduction of non-organic meat, dairy, and eggs, from throwing hundreds of millions of tons of rotting food, paper, and lawn wastes into landfills (instead of composting them for use on farms, ranches, and gardens), and the destruction of wetlands for shrimp and fish farms, industrial agriculture, chemical-intensive rice farming, and urban development or sprawl. How do we get rid of excess, climate-destabilizing methane? By purchasing organic foods, especially those produced by family farmers and ranchers in our regions, and by increasing consumer awareness that it is unhealthy and inhumane to purchase factory farm foods. It is becoming increasingly clear that buying or consuming meat, dairy, or eggs that come from a factory farm or CAFO is an ethical abomination and a climate crime. While calling for a boycott of factory-farmed products we must deliver the positive message that the organic, humane, healthy, food producing small farms and ranches of North America are actually greenhouse gas sequestration centers, arguably our most important allies in cooling off the planet.

Millions of consumers are still "in the dark" about how "conventional" foods--especially the cheaper brands of animal products, processed, fast, and fake foods--are produced. We must educate the public about the need to fight for Truth-in-Labeling so that CAFO products, derived in great measure from Monsanto's GMO crops, are no longer greenwashed as "local" or "natural."

### **Food Miles and Greenhouse Gas Emissions**

Food miles are the average miles that food travels from the farm to the consumer. Since more than 80% of the U.S. grocery purchases are now processed foods, a huge percentage of the carbon or fossil fuel footprint of industrial agriculture comes from transporting factory farm crops or animals to the processing plant or slaughterhouse and then transporting these processed foods from the processing plant to the dinner table via the supermarket. By reducing the processed foods in our diet we can greatly reduce the food miles or carbon footprint for which our households are responsible, since the shorter the distance food travels, the lower the greenhouse gas emissions.

Part of the locavore ethic is to get people to eat from their own food shed, to save energy, reduce greenhouse gas emissions, and stimulate the local economy. But, real "local" is also about stimulating a return to in-home food preparation, an appreciation for taste, and the joy in

cooking—and eating. As folks begin to appreciate the taste of locally grown fresh organic foods, their dependence on processed foods from afar usually dwindles.

The 20% of the U.S. diet that is not processed food includes fresh fruits and vegetables, dairy products, farm raised meats, eggs, whole grains, cold pressed oils, raw honey, syrup, natural sugars, etc. Though only 20% of the total food budget, the sales of non-processed food are huge! Unfortunately, production of non-processed foods is largely regional with production concentrated on the southern half of both coasts and the southwest. So, even a majority of the fresh foods come from afar. This requires lots of trucking and refrigeration to get the food to local markets the across the country.

“Fresh food miles” indeed contribute to the high CO<sub>2</sub> emissions from the U.S. food system, but these whole foods are certainly not the major greenhouse gas contributor in our food system. That dubious honor belongs to factory-farmed meat, eggs, and milk, which generate 30 to 50% of all of the U.S. greenhouse gasses, more than industry and fossil fuels combined. 7 Fortunately, locally and nationally, farmers have worked out strategies of how to grow fresh foods in the middle of the winter with better technology and a minimum of heat, even in extremely cold places like Maine, Vermont, Minnesota, and Montana. Consequently, farmers and consumers are growing and storing food throughout the year so that they are not responsible for so many food miles on their tables.

Our thesis is that a majority of our food miles could be chopped off if we prepare more of our food from local ingredients. But, that begs another question. What kind of local ingredients? Chemical and Local versus Organic and Local

Some growers and brokers argue that local, chemically grown is better than fresh organic, because so much that is organic travels long distances from the two coasts. If they are talking about comparing supermarket fresh organic with fresh chemically grown local, we should still choose supermarket organic, because, whether they are used locally or nationally, pesticides and fertilizers are more dangerous and deadly to your health and the health of the environment than chemically-free organic foods transported from outside your local region.

Chemical farmers are not inspected or reprimanded by the federal or state governments as to their use or abuse of pesticides or fertilizers unless there is an accident, whether they are local farmers or factory farmers from California, Florida, or China. The only way the abusers are caught is when there is a fish kill, a labor poisoning, a recall after multiple poisonings, or some other notable injury as a result of a spill, overuse, or carelessness.

By contrast, organic growers are inspected every year and can be inspected at any time the certifying agency or the federal government (USDA) deems it appropriate. These are the rules in California, Vermont, Chile, and all countries that grow and market certified organic products. Because organic farms are inspected (at least once a year), and their soil and water checked for toxins, consumers can be secure that the organic products are the safest on the market.

