

## 1: A List Of GMO Foods: The Basics - Redorbit

*Genetically Modified Food is defined as food items that has had their DNA changed through genetic engineering. Unlike conventional genetic modification that is carried out through time-tested conventional breeding of plants and animals.*

GM plants are much more common than many people realize too. Here is a list of the 10 most common GMO foods so you can be more aware while grocery shopping. This increased resistance to the herbicide allows farmers to use more Round Up to kill weeds. However, this results not only in a genetically modified food product, but also a food product loaded with more chemicals. Most of this corn is going to be used for human consumption. Genetically modified corn has been linked to health problems, including weight gain and organ disruption. Canola oil Canola oil is derived from rapeseed oil. It is considered one of the most chemically altered oils sold in the US. Cotton Even cotton has been genetically modified to increase yield and resistance to disease. Most concern relates to the cotton oil. Cotton originating from India, and China, in particular, is considered higher risk for personal health. Milk One fifth of the dairy cows in the United States have been given growth hormones to help them grow faster and increase their yield. These hormones can be found in some of the milk produced by these cows. These growth hormones have been shown to act inside the human body. Sugar Genetically modified sugar beets were introduced to the US market in These sugar beets are modified to resist Roundup, like corn. Aspartame Aspartame is an artificial sweetener used instead of sugar by many people. There is some question concerning the the safety of aspartame in the body, including its possible link to certain cancers. Aspartame is manufactured from genetically modified bacteria. Zucchini Genetically modified zucchini contains a toxic protein that helps make it more resistant to insects. This introduced insecticide, has recently been found in human blood, including that of pregnant women and fetuses. This indicates that some of the insecticide is making its way into our bodies rather than being broken down and excreted. Yellow squash Yellow squash has also been modified with the toxic proteins to make it insect resistant. This plant is very similar to zucchini, and both have also been modified to resist viruses. Papaya Genetically modified papaya trees have been grown in Hawaii since These Papayas are sold in the United States and Canada for human consumption. These papayas have been modified to be naturally resistant to Papaya Ringspot virus, and also to delay the maturity of the fruit. Delaying maturity gives suppliers more time to ship the fruit to supermarkets. These are just 10 of the most prevalent GMO foods found in the supermarket. There are many others currently for sale and being grown for the market. GMO safety is not yet certain , so if you want to stay away from it always keep an eye out for a label that indicates food is organic or non-GMO. You might be interested in:

## 2: Top 20 Foods and Products that have been Genetically Modified

*Genetically modified foods (GMO foods) have been shown to cause harm to humans, animals, and the environment, and despite growing opposition, more and more foods continue to be genetically altered.*

