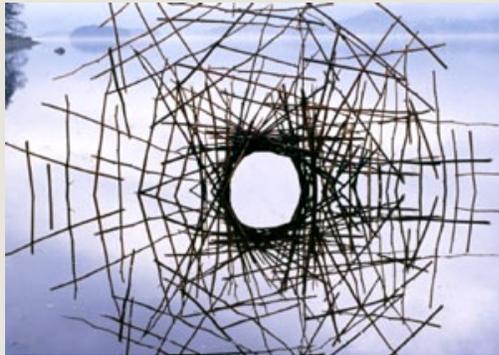


# Green Mission News

August 2014 Green Mission News

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## What's in the News ...



### A Systems View of Life

Written by: [Fritjof Capra](#) & [Pier Luigi Luisi](#)

**We have discovered that the material world, ultimately, is a network of inseparable patterns of relationships; that the planet as a whole is a living, self-regulating system.**

(Read about the book [here](#).)

## External Article Links:

### - A Systems View of Life

[www.cambridgeblog.org/2014/03/a-systems-view-of-life/](http://www.cambridgeblog.org/2014/03/a-systems-view-of-life/)

### - Growing a circular economy: Ending the throwaway society

[www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/news/circular-economy-report-announcement/](http://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/news/circular-economy-report-announcement/)

### - Food in the Circular Economy: A Proposal From the European Union

[inquisitiveeater.com/2014/07/08/food-in-the-circular-economy-a-proposal-from-the-european-union/](http://inquisitiveeater.com/2014/07/08/food-in-the-circular-economy-a-proposal-from-the-european-union/)

### - It's the ecology, stupid

[www.timesofmalta.com/articles/view/20140620/world/It-s-the-ecology-stupid.524245](http://www.timesofmalta.com/articles/view/20140620/world/It-s-the-ecology-stupid.524245)

### - WHAT DOES THE CIRCULAR ECONOMY MEAN FOR FOOD & DRINK FIRMS?

[www.waste-management-world.com/articles/2014/06/what-does-the-circular-economy-mean-for-food-drink-firms.html](http://www.waste-management-world.com/articles/2014/06/what-does-the-circular-economy-mean-for-food-drink-firms.html)

- Circular economy solutions for a sustainable world

[www.eco-business.com/news/circular-economy-solutions-sustainable-world/](http://www.eco-business.com/news/circular-economy-solutions-sustainable-world/)

- Seeking out design for a Circular Economy

[www.bagrebom.com/2014/06/27/seeking-out-design-for-a-circular-economy/](http://www.bagrebom.com/2014/06/27/seeking-out-design-for-a-circular-economy/)

- "Best Practices and Recommendations for Waste Reduction: Towards Sustainable Consumption."

<http://www.foejapan.org/en/waste/policy/pdf/140227.pdf>

- Focus on the upstream

As this cartoon wisely indicates, it is better to focus on things upstream rather than running around frantically downstream.

[http://www.japanfs.org/en/manga/manga\\_id033944.html](http://www.japanfs.org/en/manga/manga_id033944.html)

- LOCALLY-GROWN FOODS LOOK TO BIGGER BUSINESS

[bigstory.ap.org/article/once-niche-local-foods-becoming-big-business](http://bigstory.ap.org/article/once-niche-local-foods-becoming-big-business)

- Donate surplus food: together we can end food waste

[www.zeropercent.us/](http://www.zeropercent.us/)

- Waste Deep (film): change the way we eat and cook (from Australia)

[sustainabletable.org.au/](http://sustainabletable.org.au/)

- Towards Zero Food Waste in the EU

[www.zerowasteurope.eu/2010/12/towards-zero-food-waste-in-the-eu/](http://www.zerowasteurope.eu/2010/12/towards-zero-food-waste-in-the-eu/)

- Plan for Zero Food Waste

[beyondthetrolley.com/2014/07/tip-1-plan-for-zero-food-waste.html](http://beyondthetrolley.com/2014/07/tip-1-plan-for-zero-food-waste.html)

- Fine print of the food wars (V Shiva)

[www.asianage.com/columnists/fine-print-food-wars-538](http://www.asianage.com/columnists/fine-print-food-wars-538)

- Forest Rights Offer Major Opportunity to Counter Climate Change

[www.ipsnews.net/2014/07/forest-rights-offer-major-opportunity-to-counter-climate-change/](http://www.ipsnews.net/2014/07/forest-rights-offer-major-opportunity-to-counter-climate-change/)