Consumers can be confident that organic food does not contain poisonous pesticide residues, did not poison farmworkers, and was not grown with a fertilizer that trashed the soil, the water, the atmosphere, and the oceans.

Organic farming is a set of techniques and strategies that encourage the life to come back into the soil and into our food. Chemical fertilizers kill soil life and inhibit the accumulation of organic matter (plant residues in the soil). Chemical food has less life force because chemicals kill soil microorganisms and earthworms. Organic matter is critical to organic farmers because nutrients cling to organic matter, so the plant roots can efficiently find and mine nutrients and water at those spots.

Organic farmers add nutrients such as lime, rock phosphate, potash, and sulfur in an effort to get the soil balanced so that the maximum amount of all nutrients and water are available to foraging plant roots. This soil-balancing act is a constant process. On light and sandy soils, organic matter must be replaced every year by growing a fertilizer crop and by adding small amounts of compost, which has billions of soil microorganisms. These critters go to work

breaking down the organic matter and making it available to plant roots while constantly adding to the fertility by defecating the digested organic matter (and they work 24-7, not 9 to 5). To control pests, organic farmers rotate their crops, so that pests do not build up from continuous monocropping. Instead of toxic pesticides, organic growers use beneficial insects as predators and parasites on pests. They use bacterial sprays for certain worms and beetles. They spray clay on their apples and other fruits. They use insect traps and lures. And, they use trap crops that the insects like better than the main crop. They use disease resistant crops that are immune or less prone to disease. And, they monitor their fields often so that they can spot problems early.

### **The Gold Standard: Local and Organic**

Local organic food and farming are the gold standard. Organic farmers gladly adhere to a set of regulations, use non-toxic products, and accept the need to be scrutinized by an independent third party inspector. Why? Because, regulation of food safety is essential to guaranteeing consumers that the farmer has their health and well being at the center of his or her business plan. The organic regulatory process is neither easy nor happily anticipated by the farmer. But it is necessary! It is our covenant with our customers.

There are no regulations governing "local" chemically grown or GMO-derived food. Anything goes! Nobody is inspecting the farm! Nobody is watching the store! As customer, you must also be the regulator of non-organic food. Instead of depending on a regulator, you as customer should ask the "local" growers what they used as a fertilizer source, how they controlled pests and diseases, and what chemicals they used to stimulate yield.

When the local chemical grower tells you that local is better than organic, tell them that they should switch to organic so that you can trust their food to be safe, clean, inspected, and environmentally friendly. Local food is not the gold standard, and may not even be safe. Local-organic is the gold standard.

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## Climate Change and Agriculture: Biodiverse Ecological Farming Is the Answer, Not Genetic Engineering

by Vandana Shiva

Industrial globalised agriculture is heavily implicated in climate change. It contributes to the three major greenhouse gases: carbon dioxide (CO<sub>2</sub>) from the use of fossil fuels, nitrogen oxide (N<sub>2</sub>O) from the use of chemical fertilizers and methane (CH<sub>4</sub>) from factory farming. According to the Intergovernmental Panel on Climate change (IPCC), atmospheric concentration of CO<sub>2</sub> has increased from a pre-industrial concentration of about 280 parts per million to 379 parts per million in 2005. The global atmospheric concentration of CH<sub>4</sub> has increased from pre-industrial concentration of 715 parts per billion to 1774 parts per billion in 2005. The global atmospheric concentration of N<sub>2</sub>O, largely due to use of chemical fertilizers in agriculture, increased from about 270 parts per billion to 319 parts per billion in 2005.

Industrial agriculture is also more vulnerable to climate change which is intensifying droughts and floods. Monocultures lead to more frequent crop failure when rainfall does not come in time, or is too much or too little. Chemically fertilized soils have no capacity to withstand a drought. And cyclones and hurricanes make a food system dependent on long distance transport highly vulnerable to disruption.

Genetic engineering is embedded in an industrial model of agriculture based on fossil fuels. It is falsely being offered as a magic bullet for dealing with climate change.

Monsanto claims that Genetically Modified Organisms are a cure for both food insecurity and climate change and has been putting the following advertisement across the world in recent months.

9 billion people to feed.  
A changing climate  
Now what?  
Producing more  
Conserving more  
Improving farmers lives  
That's sustainable agriculture  
And that's what Monsanto is all about.

All the claims this advertisement makes are false.

GM crops do not produce more. While Monsanto claims its GMO Bt cotton gives 1500 Kg/acre, the average is 300–400 Kg/acre.

The claim to increased yield is false because yield, like climate resilience is a multi-genetic trait. Introducing toxins into a plant through herbicide resistance or Bt. Toxin increases the “yield” of toxins, not of food or nutrition.

