Does Corn By Any Other Name Taste As Sweet?

Within the Consolidated and Further Continuing Appropriations Act, 2013, is the section "Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act" and a small but controversial Farmer Assurance Provision, Section 735, also known as the "Monsanto Protection Act." This Provision, initially introduced on June 2012 and approved by Congress on March 24, 2013, has been dubbed by fierce critics as "the most dangerous food act ever" and a "terrifying piece of policy."[i] Food and consumer groups assert that the Provision protects genetically modified (GM) seed manufacturers from litigation regardless of consumer health risks, thereby undermining the judiciary's authority to regulate the growing of genetically engineered crops.[ii] Although the bill is only active for six months, U.S. food safety groups and consumers have petitioned for the bill's veto, and even mainstream news sources have cried foul, alleging that Monsanto, a multinational agricultural biotechnology corporation and leading producer of GM seed, secretly wrote and inserted the Provision into the bill in time for President Obama's signature on March 29, 2013.

Conspiracy theories aside, genetically modified organisms (GMOs) have received much attention in recent years, yet the concept of genetically engineering (GE) food is not new – U.S. farmers began growing GMOs in 1994 and now plant about 165 million acres of crops annually, including almost all U.S. plantings of corn, soybeans, canola and cotton. As a result, food manufacturers estimate that, for more than a decade, about 70-75 percent of processed foods contain at least one ingredient harvested from a GMO crop.[iii] In 2012, GMO crops grew on about 420 million acres of land in 28 countries worldwide – while the U.S. is consistently the largest GMO crop producer, Brazil, Argentina, Canada and India, among other countries, certainly contribute to this statistic.[iv] To be sure, GMOs should not be confused with the centuries-old practice of cross-breeding plant genes to produce new species of produce, such as tangelos and grapples; rather, GMOs are produced through biotechnology and laboratory-conducted genetic engineering and alteration.[v]

Despite their permanence, GMO crops and resulting products remain topics of intense debate. One of the most fiercely contested issues within the overarching topic of whether GMOs are beneficial is GMO food labeling – in the U.S. there is no national labeling standard, and individual states have started their own labeling initiatives; likewise, global countries generally do not have labeling standards or requirements specific to GMO food, yet the European Union, Japan, China and Russia require labeling of products containing GMOs. The Food and Drug Administration (FDA) does not formally regulate GMOs, but rather relies on food companies to correctly label their products in the interest of public safety. The public mind is divided on whether food companies will uphold this duty, and whether GMOs are truly safe.

A Multi-Faceted Debate

Given the relative "newness" of wide-spread experience with GMOs, great speculation surrounds the advantages and disadvantages of genetically modifying plants and animals. For example, one of the most common arguments against GMOs is that consumption of these foods is harmful. However, there is no reliable evidence that GMOs pose any health risk, and numerous governmental and scientific agencies have conducted reviews without any resulting health

concerns. Also, GMOs "enter our food supply primarily as highly processed ingredients that are essentially free of the engineered DNA and its protein products. High-fructose corn syrup and corn oil made from GE corn, soybean oil from GE soybeans, and sugar from GE sugar beets are identical to ingredients made from non-GE crops."[vi]

Undoubtedly, there are several benefits to genetically modifying crops, including creating crops that are better resistant to pests and disease, and more tolerant of changing or severe climate conditions. Crops can be modified to resist specific herbicides, allowing for greater control over weeds. Crops also grow more quickly, allowing for more frequent harvesting, and supposedly have been engineered to be more nutritious and better tasting.

According to the International Service for the Acquisition of Agribiotech Applications (ISAAA), GMO crops have reduced the use of pesticides, saved on fossil fuels, decreased carbon dioxide emissions, and "made a significant contribution to the income of >15 million small resource-poor farmers" in developing countries; these farmers now make up over 90 percent of all farmers growing GMO crops.[vii] Farmers both within and outside the U.S. have benefited from GMO crops – U.S. cotton farmers using GMO seeds have significantly reduced their use of highly poisonous insecticides, as have small-scale GMO cotton farmers in India and China, which has allowed small-scale farmers increased yields and higher income.[viii]

And, while not the primary solution, the greatest benefit associated with GMOs is the potential power to feed the world's hungry, ending poverty and malnutrition. GMO crops could greatly enhance food security in developing countries, and under proper conditions GMO crops could continue to help farmers in developing countries increase yields, resulting in greater production and profit. Studies have shown that yield increases are greater for farmers in developing countries: "The average yield increases for developing countries range from 16 percent for insect-resistant corn to 30 percent for insect resistant cotton, with an 85 percent yield increase observed in a single study on herbicide-tolerant corn."[ix]

GMO opponents have an equally long laundry list of reasons why genetically modified food must be banned, or at least regulated. First and foremost are the unknown and unexpected side-effects that may arise from consuming GMOs. While there exists no current scientific proof that GMOs jeopardize human health, significant research has not been conducted to scrutinize all possibilities. Skeptics believe that the FDA has put too much trust in the food companies to decide if their ingredients are safe: "Companies developing new ingredients, new versions of established ingredients, or new processes for producing a food or food ingredient, must make a judgment about whether the resulting food substance is a food additive requiring premarket approval by FDA."[x]

