



# CENTER FOR FOOD SAFETY

November 16, 2017

U.S. Food and Drug Administration

Docket:

FDA-2017-N-5991: Agricultural Biotechnology Education and Outreach Initiatives; Public Meetings; Request for Comments”

Submitted Electronically via [www.regulations.gov](http://www.regulations.gov)

Center for Food Safety (CFS) submits the following comments regarding the Agricultural Biotechnology Education and Outreach Initiatives. CFS staff also presented this testimony in person at the public meeting in San Francisco on November 14, 2017.

CFS is a national nonprofit organization working to protect human health and the environment from the impacts of potentially harmful food production technologies. CFS scientists have been studying genetically engineered (GE) crops and foods for more than 20 years, and our organization represents the interests of farmers, fishers, and consumers, as it is an issue that is of great concern to our membership of nearly one million people.

We appreciate that the U.S. Food and Drug Administration (FDA) and U.S. Department of Agriculture (USDA) acknowledge that the public has the right to accurate information about how their food is produced, including if it is produced using genetic engineering. The USDA is currently developing regulations for labeling GMO foods, and our position is that the agency should mandate on-package labeling of foods that contain GMOs as this is the only way to ensure equal access to this information.

In regards to providing the public with more information about GMOs, CFS’s position is that the government agencies responsible for disseminating information about GMOs should:

1. not present information that is false and misleading;
2. not present information that is speculative and unproven;
3. not rely solely on information provided by the corporations that are producing and profiting from GMOs; and
4. provide information that is proven to be true and not contradicted by federal agency data or reports.

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The biotechnology and chemical industry touts claims about GMOs that are speculative and at times, false. These claims should not be included in educational materials about GMOs that are disseminated to the public. For example:

- **GMOs do not reduce pesticide use.** According to a study by Dr. Charles Benbrook published in *Environmental Science Europe* (2012, 24:24), 404 million more pounds of pesticides were used in the U.S. in the 16 years from 1996 through 2011 due to the introduction and widespread adoption of GE soybeans, corn and cotton. Benbrook's analysis is based on gold-standard data from USDA's Agricultural Chemical Use program. Recent pesticide use estimates from the U.S. Environmental Protection Agency (EPA) support this USDA-based assessment. Over the course of just seven years from 2005 to 2012, annual agricultural herbicide use in the U.S. rose sharply by 34%, from 420 million pounds to 563 million pounds.<sup>1</sup> The reason for these pesticide increases is that approximately 90% of GE crops are engineered to withstand direct application of herbicides. As such, the false claim that GE crops reduce overall pesticide use should not be presented to the public. We encourage FDA/USDA to instead truthfully inform consumers that the major effect of GE crops has been to increase use of weed-killing pesticides, because many consumers want to consume foods that reduce pesticide use in order to reduce negative impacts on human health, wildlife, and water.
- **Currently commercialized GMO crops do not increase nutrition.** Despite abundant industry hype regarding genetic engineering experiments in which crops are modified for improved nutritional properties, there are currently no commercialized GMOs that increase vitamin or mineral content. For example, decades of effort have failed to produce a commercial GE rice variety with enhanced beta-carotene content (commonly referred to as "Vitamin A rice").<sup>2</sup> As such, the false claim that GMO crops increase nutrition should not be presented to the public.
- **Currently commercialized GMO crops have made no special contribution toward "feeding the world."** The chief cause of world hunger is poverty and a lack of adequate distribution of food. To the limited extent that new crop varieties with increased yield potential can help, genetic engineering has not been a positive contributor. There are currently no GMO crops approved or commercialized that are engineered for higher crop yields. A 2016 report by the National Academies of Sciences found a steady increase in crop yields that spans both the pre-biotech and biotech eras, strongly suggesting that non-GE factors such as advances in conventional breeding methods have played a critical role in increasing crop productivity. By contrast, they found no evidence that GE traits provide measurable increases in overall crop productivity. In addition, the report did not find clear benefits from GE crops in developing countries for small, impoverished farms. This finding is consistent with the observation that one billion people remain food insecure, despite massive adoption of GE crops globally.<sup>3</sup> As such, the false claim that GMO crops have increased yields and are needed to feed the world should not be presented to the public.
- **Genetic engineering has proven to be inferior to conventional breeding in developing drought-tolerant crops; thus, GMOs should not be promoted as critical for adaptation to climate change.** Only one GE variety of corn that is designated as "drought-tolerant" has been commercialized, but USDA concedes that it is no more

drought-tolerant than some conventionally bred crops.<sup>4</sup> In contrast, hundreds of conventionally bred drought-tolerant varieties of many crops have been developed and introduced to the market.<sup>5</sup> In 2014, the science journal *Nature* reported that 153 new varieties of drought-tolerant corn had been developed for Africa using conventional (i.e. non-GE) breeding; one study predicted they could reduce the number of people living in poverty in 13 African countries by up to 9%.<sup>6</sup> As such, the false claim that GMO crops combat climate change should not be presented to the public.