Genetically modified foods are something that inspires passions on both sides of the debate. On one side of the equation, foods that have been genetically modified can be grown in a number of different non-traditional locations and provide higher yields. This means that more people can be fed and world hunger can potentially be eliminated. On the other end of the spectrum is the fact that food allergies are dramatically on the rise and the genetic modifications to food are thought to be at least partially to blame. There are certainly some advantages to the creation of genetically modified food and there are also some disadvantages that must be considered. These lists will help everyone be able to begin forming their own position in this ongoing debate. The primary advantage of genetically modified food is that it can be grown virtually anywhere. Here is a list of some additional pros to consider on the subject as well. Foods that have been improved genetically tend to have an improved stress tolerance, allowing them to withstand drought or harsh and unexpected climate conditions. Genetic modifications can put in more vitamins and minerals into the food chain, helping everyone have a healthier overall diet. Although its controversial, it may be possible to have genetic modifications in food that would incorporate specific vaccines or medication into the food supply so that human disease could be proactively treated. Genetic modifications allow for crops to be more resistant to herbicides, pesticides, and other crop treatments that would normally harm the plant. Foods that are genetically modified have the potential of being engineered so that they can taste better. Higher yields can be produced from the same land even in just one harvest because the plants are engineered to provide more consistent results. Foods that have been genetically engineered are typically able to stay fresher for longer, giving them longer shelf lives and this produces less overall food waste. It provides consistent pricing because crops are less affected by weather changes, drought, or climate issues in general. Genetically modified food has changed the way we all think about eating. By being able to create higher yields, more people can be fed. This also means that crop lands and livestock farms can be more productive and this could lead to an increase in the overall wealth of farmers who are embracing genetic modifications. The primary disadvantage of having genetically modified food is that there can be several unexpected side effects throughout the entire food chain. People consuming the food may develop allergies or other long-term health conditions. The chemical compounds in the plants may go into their fruits in various amounts, creating an inconsistent food chain. These other disadvantages may also need to be considered. Without labels on foods that are genetically modified, people are unable to make the eating choices they wish to make. There is no knowledge about whether the foods are GMO or not. There are safety issues with GMO foods that have not been addressed. It is not known if genetic manipulation or spraying dangerous insecticides directly on our food is safe short or long term. People may eating animal protein items while eating vegetables because of genetic modification, which may be against their religious preferences, their eating preferences, or even cause a medical emergency if they have a food allergy already present. It reduces the diversity of each plant species because herbicide and pesticide resistance may also kill the beneficial insects that help to pollinate plants. Ecological damage happens to the soil that supports GMO crops over time, robbing it of its resources to the point that it can no longer sustain life. Crops that do not have genetic modifications may also be affected by the natural cross-pollination process. The cost of developing the genetic modifications may even make some crops more expensive to grow. Resistance to herbicides and other crop treatments leads to higher chemical use to get the same results, eventually causing insects and weeds to grow anyway. The chemicals that are introduced into some genetically modified food may wash into the water supply during storms or extended periods of rainfall. Many genetic modifications are patented, making it less cost effective to feed the hungry or end malnutrition from a global perspective. It has not been proven that GMO offer better yields for farmers. It could be said that the consumption of genetically modified food means that people are trading food for food-like products. If used properly, the science behind genetically modified food could be used to end hunger. If used improperly,

## GENETICALLY MODIFIED FOOD LIST pdf

the science could be misused and potentially endanger are entire food supply. This means that if we are to pursue this field of food science, we must have responsible management of the research being done and have third party independent verification and monitoring of results so that it becomes possible to distinguish fact from fiction. Use this pros and cons list about genetically modified food to think about the subject today. What you put into your body becomes part of who you are.

### 3: Genetically Modified Food: GM Foods List and Information - Disabled World

*Genetically modified material sounds a little bit like science fiction territory, but in reality, much of what we eat on a daily basis is a genetically modified organism (GMO). Whether or not these modified foods are actually healthy is still up for debate.*

URL of this page: Scientists take the gene for a desired trait in one plant or animal, and they insert that gene into a cell of another plant or animal. Function Genetic engineering can be done with plants, animals, or bacteria and other very small organisms. Genetic engineering allows scientists to move desired genes from one plant or animal into another. Genes can also be moved from an animal to a plant or vice versa. Another name for this is genetically modified organisms, or GMOs. The process to create GE foods is different than selective breeding. This involves selecting plants or animals with desired traits and breeding them. Over time, this results in offspring with those desired traits. One of the problems with selective breeding is that it can also result in traits that are not desired. Genetic engineering allows scientists to select one specific gene to implant. This avoids introducing other genes with undesirable traits. Genetic engineering also helps speed up the process of creating new foods with desired traits. The possible benefits of genetic engineering include: More nutritious food Disease- and drought-resistant plants that require fewer environmental resources such as water and fertilizer Less use of pesticides Increased supply of food with reduced cost and longer shelf life Faster growing plants and animals Food with more desirable traits, such as potatoes that produce less of a cancer-causing substance when fried Medicinal foods that could be used as vaccines or other medicines Some people have expressed concerns about GE foods, such as: Creating foods that can cause an allergic reaction or that are toxic Unexpected or harmful genetic changes Genes moving from one GM plant or animal to another plant or animal that is not genetically engineered Foods that are less nutritious These concerns have proven to be unfounded. None of the GE foods used today have caused any of these problems. They assess the safety of GE foods to humans, animals, plants, and the environment. Most of these are used to make ingredients for other foods, such as: Corn syrup used as a sweetener in many foods and drinks Corn starch used in soups and sauces Soybean, corn, and canola oils used in snack foods, breads, salad dressings, and mayonnaise Sugar from sugar beets Other major GE crops include:

### 4: The 8 Most Common Genetically Modified Foods: Are You Still Eating Them?

*Genetically modified foods (GM foods), also known as genetically engineered foods (GE foods), or bioengineered foods are foods produced from organisms that have had changes introduced into their DNA using the methods of genetic engineering.*

Genetically modified yeast has been related to increase in headaches and allergies. Cassava Cassava is a starchy plant like potato that is consumed by many people across the globe like Africa. The first GMO cassava plant was engineered in Cassava was supposed to be a virus and pest resistant but farmers reported that in few years the GMO cassava would lose their anti-virus resistant quality. Papaya and Banana Papaya was first genetically modified in Hawaii and introduced to the market in Also majority of bananas in the US are genetically modified. Artificial additives, preservatives and sweeteners Many additives, preservatives and food flavoring are genetically modified. Aspartame in diet drinks is one of the products of genetic engineering. Potatoes Genetically modified potatoes are a threat to other organic produce and their biodiversity. Studies show that mice that were fed GMO potatoes had higher toxins in their blood. Here is the summary of GMO potatoes health risks: Summary of the risks of GM potatoes Corn Most corns produced in America are genetically modified. Corn can be found is almost every processed foods in forms of high fructose corn syrup , citric acid, corn starch, corn oil and corn meal. Many food products such as many breakfast cereals , infant formula , salad dressing, bread, cereal, hamburgers, mayonnaise, veggie burgers, meat substitutes , soy cheese, tomato sauce, crackers, cookies, chocolate, candy, fried food, protein powder, baking powder, alcohol, vanilla, powdered sugar, peanut butter, ice cream, frozen yogurt, tofu, tamari, soy sauce, enriched flour and pasta have high levels of GMO corn. GMO corns have been related to infertility , tumors, and increase in food allergies. Tomatoes are genetically modified to last longer and not get rotten quickly. GMO tomatoes have been related to premature death in lab rats. Squash Squash was genetically modified to become more resistant against viruses and bacteria. However the cucumber cockroaches love to feed on GMO squash and start wounding the leaves and leaving open holes on them. Some experts also believe that GMO squash have been blended into the wild plant and that might increase the chances of new pathogens and bacterial diseases. Oils Most vegetable oils used in production of processed foods are genetically modified. Cotton seed oil, corn oil and soy oil are mostly genetically modified and produced in US, India and China. Also most canola crops in Canada have also been genetically modified. Before genetic modification, canola oil or rapeseed oil was too bitter to be used in foods. Keep in mind that the best healthy oil for cooking is organic grapeseed oil and the best cold-pressed oil for salad dressing is olive oil. Most cows , pigs and chickens maize on GMO corn and soy except the ones that are certified organic or grass fed. Also most dairy products in US are produced from animals that have been injected with rBGH growth hormones and antibiotics. Salmon GMO salmon grows a lot faster than wild salmon and it grows twice as size. AquAdvantage is the GMO salmon that can be grown as farmed fish. Many environmentalists and scientists are worried that GMO salmon could have negative impact on the environment and mutate over time. Wild salmon is low- mercury fish and the safest to consume. Giant salmon will be first GM animal available for eating Peas Genetically modified peas are created by inserting kidney beans genes into the peas DNA and creating a protein that functions as a pesticide. Studies show that genetically modified peas can cause lower immune system in human beings. Alfalfa Genetically modified alfalfa could be a serious threat to organic sustainable agriculture. Alfalfa has been found to be an amazing source of nitrogen for the soil and increasing fertility. Don Huber found a new mysterious organism in crops that were treated with Roundup. This new organism can cause disease in crops, increase infertility and potentially harm the US food supply. He wrote a letter to Tom Visak, the former secretary of agriculture who was called the governor of the year by biotech companies, to put a halt on Roundup until further studies are performed but his letter was ignored and never replied. Approving genetically modified Alfalfa can increase the chance of cross-contamination since alfalfa is pollinated by insects. In few years, the new gene can contaminate all the crops in America and that could be a serious threat to organic sustainable agriculture. Coli bacteria and inserting it into pigs. However there are still concerns among the scientific community about the

environmental impacts of GMO pigs and their safety for human consumption. Major Canadian food processor says no to GM Enviropig

