

Plant-Based Foods FAQs

What kinds of GMOs appear in alternative proteins? Where do they show up?

Plant-based products such as alternative proteins are at high risk of containing GMOs because corn and soy are often key ingredients — more than **92%** of corn and soy grown in the U.S. is genetically modified. There are also risks from new GMOs made with emerging techniques, such as the blood-like "heme" that gives the Impossible Burger its meatiness. Other animal-free products made with synthetic biology ("synbio"), sometimes referred to as "precision fermentation," are showing up online and on grocery store shelves.

What is "cultivated meat"? Is it plant-based? Is it a GMO?

Cultivated meat is lab-grown meat grown from animal cells in a bioreactor. While cultivated meat does not require raising and slaughtering an animal, it is not a plant-based food because it is actual meat. The processes behind cultivated meat and seafood are closely held by the companies developing the products, making it difficult to tell whether or not GMOs are used.

What is synbio? Why is it GMO?

Synbio is short for synthetic biology, which involves genetically modifying microorganisms such as yeast, algae, or bacteria so they will produce a variety of novel compounds, including flavorings, colorants and other additives designed to make products that mimic animal-derived products. The biotech industry is marketing this method as "precision fermentation" to distance their products from GMOs, making the term sound like an improved natural process when, in fact, it is a form of biotechnology. Some companies even falsely claim their "precision fermentation" products are non-GMO! Synbio ingredients are considered products of genetic engineering by the Non-GMO Project.

Are plant-based proteins suitable for vegans?

Many plant-based products made from legumes, nuts and grains are vegan- and vegetarian-friendly — you can use our [online product finder](#) to browse hundreds of Non-GMO Project Verified options. However, some engineered protein alternatives would not meet a strict interpretation of veganism because they used animal cells or blood samples early in the process. For example, cultivated meat is grown from animal cells, and synbio non-animal dairy is made possible by a blood sample taken from a cow. Vegan products typically prohibit using animals or animal-derived products in the development process. Some companies behind synthetic proteins describe their products as "nature identical." If these products are identical to animal products, could they really be considered vegan?

Are GMOs in plant-based foods labeled?

In the U.S., labeling laws for genetically modified foods are inconsistent. The law requires [bioengineered food](#) disclosures on some products, but exemptions and limitations mean that many products made with GMOs are not labeled. Some new GMO companies are even advertising their products as "non-GMO." The best way to avoid GMOs is to look for the Butterfly.

Are plant-based proteins made with GMOs better for the planet?

Plant-based proteins are often marketed as environmentally friendly because they don't use traditional livestock farming — but that might not be the whole story. When it comes to GMOs, assessing environmental claims is next to impossible because of incomplete data and industry secrecy. However, [preliminary research](#) raises serious questions about sustainability claims, suggesting that cultivated meat could be much worse for the planet than traditional livestock farming. Common ingredients such as GMO soy and corn also negatively impact the environment.