- China's State Media Reveals Unapproved Genetically Modified Rice Is on the Market  
[globalvoicesonline.org/2014/07/28/chinas-state-media-reveals-unapproved-genetically-modified-rice-is-on-the-market/](http://globalvoicesonline.org/2014/07/28/chinas-state-media-reveals-unapproved-genetically-modified-rice-is-on-the-market/)

- Brazil farmers say GMO corn no longer resistant to pests

<http://www.reuters.com/article/2014/07/28/us-brazil-corn-pests-idUSKBN0FX1YG20140728?feedType=RSS&feedName=environmentNews>

- 'Alarm Bells Are On':

New Study Links Neonics to Bird Declines

New study finds scope of ecological damage caused by widely used insecticides worse than thought. Second Silent Spring? Bird Declines Linked to Popular Pesticides

Neonicotinoids are aimed at insects, but they're affecting other animals too, study says.

[news.nationalgeographic.com/news/2014/07/140709-birds-insects-pesticides-insecticides-neonicotinoids-silent-spring/](http://news.nationalgeographic.com/news/2014/07/140709-birds-insects-pesticides-insecticides-neonicotinoids-silent-spring/)

- Pesticides linked to bird decline

[www.nature.com/nature/journal/vaop/ncurrent/full/nature13642.html](http://www.nature.com/nature/journal/vaop/ncurrent/full/nature13642.html)

- MAKE AGRICULTURE TRULY SUSTAINABLE NOW FOR FOOD SECURITY IN A CHANGING CLIMATE

- The 2008 food crisis was an important catalyst for realizing the need for a fundamental transformation and questioning some of the assumptions that had driven food, agricultural and trade policy in recent decades. However, actual results achieved since 2008 suggest that a paradigm shift has started, but is largely incomplete. Priority remains heavily focused on increasing industrial agricultural production, mostly under the slogan “growing more food at less cost to the environment”.

The perception that there is a supply-side productivity problem is however questionable. Hunger and malnutrition are mainly related to lack of purchasing power and/or inability of rural poor to be self-sufficient. Meeting the food security challenges is thus primarily about empowerment of the poor and their food sovereignty. Furthermore, the current demand trends for biofuels, concentrate animal feed, excessively meat-based diets and post-harvest food waste are regarded as given, rather than challenging their rational.

- The fundamental transformation of agriculture may well turn out to be one of the biggest challenges, including for international security, of the 21st century. Much slower agricultural productivity growth in the future, a quickly rising population in the most resource-constrained and climate-change-exposed regions (in particular in sub-Saharan Africa and South Asia) and a burgeoning environmental crises of agriculture are the seeds the seeds for mounting pressure on food security and the related access to land and water. This is bound to increase the frequency and severity of riots, caused by food-price hikes, with concomitant political instability, and international tension, linked to

resource conflicts and migratory movements of starving populations.

[http://unctad.org/en/PublicationsLibrary/ditcted2012d3\\_en.pdf](http://unctad.org/en/PublicationsLibrary/ditcted2012d3_en.pdf)

The world needs a paradigm shift in agricultural development: from a “green revolution” to an “ecological intensification” approach.

The required transformation is much more profound than simply tweaking the existing industrial agricultural system.

- UK ‘losing £1.7bn a year from disjointed recycling’

[www.letsrecycle.com/news/latest-news/waste-management/uk-2018losing-ps1.7bn-a-year-from-disjointed-recycling2019](http://www.letsrecycle.com/news/latest-news/waste-management/uk-2018losing-ps1.7bn-a-year-from-disjointed-recycling2019)

- SCS Global Services Releases Updated Recycled Content Certification Standard

[www.power-eng.com/marketwired/2014/07/28/scs-global-services-releases-updated-recycled-content-certification-standard.html](http://www.power-eng.com/marketwired/2014/07/28/scs-global-services-releases-updated-recycled-content-certification-standard.html)

- Plastics recyclers thrilled by EU waste review proposal

[www.recyclinginternational.com/recycling-news/8017/plastic-and-rubber/europe/plastics-recyclers-thrilled-eu-waste-review-proposal](http://www.recyclinginternational.com/recycling-news/8017/plastic-and-rubber/europe/plastics-recyclers-thrilled-eu-waste-review-proposal)

- Clear differences between organic and non-organic food, study finds research is first to find wide-ranging differences between organic and conventional fruits, vegetables and cereals

[www.theguardian.com/environment/2014/jul/11/organic-food-more-antioxidants-study](http://www.theguardian.com/environment/2014/jul/11/organic-food-more-antioxidants-study)

**###**

**Full Length Article Below:**

- Americans are too stupid for GMO labeling, says congressional panel
- ‘Superweeds’ Choke Farms

**###**

## Americans are too stupid for GMO labeling, says congressional panel

*Michael McAuliff for [The Huffington Post](#)*

WASHINGTON -- It's pretty rare that members of Congress and all the witnesses they've called will declare out loud that Americans are just too ignorant to be given a piece of information, but that was a key conclusion of a session of the House Agriculture Committee this week.

