

## Plant geneticist Kevin Folta: Scientific American's rewritten anti-GMO article a 'lesser abomination'

The *Scientific American* article about “dying broccoli” and “toxic corn” drew wide criticism for its unreferenced and outright false indictment of modern agriculture, and flimsy treatment of concepts in microbiomes. [My dissection can be seen here.](#)

I contacted the editors, and apparently others did too. I was shocked to find out that there was no peer review or expert consultation. The editors kindly returned a conscientious and conciliatory email that suggested they made a mistake and the authors would revise.

Personally, nothing short of a full retraction was a remedy. That first article was absolutely horrible, D.O.A. horrible. Not only did it vilify farmers, it scared people about food, and misinformed them about basic biology, and it was done under the banner of *Scientific American*, a trusted popular scientific brand.

### Out of the frying pan...

The editors published a “corrected” version. I learned of the revision via Twitter from Dr. Elisabeth Bik (@microbiomdigest) someone that knows a thing or two about microbiomes.

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Correction issued by Scientific American after the article was published.

### And into a fajita skillet.

“Substantial revision” might be a slight step forward, but still is an absolute mess. Here again is a painstaking dissection with referenced rebuttals. The revised text was longer, referenced (but with select references that supported the authors’ assertions, ignoring all other contradictory literature) and equally fear-based and misleading.

Food writer Mark Bittman has argued that because food is defined as “a substance that provides nutrition and promotes growth” and poison is a substance “that promotes illness,” then “much of what is produced by industrial agriculture is, quite literally, not food but poison.” While that may be an extreme statement, our food system is arguably a risk for several reasons, including the increasing use of herbicides and pesticides; the rise of genetically modified organisms (GMOs); and climate change.

**This sentence makes a strong claim that is not backed by data. Farmers, you are producing poison?**

**Risk = hazard x exposure. Pesticides (hericides, insecticides, fungicides, etc) are known hazards at some exposure threshold that is rarely met in applicators, let alone consumers.**

Since 1892, the U.S. Department of Agriculture has been collecting data on the nutritional composition of our foods. Over the decades since, there has been enough variability in how samples have been harvested, stored, prepared and analyzed to make it hard to tease out exact trends or causes of them. There is some evidence that vitamin and mineral content of foods such as broccoli has declined and some to the contrary. Given how fundamental nutrition is to our health, it's surprising there is so little robust research on how agricultural practices affect the nutrient content of crops.

**A good correction. There is no way to make comparisons of food nutrient density over a century. The most important point is that fruit and vegetables are important in the diet, and they are available and affordable just about 365 days a year in the industrialized world. That we should celebrate.**

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There you have it. The editors at *Scientific American* clearly don't realize how scholarly writing should be done, even if it is in a popular science venue. As it stands, the work uses misrepresentation and cherry picking to disparage agricultural producers, conjure fear of safe and reliable chemistries/genetics, and promote a vision of agriculture that is ultimately unsustainable without removing a lot of people from the planet.

Articles like this get a day in the sun on Twitter. Anti-ag interests will bask in its words and share in their

online communities. The real atrocity is how Scientific American destroys its own credibility, abrades trust in farming, and scares people away from fresh fruits and vegetables, the most important food on the plate for long term health.

**Read original article:** [A Lesser Abomination](#)