

The morally indefensible opposition to Golden Rice

By Bjorn Lomborg

Activists have destroyed a field trial of genetically modified Golden Rice in the Philippines.ⁱ Aided by well-meaning but misguided organizations like Greenpeace, they are potentially destroying the opportunity to avoid 680,000 deaths each year. That is morally indefensible.

Golden rice is genetically modified (GM) to have vitamin A. This is important because 3 billion people depend on rice as their staple food, and about 10% are at risk for vitamin A deficiency. The World Health Organization estimates that lack of vitamin A makes 250,000-500,000 kids go blind each year, and half of them die within a year.ⁱⁱ In total, the latest studies from *The Lancet* estimate that each year, 668,000 kids under 5 die from vitamin A deficiency.ⁱⁱⁱ

Yet, campaigners from Greenpeace to Naomi Klein^{iv} have derided the attempt to use golden rice to avoid such deficiency.

A favorite claim has been that you need to eat 7 kg (15 pounds) of rice per day to get sufficient vitamin A from Golden Rice.^v This is simply wrong. Two recent studies show that just 50g (2oz) golden rice can provide 60% of daily vitamin A – even better than spinach.^{vi}

Instead, Greenpeace suggests that poor farmers should buy more "vitamin-rich vegetables."^{vii} This, of course, is an easy suggestion to make for rich Westerners. Its strategy has obviously not alleviated the vitamin A deficiency over the past 20 years. Rather, it sounds awfully close to saying 'let them eat vitamin-enriched cake.'

In general, the activists profess to be worried about health and environment. Yet, they have kept trashing the test sites that are established to study the very safety they claim to be concerned about.

Moreover, the hand-waving assertions of dangerous ' Frankenfoods ' are simply not supported by science, which over and over again have found that GM foods are both safe and often better for the environment. According to the US National Academies: "To date, no adverse health effects attributed to genetic engineering have been documented in the human population."^{viii}

The American Association For The Advancement Of Science says it even clearer: "The science is quite clear: crop improvement by the modern molecular techniques of biotechnology is safe."^{ix} The EU commission concluded on 25 years of research: "there is, as of today, no scientific evidence associating GMOs with higher risks for the environment or for food and feed safety than conventional plants and organisms."^x

Moreover, the US National Academies also find genetically engineered (GE) crops more environmentally benign: "Generally, GE crops have had fewer adverse effects on the environment than non-GE crops produced conventionally."^{xi}

But the dubious claims of possible dangers is exactly what has led to consumer anxiety throughout the world and the Golden Rice trashing in the Philippines. The activists admitted they were "fired up by warnings from concerned scientists and peasant leaders about the dangers of the Golden rice or genetically modified rice to health and its threat to biodiversity."^{xii} And Greenpeace has openly admitted it has pushed these worries: "In the Philippines, we supported and highlighted the community rejection of golden rice in the Mindanao area. We will continue our campaign to halt release of GE rice to the environment, and to support public resistance to GE foods."^{xiii}

Without a trace of irony, Greenpeace is now calling Golden Rice a "failure" because it "has been in development for almost 20 years and has still not made any impact on the prevalence of vitamin A deficiency."^{xiv} Well, yes, but exactly because of the scientifically unsound opposition manufactured by rich, well-meaning Westerners far removed from the risks of actual vitamin A deficiency.

Using an ever-changing but incorrect array of allegations against Golden Rice, the opponents have managed to delay the deployment of Golden Rice more than 12 years. During this time about 8 million kids have died from vitamin A deficiency.

Trashing the field trials and potentially postponing Golden Rice could add another million, needless deaths.

It is now necessary to ask: are the anti-GM activists not at least partially responsible for 9 million deaths?

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ⁱ <http://bulatlat.com/main/2013/08/09/farmers-in-bicol-uproot-golden-rice/>

ⁱⁱ <http://www.who.int/nutrition/topics/vad/en/>

ⁱⁱⁱ ([http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(07\)61690-0/fulltext?_eventId=login](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(07)61690-0/fulltext?_eventId=login)).

^{iv} <http://ngin.tripod.com/feelgoodrice.htm>

^v michaelpollan.com/articles-archive/the-way-we-live-now-the-great-yellow-hype/

^{vi} DOI: 10.3945/ajcn.111.030775

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<http://www.greenpeace.org/seasia/ph/PageFiles/462570/Golden%20Illusion.pdf>

^{viii} http://www.nap.edu/openbook.php?record_id=10977&page=8

^{ix} http://www.aaas.org/news/releases/2012/media/AAAS_GM_statement.pdf

^x http://europa.eu/rapid/press-release_IP-10-1688_en.htm, see also the largest GMO overview project from the EU concludes: "The main conclusion to be drawn from the efforts of more than 130 research projects, covering a period of more

than 25 years of research, and involving more than 500 independent research groups, is that biotechnology, and in particular GMOs, are not *per se* more risky than e.g. conventional plant breeding technologies.”

http://ec.europa.eu/research/biosociety/pdf/a_decade_of_eu-funded_gmo_research.pdf, p16

^{xi} http://www.nap.edu/openbook.php?record_id=12804&page=3

^{xii} <http://bulatlat.com/main/2013/08/09/farmers-in-bicol-uproot-golden-rice/>
^{xiii} p33,

<http://www.greenpeace.org/international/Global/international/publications/greenpeace/2013/GPI-AnnualReport2012.pdf>

^{xiv} <http://www.guardian.co.uk/commentisfree/2013/feb/03/gm-food-grip-global-giants>,

<http://www.greenpeace.org/international/en/publications/reports/Golden-rice-report-2010/>