

Why can't PCC simply prohibit GMOs?

PCC cannot prohibit all GMOs because of how pervasive they are in our current food system, from crops like corn or soy, to GE rennet used to make most cheeses. That is why we work hard to offer organic certified options, because GMOs are prohibited under federal regulations. Our goal is to minimize the presence of GMOs in our stores and be transparent about our limitations in that effort. We're also strong advocates of labeling for GE and biotechnology and engage on relevant policies or proposed rules that would strengthen transparency around GE ingredients in products.

How can I avoid GE altogether?

Certified Organic and Non-GMO Project Verified offer the best assurances against GE ingredients. PCC has a long-standing priority on organic, and we will continue to expand our organic and Non-GMO Project Verified offerings to provide GE-free options to our members and customers.

Why is GE a problem?

The issues surrounding GE food and its production are complex and must be looked at from both external ecosystems impacts and internal health impacts perspectives.

For most GE foods, the plant's genetic code has been modified to withstand the application of chemicals that would otherwise kill the plant. The most prominent example of this is Roundup Ready corn—corn that has been genetically modified to withstand the application of glyphosate (the active ingredient in Roundup). Since the introduction of GE corn and other crops in 1996, global use of glyphosate has increased 15-fold in just two decades. Once billed as safe by its maker Monsanto (now owned by Bayer), just two decades later scientists, doctors, and governments began to raise alarms over emerging ecological and health impacts.

On the ecological side of the issue, weed resistance to glyphosate has spurred exponential increase in use and demands for new GE varieties of herbicide resistance crops, creating a chemical treadmill. While more research is needed, recent studies and analysis have identified concerns over low dose impacts on microbiomes, antibiotic resistance, pollinators, and aquatic systems. Aside from increased reliance on chemical pest controls, there are concerns about the introduction of manipulated genetic material into natural habitats and the unknown impacts on native species of plants and animals. For example, could GE salmon (Atlantic salmon that have had their growth-hormone gene replaced with a Pacific Chinook growth regulating gene) escape into the natural environment negatively impact already struggling native Chinook?

From the human health perspective, the first and foremost concern is with the chemicals inherent in the majority of GE production. Looking at glyphosate once again, the Global Health Organization determined in 2015 that glyphosate is "probably carcinogenic to humans." Research has shown that for some crops, like soy, glyphosate accumulates at higher residues in GE varieties, increasing exposure for humans and animals that consume these products. Because chemicals are required in the production of GE, there is also the exposure concerns for farmworkers and their families.

For non-chemically based GE crops, a lot is still being learned about how GE techniques impact the target organism's DNA as a whole and the unknown impacts of genetic manipulation on the organism and those that consume it. For example, in certain cases foreign DNA might be allergen based, yet the food being consumed would not be clearly labeled as an allergen.

Overall, these issues and potential risks are significant enough that, at the very least, consumers have a right to make informed choices as to whether they wish to consume products using GE.

Isn't this what farmers have been doing for centuries?

No. Traditional plant and animal breeding methods, such as grafting, cross-cultivation, seed selection, and even *in vitro* fertilization, are not the same as the methods that are considered GE. While there is a diverse and constantly evolving set of GE techniques, the underlying premise behind GE is the manipulation and alteration of an organism's underlying DNA. To achieve this manipulation scientists often delete or insert foreign DNA into the target organism's DNA. These alterations and insertions would not occur in nature or even with assisted breeding methods.

What is PCC's standard on genetically engineered foods?

PCC's standard around GE foods strikes a balance between our dedication to organic and sustainable food systems with our commitment to providing shoppers with a variety of options that meet their needs. The criteria we established enable us to mitigate the presence of GE foods in our stores, while affording us flexibility in sourcing so that we can respond to and navigate changes in the marketplace. While we sell packaged goods that may contain ingredients derived from GMO crops like corn or soy, we won't sell any fresh produce that is genetically engineered. We also prioritize organic and non-GMO options, unless they are not commercially available for us at a reasonable cost. See [PCC's GE Ingredient and Labeling Standard](#) for more details.

How does PCC's standard and policy compare to other retailers, including other cooperative grocers?

Based on our research and evaluation of other retailers, our GE Ingredient and Labeling standard sets down comparable or stronger requirements to prohibit the presence of genetically engineered ingredients and products in our stores. Our fresh milk standard, requiring organic or non-GMO, is stronger than the requirements of most other retailers. Our approach to packaged foods containing high-risk GMO ingredients is similar to other co-ops, where we prioritize organic and non-GMO verified products. This is primarily due to the complexities of supply chains and our ability to trace derivative ingredients, like maltitol that may be made from corn but could also be made from other crops.

Why does PCC have different standards for its grocery items and prepared foods?

PCC's standard is intended to mitigate the presence of genetically engineered foods in our stores, while being realistic about the prevalence of GE foods in the marketplace. In our prepared deli and bakery department, we often have more control over the items and the ingredients. We have direct relationships with our third-party suppliers as well, many of whom are small, local producers interested in improving their products to meet our standards. Lastly, since these items are fresh and less processed than some grocery items have to be for shelf stability, there are fewer high-risk derivative ingredients that we need to monitor. This makes it easier to source

non-GMO or organic options for the few ingredients that are at risk of being derived from GMO crops, like maltodextrin or soy lecithin.

What makes food genetically engineered (GE) or a genetically modified organism (GMO)?

Definitions of what constitutes genetically engineered food differ across the world and even within different government entities. (In part, this has created some of the problems for achieving (GE) transparency and reaching consensus on how best to identify and communicate this with consumers.) But on the whole, most would define GE food or genetically modified organism (GMOs) as a living organism whose genetic material (otherwise known as DNA) has been artificially manipulated in a laboratory through genetic engineering. Genetic engineering creates combinations of plant, animal, bacteria, and virus genes that do not occur in nature or through traditional crossbreeding methods.

Does the federal government have any regulations for GE foods?

The National Bioengineering Food Disclosure law, passed by congress in 2016, directed the United States Department of Agriculture (USDA) to establish a national mandatory standard for disclosing foods that are or may be “bioengineered,” also known more commonly as genetically engineered. The standard was passed at the end of 2018 and requires food manufacturers, importers, and certain retailers to ensure that final products containing detectable genetically modified material to be appropriately disclosed. While PCC supports labeling and transparency for genetically engineered ingredients, there were many flaws in the standard that PCC and other organizations felt were not in the best interest of consumers. To learn more about PCC’s coverage of GE labeling issues and advocacy efforts, visit our [GE Policy Advocacy Page](#) and the [Sound Consumer](#).