### 5: 12 Pros and Cons of Genetically Modified Foods | Flow Psychology

*Chipotle announced Monday that the chain will no longer serve food containing genetically modified organisms (GMO), raising the bar for transparency in the United States, where there's no.*

For some, the idea of GMO food is a good one because the modifications allow crops to become resistant to drought and infestations, letting more people have more regular meals. Others look at genetically modified foods as a dangerous proposition. From allergic reactions to potential intestinal damage, many people wish to avoid GMO foods because of animal studies that have shown changes in internal cell structure, abnormal tumor growth, and unexpected deaths that have occurred. So what exactly are the pros and cons of genetically modified foods? Better overall quality and taste. Through the modification of foods, the flavors can be enhanced. Peppers can become spicier or sweeter. Corn can become sweeter. Difficult flavors can become more palatable. More resistant to disease. Plants and animals that have been genetically modified can become more resistant to the unexpected problems of disease. Think of it as a vaccine for that plant or animal, except that the vaccine is encoded into the genetics instead of a shot given to the immune system. GMO foods can have vitamins and minerals added to them through genetic modifications to provide greater nutritive benefits to those who eat them. This is often seen through GMO crossbreeding "weeds, for example, that can be crossed with GMO plants can often become resistant to herbicides, creating the need for more GMO efforts. There is no economic value. GMO foods take just as long to mature and take just as much effort to grow, meaning that there is no real economic value to growing GMO foods when compared to non-GMO foods. A growth in allergic reactions in the general population. Time and time again, studies have shown that the consumption of GMO foods increases the risks of food-based allergies in people. If someone develops an allergy to soy because of GMO efforts, then if livestock eats that GMO soy as well, that person would have a high probability of an allergic reaction from eating the animal meat. Do the Benefits Outweigh the Risks? Why evaluate the pros and cons of genetically modified foods? The answer to this is, the benefits need to outweigh the risks when it comes to their mass production. In some areas, having access to GMO foods may make sense because resources are thin and people are dying from hunger. In other areas, however, the risks may outweigh the rewards. Where do you stand on GMO foods?

## 6: List of genetically modified crops - Wikipedia

*Genetically modified vegetables have been engineered to possess qualities that are not naturally present in the food. Scientists are able to take the genes from one plant or animal and insert them into the DNA of another, making the modified organism grow faster and larger, or to be more resistant.*

