



TOP  
*Health*  
INGREDIENTS INC.™

# Understanding the Non-GMO Ingredient Market

## Who we are:

Top Health Ingredients (THI) is a supplier and distributor of unique and novel ingredients to the food, beverage and supplement markets globally. THI responds to consumer and manufacturer demands for healthy, GMO-free and gluten-free ingredients for items such as baked goods, nutritional bars, weight loss products, fresh juices and supplements. THI is dedicated to providing customers with the highest quality non-genetically modified products available.

[www.tophealthingredients.com](http://www.tophealthingredients.com)

## Consumer awareness: What are GMOs and what's all the fuss about?

Genetically modified organisms (GMOs), also called genetically engineered (GE) or genetically modified (GM) ingredients, describes ingredients that have been altered at the gene level. The modern genetic modification of food is far different from the cross breeding of plants that has taken place for centuries, in the lab and in nature.

Current genetic engineering includes inserting genes from other plants, animals and bacteria into a plant to make it more resistant to disease, pesticides and drought, as well as increase a plant's vitamin levels or shelf life. Today, it's estimated that as many as two thirds of all food products in the supermarkets contain GM ingredients. The crops most likely to be genetically modified include soybeans, corn, beet sugar and canola. While the reasons for genetically modifying plants seem practical, consumers are wary, particularly when corporate interests and profits are involved.

The debate about the safety of GMOs is far reaching, and many states have proposed legislation that would require labeling of products containing GMOs. Citizens are concerned about the effects of GM foods on their bodies and the environment. Reports of super weeds that are herbicide resistant and have unintended or unpredictable effects on insects and animals are cited as reasons for questioning

the practice of genetically modifying plants. Proponents of GMOs, including some scientists, farmers, corporations and politicians, praise them for increasing yields, shelf life and potentially food supply, which is of great value in some developing countries. Obviously, there are pros and cons to genetically modifying food, which points to the importance of continued independent research and evidence.

According to a press release from Schaumburg, Illinois-based market research firm SPINS, more than 90 percent of Americans want to know whether their food contains GMOs. Labeling these foods has been presented for debate and vote at the legislative level in the U.S. Resistance to labeling has come from a number of sources, indicating that it would be burdensome to the food industry and expensive to manufacturers and consumers and that there is no clear "standard" for GMO labeling. Despite the ongoing debate and the rejection of labeling legislation in California, a number of food manufacturers have voluntarily labeled their foods and have added "No GMOs," "Non GMO" or even "GMO Free" to their product packaging. Manufacturers and retailers are responding to their customers' call for clear labeling, and U.S. based Whole Foods Market even announced it will require partners to label GMOs by 2018.



## About Top Health Ingredients and the non-GMO movement

THI initially entered the non-GMO ingredient supply market in 2009 with a GMO-free soluble corn fiber (isomalto oligosaccharide), seeing a need in the marketplace for optional fibers and GMO-free ingredients. Initially, THI focused on the natural food, beverage and supplement markets, generally the early adopters of new ingredients. As the demand for non-GMO ingredients has increased, so has the company's product line, which now includes an expanded list of GMO-free, gluten-free and vegan proteins, fibers and sweeteners.

THI works with personnel in China to assist with sourcing, monitoring and ongoing communications with its suppliers and plants in the region. It has developed deep relationships within its supply chain and has a reputation for putting quality first. Understanding regulatory requirements and future trends and then communicating those requirements within its supply chain has been a key factor in THI's success. In fact, the organization has been tapped to assist its partners with regulatory issues ahead of much larger companies because, in the words of one vendor, THI is "... more sophisticated in terms of regulation/certification issues." THI is proud of this reputation as the "go-to" company for non-GMO ingredients.

THI believes that supporting non-GMO is one way to excel in quality—and the growth of non-GMO shows that using non-GMO ingredients isn't just a trend; it's a profitable business decision. "Expansion of Non-GMO Verified products on shelf in the past 52 weeks has resulted in \$2.4 billion of sales—an 85 percent increase over the \$1.3 billion the previous year," according to SPINS. GMOs, once a topic of scientists, organic farmers and a few industry insiders, have captured the attention of consumers and even landed on the ballot.

