

Opinion Piece



Ivo Vegter: 110 Nobel laureates warn Greenpeace of “crime against humanity” on GMOs

By Ivo Vegter

In an open letter addressed to Greenpeace, the United Nations, and the world’s governments, a staggering 110 Nobel-winning scientists called upon the organisation to cease its campaign against genetically-modified organisms and biotechnology in agriculture.

Genetic modification of crops has a long and storied history. Ever since humanity began to grow crops for food, over 10,000 years ago, farmers have been selecting plants for desirable traits. Humanity began to speed along evolution, choosing cultivars (from “cultivated varieties”) for properties such as shorter growing seasons, better resistance to cold, drought or pests, larger fruit and higher nutritional value.

Alongside the farmers’ work, people began to preserve food against spoilage, using processing techniques such as drying, fermentation, pickling, salting, sugaring, smoking and cooling.

These advances have made it possible for billions of people to eat better than their forebears ever did, relying on the labour and land of only a small fraction of the population to free up their time for other productive pursuits.

The progress of science has its opponents, however. Chief among them is the environmental movement, often led by the radical activist group, Greenpeace. Originally formed by Vietnam-era anti-war activists to protest nuclear testing in the Pacific Ocean, the organisation broadened its scope to address many other environmental issues. Over the decades, it has grown into an international behemoth operating in 40 countries, and claiming over three

million supporters who donate an annual budget of \$360 million. Despite its tax-exempt status in most countries, it is a huge business, forever needing new and more sensational campaigns to make sure the money keeps rolling in.

From laudable beginnings, opposing nuclear bomb testing and environmental pollution, the organisation has become ever-more dogmatically opposed to industry of all kinds. It protests all forms of energy except wind and solar, even though nuclear energy is the safest, greenest form of energy in existence. It protests all forms of mining, although both the wind and solar power industries rely heavily on mining, especially of rare earth metals. These elements are called “rare” not because of their scarcity, but because they are not concentrated as ore deposits. Extraction of rare earth metals requires strip mining on a vast scale, processing using toxic acids, and leaving vast quantities of radioactive slurry in its wake.

Greenpeace doesn't like the fishing industry, because of the depletion of certain fish stocks and the incidental damage caused by by-catch, but it also opposes aquaculture, as fisheries turn to fish farmed in limited and controlled environments.

While opposing the use of pesticides, herbicides and chemical fertilisers, it also opposes biotechnology that reduces the use of pesticides, herbicides and chemical fertilisers. It opposes farm runoff and deforestation to make way for croplands, but it also opposes the scientific advances in agriculture that increase yields, thereby reducing agricultural pollution and the destruction of natural environments for new farmland.

Recently, 110 Nobel laureates, mostly in medicine, physics and chemistry – including James Watson, famed for co-discovering the structure of DNA – challenged the organisation's incoherent approach to science and the environment. In [an open letter](#), they asked Greenpeace to abandon its unscientific campaign against genetically-modified organisms. They write:

“The United Nations Food & Agriculture Program has noted that global production of food, feed and fiber will need approximately to double by 2050 to meet the demands of a growing global population. Organizations opposed to modern plant breeding, with Greenpeace at their lead, have repeatedly denied these facts and opposed biotechnological innovations in agriculture. They have misrepresented their risks, benefits, and impacts, and supported the criminal destruction of approved field trials and research projects.

“We urge Greenpeace and its supporters to re-examine the experience of farmers and consumers worldwide with crops and foods improved through biotechnology, recognize the findings of authoritative scientific bodies and regulatory agencies, and abandon their campaign against ‘GMOs’ in general and Golden Rice in particular.

“Scientific and regulatory agencies around the world have repeatedly and consistently found crops and foods improved through biotechnology to be as safe as, if not safer than those derived from any other method of production. There has never been a single confirmed case of a negative health outcome for humans or animals from their consumption. Their environmental impacts have been shown repeatedly to be less damaging to the environment, and a boon to global biodiversity.”

The irony of the opposition to genetic engineering in agriculture is that modern biotechnology isn't fundamentally different from what farmers have been doing for

millennia. Far from taking greater risks by “playing with nature”, as Greenpeace alleges, the techniques for improving crops are becoming ever-more precise.

In the past, farmers selected crops for favourable traits, and hoped for the best. They learnt to cross-breed plant varieties, which was essentially an attempt to combine the genetic material of two plants with different desirable traits. Many of these attempts at creating new, improved plants failed, because of the random nature of DNA inheritance. The process of creating new, successful cultivars was painstaking and could take many years. Many of the plants we know and love today, like the carrot, which originally was yellow or purple, are the product of cross-breeding hundreds of years ago.

In 1940, plant breeders discovered that exposure to radiation could accelerate the rate at which plants mutated. Plants would develop that had random genetic changes. Those that proved desirable were kept for further breeding, while plants with undesirable traits were discarded. This process was no more reliable than cross-breeding, but was significantly faster.

Meanwhile, nature had also been modifying plants, using viruses to introduce new genes and background radiation to damage existing DNA. As scientists learned more about these processes, the modern field of biotechnology developed. Today’s genetic engineering builds on the early, scattershot attempts to mash together different genetic stock by manipulating only very specific genes, of which the purpose is known. This makes genetic modification by modern means far safer than the unpredictable process that farmers have used for thousands of years, although in essence, it is no different.

The benefits of crops improved by biotechnology are as numerous as one could hope for: better drought, heat and cold resistance; better defences against pests and diseases; less need for fertilisers and pesticides; less labour required for weeding; better-tasting and more nutritious foods; lower rates of malnutrition and vitamin-deficiency among the poor; and better returns for small-scale farmers. Ultimately, genetic engineering is offering higher yields of better food to feed the planet’s growing population with fewer resources than ever. Who can be against that?

Activists talk about “genetic pollution”, and other such vague terms to stir up fear and distrust. However, there is no scientific reason to believe that genetically modified organisms are in any way harmful to humans, any more than orange carrots are harmful to our health. Decades of widespread use of GMO crops, and [thousands of scientific studies](#), have not found anything to suggest that genetic engineering poses any threat to human health. The handful of contrary papers have been widely discredited or retracted, or remain highly speculative.

The fear of genetic manipulation is fuelled by the sensationalist rhetoric of organisations like Greenpeace, and finds fertile soil in the minds of people who know little – if anything – about either science or agriculture, and often are wealthy enough to prefer expensive, elitist alternatives. But lobby groups with immense propaganda resources like Greenpeace also have a powerful voice in politics, and even in our schools and academia. By inserting themselves into the politics of food, they foist their ill-informed, unscientific prejudices on everyone else. This is morally unconscionable.

If people want to believe genetic engineering is from the devil, they're free to demand food that is labelled as GMO-free. Plenty corporations would be glad to profit from their ignorance. Many already are.

Fearful, misinformed people should not, however, demand that all other food be covered with implicit warnings about GMOs, when such warning serve only to add expense to the production of food. In essence, all our modern food, without exception, is genetically modified. It's time Greenpeace and other radical green activists accept the scientific reality and move along without doing any more harm.

“Opposition based on emotion and dogma contradicted by data must be stopped,” the 110 Nobel Prize-winning scientists wrote. “How many poor people in the world must die before we consider this a ‘crime against humanity’?”

How many, indeed, Greenpeace? **DM**