The issue was genetically modified organisms, or GMOs as they're often known in the food industry. And members of the subcommittee on Horticulture, Research, Biotechnology, and Foreign Agriculture, as well as their four experts, agreed that the genetic engineering of food crops has been a thorough success responsible for feeding the hungry, improving nutrition and reducing the use of pesticides.

People who oppose GMOs or want them labeled so that consumers can know what they're eating are alarmists who thrive on fear and ignorance, the panel agreed. Labeling GMO foods would only stoke those fears, and harm a beneficial thing, so it should not be allowed, the lawmakers and witnesses agreed.

"I really worry that labeling does more harm than good, that it leads too many people away from it and it diminishes the market for GMOs that are the solution to a lot of the problems we face," said David Just, a professor at Cornell University and co-director of the Cornell Center for Behavioral Economics in Child Nutrition Programs.

Rep. Ted Yoho (R-Fla.) agreed with Just and asked him, "What is the biggest drawback? Is it the ignorance of what the product is, just from a lack of education?"

"It is ignorance of the product, and it's a general skepticism of anything they eat that is too processed or treated in some way that they don't quite understand," Just said.

"Even using long scientific-sounding words make it sound like it's been grown in a test tube, and people get scared of it," Just added.

Rep. Kurt Schrader (D-Ore.) agreed with another witness, Calestous Juma, an international development professor at Harvard's Kennedy School, that political leaders had been cowed by misinformed populaces into bending on GMOs, especially in the European Union, where Juma said hundreds of millions of euros have been spent on studies that have found GMOs safe.

"It's obvious that while the science in the EU is incontrovertible about the health and safety benefits of genetically modified hybrid crops, that because of politics, people are afraid to lead, and inform consumers," Schrader said.

Juma cited an extensive [report](#) by the European Commission. (There is at least one [controversial](#) group that [disagrees](#) with him.)

Certainly, there is misinformation about GMOs, as highlighted in a [New York Times feature](#) on a Hawaiian [ban](#) of most GMOs. But entirely missing from the hearing was any suggestion that there are real concerns about the impact of genetically engineered food, such as the growth of pesticide-resistant "super weeds," over-reliance on single-crop factory farming, decreased biodiversity, and a lack of a consistent approval process. (Read more [pros and cons here.](#))

The issue may soon gain fresh relevance on Capitol Hill, where a measure backed by Reps. Mike Pompeo (R-Kan.) and G.K. Butterfield (D-N.C.) to stop states from requiring GMO labeling could get marked up as [early](#) as September. [The bill](#) also would allow genetically engineered food to be labeled "100 percent natural."

The idea of the bill brought Ben and Jerry's co-founder Jerry Greenfield to Capitol Hill Thursday to push back, along with Rep. Peter DeFazio (D-Ore.), who backs labeling.

Greenfield told HuffPost that labeling is a simple, inexpensive matter of letting people know what's in their food, and letting them decide what they want to support and eat.

"This idea that consumers will be scared away -- the label will be a very simple thing, a few words on a container saying something like 'may be produced with genetic engineering.' It's not scary," Greenfield said.

Watch the video above to see experts and members of Congress conclude Americans should be denied GMO labels because they are too ignorant, as well as Greenfield's reaction.

Michael McAuliff covers Congress and politics for The Huffington Post.

###

## ‘Superweeds’ Choke Farms

*Donnelle Eller, deller@dmreg.com 10:09 a.m. CDT June 23, 2014*

[The Des Moines Register](#)

Arkansas farmer Tommy Young says Southern growers have lived through nearly a decade of torment, fighting a destructive, fast-growing weed that can carry a million seeds, grow as tall as an NBA player and is unfazed by several herbicides.

Now that weed — Palmer amaranth — is in five Iowa counties on the state's border, and agronomists are working to determine whether it is herbicide resistant.

It has the power to choke the state's economy and environment — and increase prices for consumers.

RELATED: [Sides differ on solutions to resistant weeds](#)

Here's how: Even a moderate infestation of Palmer amaranth can rob farmers of about two-thirds of their corn and soybean yields, experts say.

That would be about \$11 billion gone from last year's total \$16 billion corn and soybean receipts. That money ripples through some of the state's most important agricultural businesses, a lineup that includes DuPont Pioneer, Sukup Manufacturing Co. and Deere & Co. Economists estimate that a quarter of Iowa's \$166 billion gross domestic product is tied to farming.

