

# Health & Nutrition Letter

YOUR GUIDE TO LIVING HEALTHIER LONGER

## Report: GMO Foods as Safe as Conventional Choices

### Lines between genetically engineered and hybridized crops blurring.

Are foods containing genetically modified (GMO) ingredients safe to eat? Even as a new Vermont law and food giants including General Mills and Campbell Soup push to label GMO products, a sweeping new scientific report concludes that genetically engineered crops are as safe as conventionally grown foods.

"We looked at a lot of evidence and found no apparent health risk," says Timothy Griffin, PhD, an associate professor at Tufts' Friedman School and director of the Agriculture, Food and Environment program. He was one of 20 scientists who spent two years reviewing 900 research publications at the behest of the National Academies of Sciences, Engineering and Medicine.

"We also heard from a number of speakers who talked about research both on potential health impacts and on perceptions - how people perceive different risks and benefits," Griffin goes on. "We looked at all this evidence and concluded that there doesn't appear to be any negative impact. If there had been a clear signal, that would have been a very different story, but there wasn't."

Nonetheless, he adds, the report struck a cautionary tone. "That doesn't say there never will be a risk. Policy and regulatory functions need to continue to look at these issues."

**NO DISEASE DIFFERENCE:** The 398-page report looked at all types of GMO crops, but focused primarily on corn, soybeans and cotton, which account for almost all commercially produced GMO crops. Its conclusions about safety echoed the findings of a lengthy roster of scientific, health and regulatory organizations, including the World Health Organization.

In addition to reviewing published studies, the committee compared the incidence of cancer, obesity, diabetes, kidney disease, autism, food allergies and celiac disease in North America to that in Western Europe. If GMO crops contributed to those conditions, differences would be expected between North America, where GMOs have been part of the diet since 1996, and Europe, which restricts their use. But no such differences were found.

**BLURRED LINES:** Moreover, the report noted that distinctions between GMO crops and conventional ones are blurring. "Genetic engineering, conventional breeding and newer technologies like gene editing all work differently, but the outcome might be genetically similar, with similar risks and benefits," Griffin explains. "You could have a plant variety that is conventionally bred to be herbicide resistant and one that is genetically engineered to be herbicide resistant. It's increasingly difficult to distinguish between the two processes."

That blurring also means, the report concluded, "it is the product, not the process, that should be regulated." The experts called for a tiered approach to regulation "that uses trait novelty, potential hazard and exposure as criteria," adding, "Sweeping, generalized statements about the benefits or adverse effects of genetically engineered crops are not helpful to the policy debate."

What about the push to label foods with GMO ingredients? In July, Congress passed a bill creating a national standard for labeling food made with GMOs. Industry supporters hope the legislation will head off a patchwork of state labeling laws such as Vermont's, which went into effect July 1.

"We say that the products that we are talking about appear to be safe, so there is not a need to label for health impacts," Griffin says. But he adds, "There are multiple valid reasons why people might want products labeled. They might want labels because they want to decide for themselves if there is a health or environmental impact, or simply because they want to distinguish one product from another."

The committee, however, also found "no conclusive cause-and-effect evidence of environmental problems from the genetically engineered crops."

**JUST CROPS:** For now at least, commented Wayne Parrott, PhD, a biotechnology advocate at the University of Georgia who was not on the committee, "The inescapable conclusion, after reading the report, is that genetically engineered crops are pretty much just crops. They are not the panacea that some proponents claim, nor the dreadful monsters that others claim."

Tufts' Griffin, however, sees promise down the road for nutritional benefits. "Until very recently, traits targeted by genetic engineering have been all pest-related," he explains. "They are what we call input traits, rather than output traits - like changing the composition of a grain. In just the past two years, though, more new products are output-related, like apples and potatoes that don't brown as quickly when they're bruised."

"It will be interesting, in the next five to 10 years, to see the potential for genetic engineering to alter nutritional aspects of food crops or feed crops to make them healthier."

TO LEARN MORE: *National Academies Press* -

<http://www.nap.edu/read/23395/> (<http://www.nap.edu/read/23395/>)

## READ MORE ON THESE TOPICS

---

- [Healthy Eating \(/topics/healthy-eating.html\)](/topics/healthy-eating.html)
- [General Nutrition \(/topics/general-nutrition.html\)](/topics/general-nutrition.html)