



In California, glyphosate phobia results in hazmat suits, respirators to protect against organic chemicals

Jon Entine | May 31, 2016



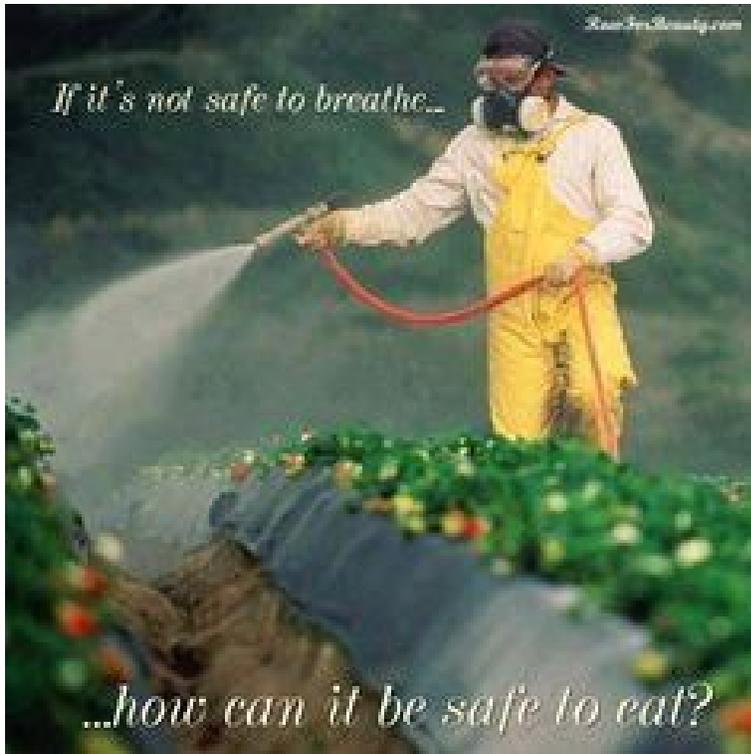
If you've followed the often acrimonious debate over GMOs in foods, you've probably seen pictures of farmers walking corn and soy fields wearing hazardous material suits and respirators. Why are they wearing them? According to anti-GMO activists, they are protecting themselves from glyphosate, a chemical often paired with GMOs that they claim is a cancer-causing pesticide.



Greenpeace activists rip up Bt eggplant plants in the Philippines.

These [people wearing hazmat suits](#) are actually Greenpeace activists ripping up genetically engineered plants in the Philippines in 2011—ironic in a tragic way as the plants being uprooted are engineered with the natural soil-dwelling bacterium *Bacillus thuringiensis* (Bt) to protect crops against pests, which farmers who grow them use about 95% less pesticides. Organic farmers use the same Bt pesticide on their crops in a sprayable form.

Here is another of literally hundreds of similar scare pictures on the Internet.



Note the accompanying scare line: “If it’s not safe to breathe...how can it be safe to eat?” It’s a fabricated image and tag; glyphosate has a toxic profile akin to table salt. Farmers use such a diluted form (and such a small amount) when using glyphosate on their fields that it does not require the use of protective gear.

Farmers do sometimes use hazmat suits and respirators. Take a look at this picture taken from [this video](#) produced a few years ago. You can see the farmer decked out in a full hazardous materials suit with chemical spewing from the back of his tractor. Looks pretty ominous, yes?



Well, it turns out these are organic cauliflower fields at one of California's largest family-owned California farms, Lakeside Organic Gardens in Watsonville. They know that spraying their fields with some natural chemicals, like the soapy insecticide they use, can endanger their health—so they protect themselves.

Which brings us to the situation unfolding in towns and cities across America, most recently in Petaluma, California. Petaluma is in uber-liberal Sonoma County, a hotbed of anti-GMO sentiment. In November, Sonoma [will vote](#) on a highly contentious initiative that would ban GM crops and seeds. (A similar ban proposal [failed](#) in 2004.)

Petaluma is foodie country, and home to Chez Panisse, the pricey restaurant founded by Alice Walters, the superstar chef who [dismisses](#) GMOs and [campaigns](#) for eating only organic food so we can all be “good stewards of the land”. It's also now hazmat country, and Walters has no one to blame but herself.

Travesty unfolding in the organic heart of California

Although the herbicide glyphosate is still legal for use in the Petaluma region, anti-GMO activists have complained about it in public forums with the hope of getting it banned. Anticipating a ban, public officials have begun introducing alternative weed control methods.. “We're not under a moratorium, but we're doing this internally so we can have some data to bring to people to consider,” [said](#) Ron DeNicola, parks and landscape manager for the city of Petaluma. Anticipating a possible ban, both the city and the area's largest school district stop using it, instead trying out various organic solutions.

