Viewpoint: ‘Terminator seeds’—the anti-GMO bogeyman that never existed

Aside from the myth that scientists create GMO tomatoes with syringes, possibly the most prevalent of the “alternative facts” used in opposition to crop biotechnology involves so-called “terminator seeds.” Prominent anti-GMO activist Vandana Shiva explained in August 2015 how the biotech industry was allegedly plotting to use these engineered, sterile seeds against farmers and consumers in India:

> The GMO mustard is based on what has been called the “Terminator Technology” to make the harvested seed sterile …. The introduction of GMO mustard with Terminator traits will deny Indian citizens the right to safe and pure mustard oil because of the risk of contamination.

Let’s be clear: there were never any GMO sterile terminator seeds in farmers’ fields anywhere in the world. Never. Nada. Nowhere. And yet, this idea has distorted the discussion for decades and was recently revived in the Global South, where it is being used to scare a new population of people—many of whom are food insecure or at real risk of future food production challenges in times of climate change. As recently as April 2019, Claire Nasike, Greenpeace Africa’s “Food For Life Campaigner,” claimed this sterility trait would force farmers to purchase new biotech seeds every growing season:

missnasike gp africa

An obituary provides closure on a window of time, typically with a framework provided by the facts of that time. But it also presents an opportunity to consider the legacy and impact. Today is that day for Monsanto terminator seeds. Yet how do you write an obituary for something that never existed? I consulted guides and I looked at examples, but I never found one for an organism that was only hypothetical. So, how to proceed? I guess we’ll start at the birth of the idea.

[su_panel color=”#3A3A3A” border=”1px solid #3A3A3A” radius=”2? text_align=”left”]**Read the GMO FAQ: What’s the controversy over ‘terminator’ seeds?**[/su_panel]

Birth of an anti-GMO bogeyman

“Terminator seeds” were never the real name of these products—this was a fearmongering nickname supplied by 1990s anti-GMO activists opposed to many aspects of modern agriculture. The more scientific name, Genetic Use Restriction Technology (GURT), and its characteristics are detailed elsewhere. This is a family of technologies that could have helped prevent gene flow, or the undesirable spread of biotech crops in the environment, as well as prevented farmers from re-using unauthorized seeds.

Many people don’t know that the actual parents of the patent-known-as-terminator were, in fact, our own US Department of Agriculture (USDA) as well as a company called Delta & Pine Land Company. Later the D&PL company and its intellectual property were acquired by Monsanto. In the ensuing drama, Monsanto promised to not commercialize this technology—and it never did.

call to action

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Like many ideas filed at the US Patent Office, GURT turned out to be nothing but paperwork. There was never a commercialized product, nor profit to Monsanto. Without fanfare, the patent expired in the US in 2015. Ironically, anti-GMO activists profited wildly from spreading misinformation on this topic. It generated lucrative speaking engagements and book sales for Shiva and other promoters of the Terminator myths, including the false notion that growing expensive, patented “suicide seeds” was leading poor farmers to take their lives. Facts were no barrier to activists who wanted a scapegoat.

One side effect of a patent expiration is that anyone can use the formerly protected idea without infringement. However, in 2000, the UN Convention on Biological Diversity (CBD) imposed a moratorium on the use of GURT in any state that is a member of the CBD. So, if any of these countries (and there are nearly 200 member countries) should try to use GURT, they would face non-patent legal barriers.

In short, if anyone tries to tell you that Monsanto’s sterile seeds were really in fields in the Midwest, or that multinationals are coming into Africa with sterile seeds, you can point them to this obituary. Those claims are not true.

Terminator's lingering legacy

And here's where the real sadness of the story arc comes in: the lies, distortions, and conflations about this patent have been used to prevent farmers from utilizing tools of modern agriculture that could increase their yields, improve their health by reducing pesticide use and increase food security in their communities. In countries that have overcome the misinformation, like Bangladesh, we have seen that adoption of GMOs has provided real benefits. Farmers are using less pesticide, increasing their profits and saving and sharing the insect-resistant Bt eggplant seeds they grow.

Africa isn't far behind. Scientists and farmers on the continent are developing crops that serve their local needs. Nigerian and Ghanaian researchers have developed pest-resistant cowpea and other important local crops. Facing devastating fall armyworm attacks, scientists in Kenya are trialing insect-resistant maize. Banana researchers in Uganda are trying to save this staple food with disease resistance and improve its nutritional profile. These applications have nothing to do with GURT, and spreading terminator seed propaganda to keep them off the market would be harmful to local scientists, farmers and consumers.

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Fearmongering about terminator seeds prevents politicians from understanding the facts. Much like anti-vaccine activists who spread falsehoods about ingredients in vaccines, the overheated speculation offered up by campaigners on this topic prevents discussion about real issues facing farmers, such as harsh weather conditions, pest invasions, predatory lending, sociocultural and domestic pressures and inadequate mental health support. In fact, the "suicide seed" accusation lets the real culprits off the hook, such as the banking industry and policy makers.

So when you think of Monsanto terminator seeds, remember that no farmer anywhere in the world has ever had access to them. Activist groups who say otherwise have created severe consequences for developing countries that are trying to feed themselves. The legacy of this unfortunate episode will linger for a long time. But from here forward, the anti-GMO movement can decide whether it will be remembered for perpetuating the dangerous myth of suicide seeds, or recognizing that it's dead and buried. Let's hope they choose wisely.

Mary Mangan holds a PhD in cell, molecular, and developmental biology from the University of Rochester. She co-founded OpenHelix, a company that provides awareness and training on open source genomics software tools. Follow her on Twitter @mem_somerville

This article originally appeared at the GLP on August 27, 2019.