In addition to the recommendations above, the agencies should also provide the public with the following truthful information about GE foods.

- **GE salmon, regardless of where they are raised, pose a clear and present danger to wild salmon populations.** This statement has been presented in numerous scientific studies, and was noted in comments to FDA from experts in transgenic fish, expert federal wildlife agencies, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service, which recommended against approval of the first-ever GE salmon due to the many impacts on wild fish populations.<sup>7</sup>
- **Recently approved GE crops resistant to the herbicide dicamba have resulted in massive injury to soybeans and other crops across the U.S. and are negatively impacting farmers.** In one of the biggest stories in agriculture this year, the widespread adoption of Monsanto's genetically engineered, dicamba-resistant soybeans and cotton has led to a massive increase in use of this highly volatile herbicide, resulting in unprecedented levels of herbicidal drift injury to soybeans and other crops across the country.<sup>8</sup> To date, there have been 2,708 official complaints from farmers about damage to their soybeans due to dicamba drift from neighboring farms, and 3.6 million acres of soybeans have been injured across 25 states,<sup>9</sup> though the true scope of dicamba drift injury is likely as much as ten-fold greater.<sup>10</sup>

The public deserves to know the truth about GE crops and foods. They should not be given information that is false and misleading—such as the claim that GE crops reduce pesticide use—and should not be given information that is speculative and unproven—such as the claim that GE crops will feed the world. Center for Food Safety would be happy to share our extensive research with the agencies tasked with providing information about GMOs to the public. Thank you for your consideration of these comments.

Sincerely,

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<sup>1</sup> U.S. Environmental Protection Agency, Pesticides Industry Sales and Usage: 2008-2012 Market Estimates.

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Biological and Economic Analysis Division, Office of Pesticide Programs, US EPA, 2017.

<sup>2</sup> Allison Wilson, PhD., *Goodbye to Golden Rice? GM Trait Leads to Drastic Yield Loss and “Metabolic Meltdown,”* Independent Science News (Oct. 25, 2017) <https://www.independentsciencenews.org/health/goodbye-golden-rice-gm-trait-leads-to-drastic-yield-loss/>.

<sup>3</sup> National Academies of Sciences, Engineering, and Medicine. 2016. *Genetically Engineered Crops: Experiences and Prospects*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/23395>. <https://www.nap.edu/catalog/23395/genetically-engineered-crops-experiences-and-prospects>. See also Bill Freese & Doug Gurian Sherman, National Academy of Sciences Finds Genetically Engineered Crops Not the Solution to World Hunger, Center for Food Safety, May 23, 2016, <https://www.centerforfoodsafety.org/blog/4372/national-academy-of-sciences-finds-genetically-engineered-crops-not-the-solution-to-world-hunger>.

<sup>4</sup> U.S. Department of Agriculture, Biotechnology Regulatory Services, APHIS, Draft Environmental Assessment, March 2011. Monsanto Company Petition (07-CR-191U) for Determination of Non-regulated Status of Event MON 87460, OECD Unique Identifier: MON 87460-4.

<sup>5</sup> GM Watch. Non-GM Successes: Drought Tolerance. GMWatch, <http://www.gmwatch.org/en/component/content/article/31-need-gm/12319-drought-resistance>.

<sup>6</sup> Natasha Gilbert. Cross-bred crops get fit faster: Genetic engineering lags behind conventional breeding in efforts to create drought-resistant maize. *Nature* 513: 292.

<sup>7</sup> See e.g., *Environmental Risk Assessment of Genetically Modified Organisms, Volume 3, Methodologies of Transgenic Fish*. K.R. Hayes, et al. CAB International; Kapuscinski & Sundström, *Comments on Environmental Assessment for AquAdvantage Salmon and Briefing Packet on AquAdvantage Salmon for the Veterinary Medicine Advisory Committee* (2010).

<sup>8</sup> For just one of hundreds of stories, see: Caitlin Dewey. This miracle weed killer was supposed to save farmers. Instead, it's devastating them. *The Washington Post*, August 29, 2017.

<sup>9</sup> Kevin Bradley. A final report on dicamba-injured soybean acres. *Integrated Pest Management*, University of Missouri, October 30, 2017. [https://ipm.missouri.edu/IPC/M/2017/10/final\\_report\\_dicamba\\_injured\\_soybean/](https://ipm.missouri.edu/IPC/M/2017/10/final_report_dicamba_injured_soybean/).

<sup>10</sup> Russ Quinn & Emily Unglesbee. Dicamba Answers: MU Experts explain dicamba damage and crop insurance. *DTN Progressive Farmer*, August 29, 2017. <https://www.dtnpf.com/agriculture/web/ag/news/article/2017/08/29/mu-experts-explain-dicamba-damage>.