Definition[ edit ] Genetically modified foods are foods produced from organisms that have had changes introduced into their DNA using the methods of genetic engineering as opposed to traditional cross breeding. Foods produced from or using GM organisms are often referred to as GM foods. History of genetic engineering Human-directed genetic manipulation of food began with the domestication of plants and animals through artificial selection at about 10,000 to 10,000 BC. The first genetically modified plant was produced in 1982, using an antibiotic-resistant tobacco plant. Scientists modified bacteria to produce chymosin, which was also able to clot milk, resulting in cheese curds. The agency considers the mushroom exempt because the editing process did not involve the introduction of foreign DNA. By some weed populations had evolved to tolerate some of the same herbicides. Palmer amaranth is a weed that competes with cotton. A native of the southwestern US, it traveled east and was first found resistant to glyphosate in 2000, less than 10 years after GM cotton was introduced. Genetic engineering Genetically engineered organisms are generated and tested in the laboratory for desired qualities. Less commonly, genes are removed or their expression is increased or silenced or the number of copies of a gene is increased or decreased. Once satisfactory strains are produced, the producer applies for regulatory approval to field-test them, called a "field release. If these field tests are successful, the producer applies for regulatory approval to grow and market the crop. Once approved, specimens seeds, cuttings, breeding pairs, etc. The farmers cultivate and market the new strain. In some cases, the approval covers marketing but not cultivation. According to the USDA, the number of field releases for genetically engineered organisms has grown from four in 1992 to an average of about 10 per year. Cumulatively, more than 170, releases had been approved through September 2013. Its single-handed savior was a breed engineered to be resistant to the virus. It was withdrawn in 1994 after retailers rejected it and food processors ran into export problems. The potato was made resistant to late blight by adding resistant genes blb1 and blb2 that originate from the Mexican wild potato *Solanum bulbocastanum*. Importation into Hawaii is banned for "plant sanitation" reasons. Simplot Company that contained ten genetic modifications that prevent bruising and produce less acrylamide when fried. The modifications eliminate specific proteins from the potatoes, via RNA interference, rather than introducing novel proteins. Corn-based masa flour and masa dough are used in the production of taco shells, corn chips and tortillas. Pure starch is a white, tasteless and odourless powder. It consists of two types of molecules: Maltodextrin, a lightly hydrolyzed starch product used as a bland-tasting filler and thickener. Various glucose syrups, also called corn syrups in the US, viscous solutions used as sweeteners and thickeners in many kinds of processed foods. Dextrose, commercial glucose, prepared by the complete hydrolysis of starch. High fructose syrup, made by treating dextrose solutions with the enzyme glucose isomerase, until a substantial fraction of the glucose has been converted to fructose. Lecithin[ edit ] Lecithin is a naturally occurring lipid. It can be found in egg yolks and oil-producing plants. Corn, soy and safflower oil are sources of lecithin, though the majority of lecithin commercially available is derived from soy. After deregulation in 1996, glyphosate-resistant sugar beet was extensively adopted in the United States. There is a vanishingly small amount of protein or DNA from the original crop in vegetable oil. The refining process [96] removes all, or nearly all non-triglyceride ingredients. The length of a fatty acid influences its fat absorption during the digestive process. Fatty acids in the middle position on the glycerol molecules appear to be absorbed more easily and influence metabolism more than fatty acids on the end positions. Unlike ordinary fats, MCTs are metabolized like carbohydrates. They have exceptional oxidative stability, and prevent foods from turning rancid readily. What remains after oil extraction is a meal that becomes an ingredient in animal feed and contains canola protein. The high-protein defatted and toasted soy meal becomes livestock feed and dog food. It is impossible to tell if an animal was fed GM soy just by looking at the resulting meat, dairy, or egg products. The only way to verify the presence of GMOs in animal feed is to analyze the origin of the feed

itself. The studies included in the review ranged from 90 days to two years, with several of the longer studies considering reproductive and intergenerational effects. These enzymes may also provide benefit to the gut microbiome of an animal, as well as hydrolyse antinutritional factors present in the feed. Originally it was available only from the fourth stomach of calves, and was scarce and expensive, or was available from microbial sources, which often produced unpleasant tastes. Genetic engineering made it possible to extract rennet-producing genes from animal stomachs and insert them into bacteria, fungi or yeasts to make them produce chymosin, the key enzyme. Chymosin is isolated from the fermentation broth, so that the Fermentation-Produced Chymosin FPC used by cheese producers has an amino acid sequence that is identical to bovine rennet. Trace quantities of chymosin may remain in cheese. Genetically modified livestock Genetically modified livestock are organisms from the group of cattle, sheep, pigs, goats, birds, horses and fish kept for human consumption, whose genetic material DNA has been altered using genetic engineering techniques. In some cases, the aim is to introduce a new trait to the animals which does not occur naturally in the species, i. A review published on behalf of Food Standards Australia New Zealand examined transgenic experimentation on terrestrial livestock species as well as aquatic species such as fish and shellfish. The review examined the molecular techniques used for experimentation as well as techniques for tracing the transgenes in animals and products as well as issues regarding transgene stability.