As a leading supplier of non-GMO ingredients, THI has witnessed this dramatic swell in the demand for information and supply of non-GMO ingredients. "While non-GMO has been important and relevant to some individuals and organizations, particularly in the natural and organic marketplaces for years, we are now seeing a tidal wave of interest from mainstream consumers and markets as awareness of GMOs in the U.S. continues to rise," said THI CEO, Kimmo Lucas. "When we began supplying non-GMO ingredients four and a half years ago, non-GMO was an 'after-thought'. Now it has become a primary driver for our customers. This increase in demand is driven by consumers' awareness and by their response."



## GMO-free vs. non-GMO: What's the difference?

Since GMO labeling and certification participation are still voluntary, shoppers face choices in the grocery aisle. GMO-free? Non-GMO? Non-GMO Project Verified? What is the difference between these labels?

To the industry, “GMO-free” generally indicates that a product or ingredient has never been genetically modified and testing at source by third parties is completed to confirm that source ingredients are PCR negative. This method, qPCR, is used to detect specific GMO events by screening elements or markers on the source ingredient (for example, the corn, soy or sugar stalk from which the final product is derived.) A non-GMO label on the other hand may indicate a test only of the finished product. While both tests are not foolproof, testing only on a finished product leaves room for speculation as to whether the processing to reach a final product may have degraded the GMO genes making them “untraceable.” Erythritol and maltodextrin are two examples that fall into this category.

Standards set out by legislation or by approved certification agencies can help address how to describe products and related terminology. One organization that addresses consumer concern and labeling is the Non-GMO Project ([www.nongmo-project.org](http://www.nongmo-project.org)), a non-profit organization committed to preserving and building sources of non-GMO products, educating consumers and providing verified non-GMO choices. The Project has specific guidelines related to verification processes and provides those companies who comply with the process their “Non-GMO Project Verified” seal of approval, which can be used on product packaging. And while the availability of completely GMO-free finished products would be ideal, experts concur that there needs to be a mutually agreeable level of acceptable amounts of GMOs in products since currently, complete traceability and removal from finished products is nearly impossible. (An estimated 90 percent of North American soy, corn and canola crops are genetically modified.)



## Labeling and the effects of non-GMO demand for ingredient supply

In an environment where legislation could require labeling of GMOs, some manufacturers will simply choose to label their products as “containing GMOs” and rely on their brand equity to preserve sales. Others will choose to reformulate their products, substituting with non-GMO ingredients or avoiding typically GM ingredients. (Lists vary but generally include tomatoes, soybeans, corn, rice and vegetable oil).

Since many of the main crops in North America have been genetically modified, particularly corn and soy, companies seeking non-GMO status will likely need to develop relationships with global suppliers of non-GMO crops. Substituting with non-GM ingredients can be daunting, as it may require companies to move away from longheld relationships with GM ingredient suppliers. It may require changes to purchasing policies within the organization and price and revenue review and adjustments. It will certainly require patience as new non-GMO ingredients are sourced and tested.

In response to all of these needs, manufacturers must seek suppliers/ingredient manufacturers who are prepared to ease this transition. Branding, taste and marketshare are all at stake for food companies who decide to reformulate. They need to assure that new ingredients meet their quality standards, are free of contaminants and that supply is guaranteed. Supplier and food manufacturer communication is the key to a successful relationship.

Food and supplement companies should be clear about their needs: price points, volumes, deadlines, testing procedures and certifications. And suppliers need to be diligent in their pursuit of meeting these needs while communicating any issues or concerns to the manufacturer, as they are known.