It's been a disaster so far. The first issue has been price. Glyphosate costs \$62 for a 140-gallon mix. The organic products they have tried cost more than a \$1000 to cover the same area—a 1,50 percent increase. That may be nothing to the residents of one of the richest counties in the United States, but it's enough to bankrupt the weed management budgets in less affluent places, if Petaluma's “experiment” should become a model.

But the real threats may be ecological, and to the health and safety of farmers and others who apply the herbicide, according to officials in Petaluma.

The treatments are also said to be extremely pungent during application, with several workers complaining of eye irritation and one experiencing respiratory problems, [Joe] DeCarlo, the district's director of maintenance,] [said](#). Those attributes have required the use of new protective equipment, something that was not required with Roundup.

“It's frustrating being out there using something labeled as organic, but you have to be out there in a bodysuit and a respirator,” he said.

So here's the bottom line: Glyphosate, which is the generic name for Round-Up, has a “caution” label that suggests farmers wear regular clothing that covers their skin. Organic chemical soap concentrates come with a “warning” label: It's toxic to bees (and other harmless ecologically crucial insects) but “requires eyewear, coveralls, and chemical resistant footwear, gloves,

headgear and an apron.” Prudent farmers, like those at Lakeside Organic, and the workers in Petaluma, were respirators.

To cap off the disaster, the hazardous organic soapy chemicals do not kill the weeds as effectively as glyphosate, Petaluma officials said.

Having used the alternative herbicides over the past two months, DeCarlo said crews have needed to apply the treatments more often to achieve similar results. The plants are also likely to regrow, since the root remains alive underground.

Every news release going forward out of Petaluma is in danger of going straight onto the pages of The Onion. How did anti-GMO campaigners drive Petaluma, and indeed many other well-meaning cities and regions around the world, into in this bizarre Alice in Wonderland anti-science pickle?

Chemophobia and GMOs

Chemicals scare people. Even worse in many people’s minds are pesticides, which are used in growing crops, and which inevitably end up in our food in miniscule amounts. Scientists assure us that the infinitesimally small amounts of food pesticide residues that we ingest are harmless, but that doesn’t reassure many people who have been caught up in a wave of chemophobia—a fear of any chemicals that dominates mainstream environmentalism. This chemophobia has even trickled out to many in the media who are unschooled in risk assessment.

Three years ago, the central mission of anti-biotechnology activists was to convince people that GMOs could cause health problems. Those concerns have largely faded, as one independent global science agency after another—now [numbering more than 275](#)—have reviewed thousands of studies and issued public statements affirming that foods grown from genetically modified seeds are as safe or safer than their conventional or organic counterparts. The GMOs-are-safe consensus was underscored in May when the National Academies—the premier independent science organization in the United States—[issued a comprehensive review](#), declaring that no unusual health problems have been linked to GMOs.

As the ability to scare people about the alleged dangers of GMOs has receded in recent years, campaigners gradually shifted their focus away from GM foods themselves, instead targeting the synthetic chemicals often paired with them. Their chief bogeyman: glyphosate, which scientists have long established was of milquetoast toxicity, less hazardous than common table salt. [Read GLP’s [GMO FAQ backgrounder on glyphosate](#)] Glyphosate emerged as the proxy for anti-biotech campaigners to attack GMOs.

GMO critics claim glyphosate is linked to autism, cancer, gluten allergies, ‘leaky gut’ syndrome and other disorders. Concerns about glyphosate’s possible health impacts increased in 2015 after the International Agency for Research on Cancer, a research arm of the World Health Organization, [classified glyphosate](#) as “probably carcinogenic,” using what is called a hazard evaluation.

But regulatory oversight agencies in the US, Europe and elsewhere reviewed and rejected IARC's cancer designation, noting it was based on the questionable quality of the studies evaluated to make its conclusions and that it focused on whether glyphosate might cause cancer in workers exposed to extreme doses over extended periods of times, not whether it traces of it in our food pose a danger. The US Environmental Protection Agency issued a 'final' report in October 2015, questioning IARC's use of incomplete data, reaffirming its past conclusions that the herbicide is safe as use.

A joint panel from the World Health Organization and the Food and Agriculture Organization of the United Nations issued a [review of glyphosate](#) in May 2016, concluding it poses no cancer risks as encountered in food and does not impact our genes. The global science consensus remains that glyphosate is a comparatively mild herbicidal toxicant that does not cause cancer or pose serious health threat

So what happens now? Petaluma and other communities in the US appear poised to ban glyphosate and substitute more hazardous, ineffective and costly alternatives. The situation is even worse in Europe, where anti-glyphosate frenzy has frozen the European Commission, which has until June 30th to reauthorize its use or a defector EU ban will go into fact.

Maybe Alice Waters could speak out about being a 'good steward of the land' so policymakers can reintroduce science and common sense back into the debate.

Jon Entine, Executive Director of the [Genetic Literacy Project](#), Senior Fellow at the [Institute for Food and Agricultural Literacy](#), University of California-Davis. Follow [@JonEntine](#) on [Twitter](#)