The growth of herbicide resistance means farmers will use more — and potentially more toxic — chemicals to battle the aggressive weed.

Agribusinesses are introducing a new lineup of herbicides and seeds to the battle. Environmental groups worry that those proposed solutions will only worsen the problem.

"Increased herbicide use on the new engineered crops will speed up weed resistance, leaving no viable herbicide alternatives," said Doug Gurian-Sherman, a senior scientist with the Center for Food Safety.

"This is a dangerous chemical cocktail that, when combined with the current farming system, it's a recipe for disaster," Gurian-Sherman, formerly with the Union of Concerned Scientists.

DATA: [Herbicide use over the years](#)

MAP: [Spread of herbicide-resistant Palmer amaranth](#)

But farmers like Young say they have been forced to adopt less environmentally friendly farming practices, such as increased tillage, to battle herbicide-resistant weeds. Tilling is blamed for increased soil erosion and the loss of nutrients that can make their way into rivers and streams.

Farmers also have turned to older, less-safe chemicals like 2,4-D when glyphosate doesn't work.

Iowa farmers should be scared, said Young, who had stopped tilling 7,000 acres that his family farms until the discovery of Palmer amaranth four years ago. He said crop rotation and other conservation methods helped him keep the weed at bay for about four years after becoming resistant in the state.

Southern states have plowed under thousands of acres of crops such as cotton in an effort to control Palmer amaranth — and spent millions of dollars hand-weeding it.

"I'm sitting in a sprayer that cost over \$350,000," Young said. "It's got a computer system that lets me tell you precisely what herbicide I sprayed, how many ounces I sprayed, the wind direction and speed, the field I was in, the humidity.

"I've got all this fantastic technology, but nothing to pour in my tank," said the 50-year-old, who wants government regulators to approve new products from Dow and Monsanto to help battle the weed. "I'm using the same chemicals I used when I was

14."

Soon, it won't just be farmers who suffer, he said: "We're all going to get hurt."

Many U.S. products are tied to corn and soybeans — from sodas to cereals and fuels — and prices will rise, said Mike Owen, professor of agronomy at Iowa State University. "People don't recognize almost everything they touch, whether they eat it or they wear it or drive it, has corn or soybeans in it."

Access to high-quality, low-cost readily available food is "all a function of an effective agricultural system that a weed like the Palmer amaranth could significantly impact," Owen said.

'Best herbicide around' loses power

Nearly 20 weeds in Iowa have developed resistance to herbicides that include glyphosate, a once-in-a-century chemical that Monsanto brought to the market in 1976 under the name Roundup. It killed a broad range of weeds.

Seed companies later introduced genetically modified soybeans, corn, cotton and other crops that were tolerant to glyphosate and other herbicides. It enabled farmers to spray fields for weeds without harming crops.

Seeds also have been modified so crops are resistant to insects and can better withstand environmental forces such as drought. Experts say the seeds have increased yields and, at least initially, enabled farmers to reduce the amount of herbicides and pesticides they used.

Last year, nearly 160 million corn and soybeans acres nationally were planted with genetically modified crops, nearly tripling since 2000, the U.S. Department of Agriculture said in a recent report. That's about 90 percent of all corn and soybean acres.

Critics blame farmers for creating herbicide-resistant weeds by overusing herbicides such as glyphosate and failing to diversify the crops they plant, relying on products such as Roundup Ready corn and soybeans year after year.

"Even though we warned them, you understand the economics behind it," said Robert Hartzler, an ISU professor of agronomy. "The current system favors the growth of corn and soybeans," prompting farmers to leave out rotations of other crops such as winter wheat that could disrupt weed resistance.

"To make a reasonable living, you need to farm large acres, and to farm large acres, you need to cover acres quickly and that involves herbicides. Glyphosate was the best herbicide around," Hartzler said.

"You couldn't sit down at a blackboard and come up with a better rotation than we have for weeds to thrive in," he said.

Hartzler and other scientists say herbicide resistance in weeds was inevitable. "You've heard of this guy called Chuck Darwin and evolution?" Owen said.

"If we use one single system, one tool to control a pest, Mother Nature will find a way

around that tool," said Brent Wilson, DuPont Pioneer technical services manager. "That's just the law of nature.

"It's too bad that glyphosate is developing resistance, but it shouldn't surprise us," Wilson said. "We don't know of any herbicide that won't develop resistance over some time."

Is Palmer already resistant in Iowa?

Hartzler, Owen and others are trying to determine whether Palmer amaranth, discovered in Iowa last year, is resistant to glyphosate.

