

10 Things You May Not Know About GMOs



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Confused about GMOs? Are you constantly bombarded with news that GMOs are harmful and then turn around a few minutes later to read they are not harmful and safe? There is no question GMOs (Soy, corn, cotton, canola, sugar beets, alfalfa, papaya, squash) are front and center in many food conversations and news sources. I have put a quick list of some GMO facts that you may not know:

1) ***GMOs is not a food. GMOs (genetically modified organism) are a breeding technology.***

Sometimes when I talk with people about GMOs, I get the feeling they really don't know what GMOs are. So let's start with these three fast facts:

- **GMOs are not Monsanto.**
- **GMOs are not Round Up or Glyphosate.**
- **GMOs are not chemicals.**

So exactly what is GMO? Our food has been genetically modified for thousands of years. GMO technology allows us to be more precise in the genetic modifications. According to a [Popular Science article](#) - "Scientists extract a bit of DNA from an organism, modify or make copies of it, and incorporate it into the genome of the same species or a second one. They do this by either using bacteria to deliver the new genetic material, or by shooting tiny DNA-coated metal pellets into plant cells with a gene gun. While scientists can't control exactly where the foreign DNA will land, they can repeat the experiment until they get a genome with the right information in the right place. That process allows for *greater precision*. With GMOs, we *know* the genetic information we are using, we know where it goes in the genome, and we can see if it is near an allergen or a toxin."

2) **Herbicide resistant weeds, or "superweeds" are not caused by GMOs.** The reason we have "superweeds" is because weeds continually change to resist pesticides. Superweeds are not new. Weeds have always changed (on their own) to resist pesticides. What would happen if they didn't? Weeds would be extinct.

Yes, farmers have relied on Round Up (glyphosate) for quite a few years because it was so effective, low cost and much safer than other pesticides. But as weeds do, they are becoming resistant to Round Up. The solution? Farmers have been slacking. They need to continually change their weed plan, using several methods including crop rotation and other pesticide control measure, to combat weed pressures in their fields.

3) **The medical community also uses GMOs.** Perhaps the most popular is insulin, which is used by million every single day. Other medical uses of genetically engineering is drug treatments for cancer, Alzheimer's and cystic fibrosis. Our world is much better because of these medical treatments - all which are genetically modified organisms. And another common misconception - GMOs do *not* cause autism. Millions are alive today as the direct result of GMO technology. Period.

4) **GMOs do happen in nature.** [The sweet potato](#) was modified, in nature, some 8000 years ago. Soil bacteria entered the plant and modified the sweet potato plant. According to Jan Kreuze, "People have been eating foods, as the result of GMO technology, for thousands of years without knowing it."

5) **Europe IS importing feed/food that has used the GMO technology.** One issue that is constantly brought up by consumers is Europe has banned GMOs. And then it is always followed up with, "why doesn't the U.S. do the same?" The reality is Europe never banned GMOs (only two countries have outright banned GMOs), but rather, had not approved them. The [EU has now authorized the importation of 17 GMOs](#) for food/feed uses.

6) **GMO's are not causing the [increase in food allergies](#).** Food allergies are mostly caused by eight major food products - milk, eggs, peanuts, tree nuts, soy, wheat, fish and shellfish. All GMO foods are required to be tested extensively for these eight food products and biotech developers work closely with the FDA to assure any new GMO foods do not produce any new allergens. And, perhaps, the coolest thing about this technology is we can use the biotechnology to remove known allergens from foods. Imagine a world where someone can eat peanuts without the "peanut allergen."

7) **Long Term Studies on GMOs.** Probably the most common statement I have seen or read is, "There are no long term studies on GMOs." There have been [GMO studies](#) done on animals where the results show no negative effects on animals. And then the question also becomes, what is considered long term? For the naysayers, there will be no amount of time that will satisfy them. In addition, there have *never* been long-term studies required on any other new seed variety or crop. GMOs are the only crops that require extensive pre-marketing scrutiny. And think all natural plant

foods are always good for us? Think about rhubarb leaves and pits of peaches - all which are poisonous to humans.

8) **GMOs only affect 1-4 genes, where traditional breeding plants affect 10,000 - >300,000 genes.** And the 1-4 genes that are changed? Scientists know everything there is to know about them.

9) **GMOs = Sustainability.** Using GMO technology allows farmers to use less pesticides. Less pesticides = good for people and the environment. Not only do farmers use less pesticides, but newer GMO varieties include a drought tolerant trait where plants require less water. There is also the possibility of GMO plants using nitrogen already present in the soil as a nutrient. Presently, plants have a hard time accessing and using the nitrogen already present in the soils. Biotechnology possibilities are endless.

10) **Farmers care.** Farmers really do care about what they grow. Our goal is to grow safe, affordable food. Farmers rely on expert advice that helps them determine the best seeds to plant. We can plant whatever seed we choose. We are not forced into any seed choices or seed companies.

Farmers choose to plant biotech seeds. We do need to sign a technology agreement that says we cannot save any seed back to plant for future years. We know that and understand that. Personally, we have farmed for over 35 years and we have never held back any seed to be used for the following growing season.

And, finally, our farm field (where GMO corn and soybeans are grown) is literally in my backyard. Why would we grow something dangerous to our health right in our backyards? *We really do care.* We know GMOs are not the *only* solution, but just a single tool in our farming toolbox. And it seems farming requires multiple tools and I also believe our "toolbox" will continue to grow in the future.