

## Marvel's X-Men fan? Then you should appreciate 'special powers' of 'mutant' GM crops

The parallels between the debate over GMOs and the treatment of mutants in the X-Men series are striking. Of course, one is in reality and the other is in an exaggerated fictional universe, but putting these differences of degree aside, I think we can learn a lot from thinking about these similarities. Let me list some of the strong similarities that I see between the X-Men and genetically engineered crops.

### **Special power achieved through genetics**

The mutants in the X-Men Universe have awesome powers from random mutations in their DNA. Genetic engineering is used in agriculture to give plants new traits that they did not have before to improve agriculture in some way. Plants that defend themselves against insect pests or diseases they never could before are certainly awesomely powerful for the farmers who grow them. While the genetic explanations for the mutant powers are often techno-babble or remain mysterious, the genetic changes made in GMO crops are well understood and predictable. However, for most people these genetic alterations and their real impacts are not easily understood and are equally mysterious, contributing to fear.

### **Fear**

A strong theme that runs through the X-Men series is fear. Fear of the unknown, fear of change, fear of misplaced trust, fear of hidden or unseen dangers, and fear of losing the world that you know. We see each of these with opponents of GMOs: people fear their food or lives changing in ways that they don't want, they fear companies and individuals who they don't feel they can trust, and they fear harms that they cannot see. In both situations, there is a relative lack of moderation in the dialog, mostly dominated by vocal and extreme opponents on one side with very few who enter the debate trying to find the middle ground.

### **GMO labeling and mutant registration**

One of the early issues explored in the first X-Men film was the idea of mutant registration. Faced with the existence of novel and often unseen powers that could be used to commit crimes or do harm to others, politicians pushed to have a registry of all mutants so they would know what to expect (or who would be in your lineup of usual suspects). With GMOs, labeling is pushed with very similar arguments – that stamping “GMO” on foods will provide security for people who fear them. While there is an important difference between the two – that one concerns the identity of human persons and the other, the labeling of plants and their products, they derive from the same fear of hidden or unseen dangers. One might say for both mutants and GMOs, “If there's nothing to hide, why not label them?” And the response is the same, “Because labeling is a pretext for getting rid of them.”

### **Internal conflict on acceptance**

In the X-Men story, there is a conflict amongst the mutants on how they should respond to fear hatred,

and persecution. On one side, the Brotherhood of Mutants led by Magneto seeks to dominate non-mutants and avenge the deaths of their comrades. On the other side, you have the X-Men, led by Professor Charles Xavier, who seeks the resolution of this situation through education, awareness, and understanding, and through training mutants to use their powers for good.

For GMOs, the debate over the approach to acceptance is there, but it is much more subtle (and does not include the violence dimension seen in the mutant superhero series). Amongst proponents there are two main approaches to ending the debate. The first is through pushing the technology and pouncing on any opposition to GMOs or limitations to their use. Local bans, labeling campaigns, are seen as steps down a slippery slope to outright bans. The other, more Charles Xavier-type path to GMO acceptance, is through education and open discussion. Helping people to understand – and not fear – GMOs, while providing training for scientists and others who are involved or interested in this subject to help reach out to everyone else is the other path that can be taken. This requires careful consideration of approaches, and keeping your cool when faced with people who are strongly opposed.

### **Exploiting controversy**

The final similarity I would like to mention is how controversy is exploited in both situations. In the new film, fear of mutants is being aggressively promoted by a weapons developer, Trask, who argues that his products are needed to save the world from mutants. He may believe he is bringing peace to the world, but paradoxically, is trying to do this through creating conflict. Today, there are companies and nations using the controversy over GMOs to make a profit, feeding money into organizations that drum up fear, and then promote their products (or testing services) as the solution. Nations may cite GMO safety as a reason to set up *de facto* trade barriers despite free trade agreements, exploiting loopholes for political purposes. I should emphasize again, the difference between selling weapons for a war between people and using controversy as an edge for economic conflicts – these are *not* the same. However, I see a similarity in how selfish interests exploit and perpetuate conflict.

**Read the full, original article:** [GMOs: Days of Future Past](#)

### **Additional Resources:**

- [“Regulatory delays and ‘Jurassic Park’ may have ruined prospects for AquaBounty GE salmon,”](#) Boston Business Journal
- [“GMO debate entrenched in 1980s narrative of ‘synthetic monsters’ and ‘mad scientists’ in Hazmat suits,”](#) Discover