Even the nutrition argument is manipulated. Golden rice genetically engineered to increase Vitamin A produces 70 times less Vitamin A than available alternatives such as coriander leaves and curry leaves.

The false claim of higher food production has been dislodged by a recent study titled, [Failure to Yield](#) by Dr. Doug Gurian Sherman of the Union of Concerned Scientists, who was former biotech specialist for the U.S. Environmental Protection Agency and former adviser on GM to the U.S Food and Drug Administration. Sherman states, "Let us be clear. There are no commercialized GM crops that inherently increase yield. Similarly there are no GM crops on the market that were engineered to resist drought, reduce fertilizer pollution or save soil. Not one."

There are currently two predominant applications of genetic engineering: one is herbicide resistance, the other is crops with Bt. toxin. Herbicides kill plants. Therefore they reduce return of organic matter to the soil. Herbicide resistant crops, like Round Up Ready Soya and Corn reduce soil carbon, they do not conserve it. This is why Monsanto's attempt to use the climate negotiations to introduce Round Up and Round Up resistant crops as a climate solution is scientifically and ecologically wrong.

Monsanto's GMOs, which are either Round Up Ready crops or Bt toxin crops do not conserve resources. They demand more water, they destroy biodiversity and they increase toxics in farming. Pesticide use has increased 13 times as a result of the use Bt cotton seeds in the region of Vidharbha, India.

Monsanto's GMOs do not improve farmers' lives. They have pushed farmers to suicide. 200,000 Indian farmers have committed suicide in the last decade. 84% of the suicides in Vidharbha, the region with highest suicides are linked to debt created by Bt-cotton. GMOs are non-renewable, while the open pollinated varieties that farmers have bred are renewable and can be saved year to year. The price of cotton seed was Rs 7/kg. Bt cotton seed price jumped to Rs 1,700/kg.

This is neither ecological nor economic or social sustainability. It is eco-cide and genocide.

Genetic engineering does not "create" climate resilience. In a recent article titled, "GM: Food for Thought" (Deccan Chronicle, August 26, 2009), Dr. M.S. Swaminathan [wrote](#) "we can isolate a gene responsible for conferring drought tolerance, introduce that gene into a plant, and make it drought tolerant."

Drought tolerance is a polygenetic trait. It is therefore scientifically flawed to talk of "isolating a gene for drought tolerance." Genetic engineering tools are so far only able to transfer single gene traits. That is why in twenty years only two single gene traits for herbicide resistance and Bt. toxin have been commercialized through genetic engineering.

Navdanya's recent [report](#) titled, "Biopiracy of Climate Resilient Crops: Gene Giants are Stealing farmers' innovation of drought resistant, flood resistant and salt resistant varieties," shows that farmers have bred crops that are resistant to climate extremes. And it is these traits which are the result of millennia of farmers' breeding which are now being patented and pirated by the genetic engineering industry. Using farmers' varieties as "genetic material," the biotechnology industry is playing genetic roulette to gamble on which gene complexes are responsible for which trait. This is not done through genetic engineering; it is done through software programs like athlete. As the report states, "Athlete uses vast amounts of available genomic data (mostly public) to rapidly reach a reliable limited list of candidate key genes with high relevance to a

target trait of choice. Allegorically, the Athlete platform could be viewed as a 'machine' that is able to choose 50–100 lottery tickets from amongst hundreds of thousands of tickets, with the high likelihood that the winning ticket will be included among them.”

Breeding is being replaced by gambling, innovation is giving way to biopiracy, and science is being substituted by propaganda. This cannot be the basis of food security in times of climate vulnerability.

While genetic engineering is a false solution, over the past 20 years, we have built [Navdanya](#), India's biodiversity and organic farming movement. We are increasingly realizing there is a convergence between objectives of conservation of biodiversity, reduction of climate change impact and alleviation of poverty. Biodiverse, local, organic systems produce more food and higher farm incomes, while they also reduce water use and risks of crop failure due to climate change.

Biodiversity offers resilience to recover from climate disasters. After the Orissa Super Cyclone of 1998, and the Tsunami of 2004, Navdanya distributed seeds of saline resistant rice varieties as “Seeds of Hope” to rejuvenate agriculture in lands reentered saline by the sea. We are now creating seed banks of drought resistant, flood resistant and saline resistant seed varieties to respond to climate extremities.

Navdanya's work over the past twenty years has shown that we can grow more food and provide higher incomes to farmers without destroying the environment and killing our peasants. Our study on “Biodiversity based organic farming: A new paradigm for Food Security and Food Safety” has established that small biodiverse organic farms produce more food and provide higher incomes to farmers.