Studies have been conducted that directly contradict the benefits cited in support of GMOs. The U.S. Department of Agriculture (USDA) partially funded a study that analyzed maize grain yield data from 1990-2010 and concluded that genetically modified seeds do not necessarily result in higher crop yields.[xi] And a 2012 study conducted by Washington State University showed an overall increase in pesticide use on GMO crops due to weeds developing a resistance to herbicides like Monsanto's Roundup, resulting in use of stronger, more-toxic herbicides.[xii] Along this same line is the possibility for crop contamination and general ecological damage – pollen

from the modified crops may spread to wild plants, creating new, modified, herbicide-resistant plants that cannot be controlled by nature; similarly, herbicide over-use may cause pollution of waterways and the fish and animals living within. Opponents fear that introducing genes to make crops pest resistant may make these crops equally poisonous to beneficial insects and animals, which could ultimately lead to a reduction in species diversity or even extinction.

Particular attention recently has been given to how this debate has evolved in Hawaii, specifically regarding the ethics of patenting genetically engineered plant life, and open air testing of crops by Monsanto, Dow AgroSciences, Syngenta, DuPont Pioneer and BASF. These five companies are the world's largest biotechnical and chemical companies who have the world's greatest concentration of GMO research fields in Hawaii. In March 2013, Hawaii's House Bill 174, which prohibits the sale or distribution of genetically engineered whole food in the State unless appropriately labeled as genetically engineered or produced or partially produced with genetic engineering, was passed in the House of Representatives and placed before the Senate[xiii]; there are at least a dozen other Hawaiian bills similarly seeking to regulate, limit and/or ban the growth, sale and import of GMOs.[xiv] In a sense, GMOs represent looting and loss of control to small, native farmers, especially in relation to the taro crop: taro is a traditional staple crop and, perhaps most importantly, revered as the first ancestor of the Hawaiian people; genetic engineering of taro is banned in Hawaii, but the crop may nonetheless be affected by GMO crop cross-pollination or insect resistance.[xv]

In addition to Hawaii, 29 other states have either partially passed or introduced legislation, or have concerted campaigns targeting GMO food labeling. For example, Vermont's H.112 bill was passed on May 11.2013 by its House of Representatives, and Connecticut's HB 5117 was approved by its House of Representatives on May 24, 2013. Other states with pending legislation include Massachusetts, Minnesota, New Jersey, North Carolina, Oregon, Rhode Island, Virginia, and Washington. Likewise, even though the majority in California voted against Proposition 37, the Right to Know campaign continues to support Prop. 37 initiatives. Similarly, groups and organizations in Arizona, Colorado, Florida, Idaho, Michigan, New York, Ohio, Tennessee, and Utah, in addition to individual corporations throughout the country, are all working to protect consumers' rights and promote GMO labeling.[xvi] As even some GMO proponents have stated, consumers have rights and deserve to know what is in their food.[xvii]

What the Future Holds

As outlined above, numerous unknowns surrounding GMOs still exist - the debate over whether to label GMO food will undoubtedly continue for some time, and with an uncertain outcome. With the debate comes several liability issues of which anyone within the food product chain should be aware.

Consumers bringing lawsuits alleging that products labeled "all natural" really contain unnatural ingredients have become more common in recent years. In terms of whether or not products containing GMO substances may still be considered natural, the FDA admits that, scientifically speaking, it does not have an actual definition of "all natural" because the food has likely been processed to some extent: "FDA has not developed a definition for use of the term natural or its derivatives. However, the agency has not objected to the use of the term if the food does not

contain added color, artificial flavors, or synthetic substances."[xviii] Further, acknowledging the controversial nature of GMOs, "FDA plans to announce, in a future Federal Register notice, a workshop to discuss specific scientific issues."[xix] To date, the USDA has issued notices seeking comments on genetically engineered plant pests in connection with corn, maize, soybeans, and alfalfa, and sharing certain business information with state and tribal governments, but an actual FDA workshop to discuss GMO science has not been noticed.[xx] While the Environmental Protection Agency (EPA) monitors the use of pesticides and the USDA monitors crops, coordination between these two agencies with the FDA is severely lacking.

Labeling critics argue that, even if GMO food is correctly labeled, consumers may not read the information, causing people with allergies to consume foods to which they are allergic based on the added GMO substance, or causing vegetarians or vegans to consume plant-based foods containing animal genes. Consumers may have viable causes of action against anyone in the GMO distribution chain: seed companies, farmers, manufacturers, retailers, and restaurateurs. The same would be true should it be discovered that GMOs are in fact detrimental to human health.[xxi]

Notwithstanding allergy issues, anyone named in a GMO lawsuit should be able to either file a motion to dismiss for failure to state a claim, or have plaintiff's purported expert testimony excluded, as no one is able to conclusively say that GMOs are harmful; there are also no GMO labeling requirements per the Food Safety Modernization Act, and no individual state labeling initiatives to date have passed (several are working through the legislative process). Given that there is no national standard, individual state initiatives, should any become law, may subject companies to varying labeling rules throughout the country. A national labeling standard, though, must temper actions taken by the states, working with the states rather than either implementing a weaker national standard, or preempting state efforts with a stricter standard as neither effort will serve the intended purpose.

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