"If I was a betting man, and I am, I'd say we've got glyphosate-resistant Palmer in Iowa," Owen said. Hartzler believes the superweed is likely growing in more than five counties.

The tiny seed spreads easily — by farm equipment that moves across state lines and fields, in cotton byproducts that are fed to dairy cows, even potentially by birds, experts say.

The states around Iowa are already fighting glyphosate-resistant Palmer amaranth, including Illinois, Missouri and Kansas.

Waterhemp, a similar-looking but wimpier cousin of Palmer amaranth, is resistant to glyphosate and other herbicides in Iowa. "At least 50 percent of fields in Iowa have waterhemp that's resistant to glyphosate. It's our No. 1 weed problem," Hartzler said.

It's difficult to distinguish between waterhemp and Palmer amaranth, both pigweeds, especially when they're small, he said. But Palmer amaranth is stronger and faster-growing. It can quickly overrun a soybean crop. Corn is tougher in a matchup.

Waiting even a long weekend to kill Palmer amaranth can result in the plant getting too large to kill with a herbicide. The weed can grow 2 inches a day and needs to be sprayed when it's 4 to 6 inches in size.

Add spring rains or wind to the equation, and farmers can quickly miss the window, Hartzler said.

Already, U.S. farmers are being forced to use more herbicides to control waterhemp. "We've already seen a big leap, and Palmer amaranth will increase it more," he said.

A Muscatine County farmer who discovered Palmer amaranth last fall decided to mow down part of a soybean field to control it. "He knew if he tried to harvest it, the Palmer amaranth seed would get inside the combine, and it's nearly impossible to clean it out," said Hartzler, who determined that weed wasn't yet resistant to glyphosate. "He didn't want to spread it to other fields."

The Iowa Soybean Association has asked farmers to carefully scout fields and nearby ditches for Palmer amaranth. They're being urged to treat any pigweed like it's herbicide-resistant, meaning aggressively stamping it out when it's small.

Young, the Arkansas farmer, said he initially thought he had missed spraying a small patch of weeds that turned out to be resistant to Palmer amaranth. Within a short time,

the weed had spread to all the fields he farms.

"If you miss the window of application, you miss the whole boat," Young said. "I'd say there are very few acres in Arkansas that don't have resistant Palmer amaranth."

The cost of using more herbicide, buying tillage equipment, even hiring workers to hand-weed fields, is driving some farmers out of business, he said. "For a lot of farmers, there won't be a next year."

Farmers won't be able to keep up with global demand for their crops as the herbicide-resistant weeds spread and reduce yields. "We're farming like we did 35 to 40 years ago," he said. "It's like using a rotary-dial phone" in a cellphone world.

### **Palmer amaranth**

**AGGRESSIVE:** Palmer amaranth quickly evolves, adapting to pressures such as herbicides. It's invasive, with small seeds that are easily spread by machines, feed and birds. It aggressively competes with crops for water and nutrients.

**FAST-GROWING:** One plant can create 1 million seeds and grow 2 inches a day.

**'A CHRISTMAS TREE':** It can grow up to 7 feet, blocking sunlight from smaller plants such as soybeans. "You could have used it as a Christmas tree," said agronomist Clarke McGrath, about weeds discovered in southwest Iowa. "That's what's so scary about Palmer amaranth. It's so competitive, it can put on so much biomass, it can take over a field pretty easy."

**EDIBLE:** The seeds are a good source of protein.

Herbicide resistance at a glance

14: Weeds in the U.S. that are resistant to glyphosate

160 million: U.S. acres with genetically modified corn and soybeans

70 million: U.S. acres of cropland with glyphosate-resistant weeds in 2013

30,000: Weed species that have the potential to cause farmers trouble

Source: U.S. Department of Agriculture; Union of Concerned Scientists; Dow AgroSciences

### **Climate change another threat**

The nation's \$330 billion agriculture industry will see increased weed, insect and disease pressures from projected rising average temperatures and extreme weather events such as flooding and droughts, according to the latest national climate change report.

Already, farmers like those in Iowa are fighting narrowing windows to prepare fields and plant and harvest crops, said Ricardo Salvador, a senior scientist at the Union of Concerned Scientists. "You're applying the herbicides, you're applying the fertilizers,

and harvesting all at breakneck speed," said Salvador, a former agronomy professor at Iowa State University. That will only intensify as catastrophic weather events increase, making farming more difficult.

Herbicide-tolerant crops make farming under those narrowing windows easier. But Salvador believes that will be detrimental. With increased use comes increased weed resistance, he said. "It's the primary accelerator that will bring about more of these problems."

Dow AgroSciences disagrees. It says adding to the tools that farmers use is the best way to control weeds and their extensive damage.