Biodiverse organic and local food systems contribute both to mitigation of and adaptation to climate change. Small, biodiverse, organic farms especially in Third World countries are totally fossil fuel free. Energy for farming operations comes from animal energy. Soil fertility is built by feeding soil organisms by recycling organic matter. This reduces greenhouse gas emissions. Biodiverse systems are also more resilient to draughts and floods because they have higher water holding capacity and hence contribute to adaption to climate change. Navdanya's study on climate change and organic farming has indicated that organic farming increases carbon absorption by upto 55% and water holding capacity by 10% thus contributing to both mitigation and adaptation to climate change.

Biodiverse organic farms produce more food and higher incomes than industrial monocultures. Mitigating climate change, conserving biodiversity and increasing food security can thus go hand in hand.

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*Dr. Vandana Shiva is a philosopher, environmental activist and eco feminist. She has fought for changes in the practice and paradigms of agriculture and food, and assisted grassroots organizations of the Green movement in Africa, Asia, Latin America, Ireland, Switzerland, and Austria with campaigns against genetic engineering. In 1982, she founded the Research Foundation for Science, Technology and Ecology, which led to the creation of [Navdanya](#) in 1991, a national movement to protect the diversity and integrity of living resources, especially native seed, the promotion of organic farming and fair trade. She is author of numerous books including, [Soil Not Oil: Environmental Justice in an Age of Climate Crisis](#); [Stolen Harvest: The hijacking of the Global food supply](#); [Earth Democracy: Justice, Sustainability, and Peace](#); and*

*[Staying Alive: Women, Ecology, and Development](#). Shiva has also served as an adviser to governments in India and abroad as well as NGOs, including the International Forum on Globalization, the Women's Environment and Development Organization and the Third World Network. She has received numerous awards, including 1993 Right Livelihood Award (Alternative Nobel Prize) and the 2010 Sydney Peace Prize.*

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## **EPA to Limit Rocket Fuel Chemical in Tap Water**

WASHINGTON — The Environmental Protection Agency is setting the first federal drinking water standard for a toxic rocket fuel ingredient linked to thyroid problems in pregnant women and young children, the Obama administration announced on Wednesday.

The Environmental Protection Agency is setting the first federal drinking water standard for a toxic rocket fuel ingredient linked to thyroid problems in pregnant women and young children, the Obama administration announced on Wednesday.

Environmental Protection Agency administrator Lisa Jackson said that setting the standard will protect public health and spark new technologies to clean up drinking water. Based on monitoring conducted from 2001 to 2005, 153 drinking water sources in 26 states contain perchlorate. The standard could take up to two years to develop, the EPA said.

Perchlorate is also used in fireworks and explosives. In most cases, water contamination has been caused by improper disposal at rocket testing sites, military bases and chemical plants. "As improved standards are developed and put in place, clean water technology innovators have an opportunity to create cutting edge solutions that will strengthen health protections and spark economic growth," Jackson said in a statement.

Jackson is expected to make that case before a Senate panel Wednesday, where she will likely face opposition from Republicans who plan to take on the EPA over air pollution regulations, controls on the gases blamed for global warming, and other regulations. Oklahoma Sen. James Inhofe, the top Republican on the environment panel, will bring forward legislation Wednesday to strip the agency of its ability to control heat-trapping gases under the Clean Air Act. House Energy and Commerce Chairman Fred Upton, R-Mich., will release an identical draft bill. Democrats, who have pushed for the EPA to regulate perchlorate, say the decision shows the administration standing up for rules that protect public health, even if they burden business. President Barack Obama recently announced a review of all regulations to reduce barriers to economic growth and investment.

The perchlorate standard is eight years in the making. In 2002, an EPA draft risk assessment found that 1 part per billion should be considered safe. Six years later, the Bush administration decided not to regulate the chemical, instead recommending that concentrations not exceed 15 parts per billion. At the time, federal scientists estimated that 16.6 million Americans could be exposed to unsafe levels through their drinking water.

California and Massachusetts in the meantime have set state-level drinking water standards. Sen. Barbara Boxer, D-Calif., who has sponsored legislation to require the EPA to set a standard, said in a statement Wednesday that she was pleased the government was "finally going to protect our families from perchlorate." California has the most water supplies affected — 58, according to the 2001-05 data. Many of the others are in Texas.

"I will do everything I can to make sure this new protection moves forward," Boxer said. Pentagon officials have spent years questioning the EPA's assessment of perchlorate's risk but have denied influencing the agency's decisions. The military could face liability for tainting water during rocket and missile testing, since the standard will force water agencies around the country to clean up the pollution.

On the Net: EPA's perchlorate website: <http://tinyurl.com/EPAPERCHLORATE>