

Meta-Analysis Shows GM Crops Reduce Pesticide use by 37 Percent

By ACSH Staff — November 6, 2014

Despite a plethora of studies over the past two decades providing evidence that GMO (also known as genetically-engineered or biotech) foods are just as safe as conventional foods, along with confirmation from American Association for the Advancement of Science, the U.S. Food and Drug Administration, the United States Department of



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Despite a plethora of studies over the past two decades providing evidence that GMO (also known as genetically-engineered or biotech) foods are just as safe as conventional foods, along with confirmation from American Association for the Advancement of Science, the U.S. Food and Drug Administration, the United States Department of Agriculture, and the Environmental Protection Agency that GM technology does not pose a human health threat, anti-GMO groups still try to look for any reason to reject this life-saving technology. One common argument is that GMOs are causing pesticide inputs to increase. We've [stated before](#) [2] that GMOs actually reduce pesticide use and now a new meta-analysis of GM crop impacts provides more evidence to support this fact.

The [meta-analysis](#) [3] was conducted by PhD student Wilhelm Klöpffer and Dr. Matin Qaim of the Georg-August-University of Göttingen in Germany, in order to examine the effects of GM crops at a global scale. In the analysis, published this week in PLOS ONE, Klöpffer and Dr. Qaim included 147 original studies from all over the world that report impacts of GM soybean, maize, or cotton crop yields, pesticide use, and/or farmer profits. The authors found that crop yields increased by 22 percent, and increased farmer profits by 68 percent. They also found that GM technology has reduced chemical pesticide use by 37 percent. It was found that yield and profit gains are higher in developing countries than developed countries, though both net yield and economic impacts were still positive for developed countries.

Klöpffer and Dr. Qaim's study just adds to the abundance of evidence suggesting that GMO impacts are substantially positive. The meta-analysis reveals robust evidence of GM crop benefits for farmers in developed and developing countries, the authors conclude, Such evidence may help to gradually increase public trust in this technology. We certainly hope so.

ACSH's Dr. Gil Ross had this perspective: While I find it somewhat ironic that this analysis comes from an EU group, while Europe in general has embraced a deep-seated superstitious fear of GM agriculture as frankenfood, we at ACSH welcome their evaluation, without being surprised in the slightest. On the other hand, the approved use of licensed pesticides is not actually anything to be feared or even concerned about, aside from the economics: as we [published](#) [4] in 2011, modern pesticide use in agriculture is not associated with any adverse health effects, despite all the hype to the contrary from anti-chemical activist groups.

ACSH's Ariel Savransky adds, The fact is that GMOs have the potential to provide numerous benefits and save millions of lives, yet they are still being demonized by anti-GMO activists who are using arguments with no basis in science. This study is another one to be used in providing a scientific perspective to counter fearmongering activists with scary agendas.

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[3] <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0111629>

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