With the pending legislation change in the U.S., manufacturers also need to seek out suppliers able to comply with Food Modernization Safety Act (FMSA) and the resultant Foreign Supplier Verification Program (FSVP). The challenge with global markets is the predominance of “trading companies” that may wish to blind their plant/ingredient manufacturer to potential customers as a way of ensuring the customer doesn’t go directly to the manufacturer. While this may seem a reasonable decision from an account perspective, it can prove lethal to the U.S. food manufacturer who will shoulder liability for potential problems with the product, particularly as FSVP is engaged. Working with companies experienced in securing global food manufacturing contracts can dramatically reduce time and effort and can increase compliance with U.S. regulatory bodies.

While the details of the above legislation are yet to be finalized, what is clear is that more responsibility will be placed on all parties to ensure that documentation is regularly gathered and available for review by the FDA.

There is good news, says Debbra DeMarco, Vice President at THI.

*Sourcing ingredients from developing countries, even if they are GMO-free, does not immediately mean higher pricing. And in fact, some ingredients may be less expensive. When companies work with an experienced ingredient supplier, they benefit from their existing relationships and contacts within the industry. Going no-GMO will almost certainly mean GOING GLOBAL. And for some companies that means overcoming possible language barriers and focusing on quality control, product safety, FDA and Customs demands, testing protocols, shipping, packaging, substitutions and supply relationships.*



## Succeeding and leading in the non-GMO ingredient market

Growing numbers of consumers are reading packages and labels—for everything from levels of sugar, salt, fat and fiber to GMOs. Retailers and manufacturers risk losing customers if purchasers suspect they aren't getting the "whole" picture. North Americans in particular have plenty of choices—the bulging aisles in our supermarkets attest to that.

This is a relatively new and quickly growing market without a lot of "standards" in place. Whenever

you have this combination, there is room for interpretation and, unfortunately, misinformation and even corruption. Multiple agencies now offer "non-GMO" certifications for food ingredients, but test methodologies have yet to be standardized. In order for the labeling movement to be successful, it is important that agreed upon standards are developed and the unscrupulous organizations, weeded out.

According to THI's Lucas:

*Transparency is key. You need to work with folks you can trust. Transparency means being open with customers about quality programs and certifications. From a non-GMO perspective, it means disclosing the testing results of the raw input material and proving that identity preservation programs are in place. It also means that if a supply issue arises and a qualified second source is available—which should be part of any ingredient supplier's capability—that the ingredient isn't substituted without its clients' approval. Unfortunately, there are numerous examples within the industry of suppliers willing to pass off ingredients made by a different manufacturer. THI works with and on behalf of their customers in North America to source and supply GMO-free ingredients. We are based in Canada, and have warehouses in the U.S. and people in Asia to manage relationships there. We know our market and are constantly building long-term relationships with high-quality ingredient manufacturers. Our customers' needs come before our relationship with any specific ingredient plant or manufacturer.*

Reaching beyond the "documentation" stage with potential supply manufacturers is critical to success. Visiting the plants—the sources for the ingredients—is vital to gaining an understanding of the plant's capacities and any potential risks that exist for customers, whether that is transportation issues,

safety issues or quality issues. THI customers have come to expect this. Certification methods vary widely geographically and it is important that there is continuous review and verification to ensure compliance and truth in labeling to consumers.



## Conclusion

The non-GMO movement isn't going to disappear. Forward-thinking organizations are now aware that GMO labeling is no longer an "if" but a "when." It is going to happen and they are positioning their brands appropriately. Whether or not people believe they should or should not be consuming GMOs, it is about consumers demanding to know what is in the food they eat. This translates into a need for transparency whether labeling occurs voluntarily or through legislation.

Working with the right people who have experience in the industry and the global supply market is essential. Exposing your company to unnecessary risk through poor verification or inappropriate labeling is avoidable. When you make statements, they need to be based on proven fact. That means asking the right questions and ensuring the proper documentation and evidence are provided. If the proper response isn't secured, it means working with a potential ingredient manufacturer to obtain compliance—or making a decision to look elsewhere. Considering the marketshare at stake, it is wise to get in the game early and secure quality suppliers for non-GMO ingredients.