## 7: Genetically Modified Foods

*GMOs - genetically modified organisms - have been the topic of many food discussions. With so much talk of GMOs and GM foods, you may be surprised to know there are currently only eight genetically modified crops available in the United States and Canada.*

For some people, the idea of this technology is a good thing for many reasons, such as it allows crops to become resistant to infestations and drought, providing for more regular meals for us. In fact, research indicates that the world today is already producing more food than it needs to produce to provide each person with 3 squares each day. But for others, this technology is regarded as a dangerous proposition, arguing that it carries many risks, from allergic reactions to potential intestinal damage. It is also said that many people try to avoid these types of food because of the findings of animal studies that show abnormal tumor growth, changes in internal cell structure and occurrence of unexpected deaths. To come up with a good idea whether GMOs are generally beneficial to society or not, it is best to have an in-depth look into their pros and cons.

**List of Pros of Genetically Modified Foods**

1. They offer better overall quality and taste. By modifying food, its flavors can be enhanced. For instance, corn can become sweeter and pepper can become spicier. In fact, it can make difficult flavors become more palatable. They come with lowered the risk of crop failure. Seeds are being genetically altered for many reasons, including improved resistance to insects and better crop health. Genetically modified crops can also better resist extreme weather conditions. All these things mean lower risk of crop failure. They are more resistant to disease. Plants and animals that have been genetically modified for food can have better resistance to unexpected diseases. Like a vaccine, genetic enhancements are encoded into them to strengthen their immune system. They have longer shelf life. Typically, genetically modified foods have a longer shelf life than their traditional counterparts, which means that they can be safely transported to far-away regions that have no to nutritious food without the worry of them getting spoiled. They can provide more nutritional benefits. Through genetic modifications, these types of food are added with vitamins and minerals to ensure they offer greater nutritive benefits to consumers, which is really helpful in developing countries that do not always have the access to this basic need. Also, with nutrition-rich GMOs, companies will be able to supply more essential nutrients to the general population and help address worldwide malnutrition. For example, rice that is enhanced with vitamin A, known as the golden rice, now helps with reducing vitamin A deficiencies around the world. They bring about environmental benefits. In the production of GMO foods, less chemicals, machinery, time and land are being used, which means that it is helping to reduce greenhouse gas emissions, environmental pollution and soil erosion. Also, with enhanced productivity, farmers will be able to dedicate less real estate to crops, plus they are already growing potatoes, corn and cotton without spraying the bacterial insecticide, *Bacillus thuringiensis*, as GMO crops already produce their own insecticides. They are used in the creation of vaccines. According to the Food and Agriculture Organization of the United Nations FAO , the use of molecular biology in vaccination development has been successful and is holding promise. Today, scientists have already engineered plants to produce vaccines, as well as proteins and other pharmaceutical products, through a method process called pharming.

**List of Cons of Genetically Modified Foods**

1. They can also cause environmental damage. Though it is said that growing GMOs is beneficial to the environment, it also has a downside in this aspect. Genetically modified plants or livestock grown in environmental conditions that do not support them originally are believed to cause irrevocable damage to the environment. This is can be seen in the case of GMO cross-breeding, where weeds that can be crossed with modified plants can often become resistant to herbicides, which necessitates the need for more modification efforts. They can cause genes to migrate. Genes introduced in GMOs are no exception, and interactions might occur at gene, cell, plant, and ecosystem level. Problems could result if, for example, herbicide-resistance genes got into weeds. So far, research on this is inconclusive, with scientists divided often bitterly. But there is scientific consensus that once widely released, recalling transgenes or foreign DNA sequences, whose safety is still subject to scientific debate, will not be feasible. They actually offer no economic value. As food products that are genetically modified typically take just as long to mature and just

as much effort to cultivate and grow, they basically do not bring any economic value when compared to growing non-GMO foods. They can pose significant allergy risks. According to the findings of a study conducted by Brown University, genetic enhancements would often combine proteins that are not originally there in the organism, which can cause allergic reactions for people. In fact, GMOs were found to have caused an increase in allergic reactions in the general population. According to the National Center for Health Statistics, food allergies in children below 18 years old jumped from 3. They have lowered resistance to antibiotics. According to Iowa State University, some genetically modified foods have built-in antibiotic qualities that boost immunity, but when they are consumed, the effectiveness would be lessened, unlike actual antibiotics. In conclusion, it is really important to evaluate the pros and cons of genetically modified foods, as we need to try to outweigh the risks when it comes to producing them in huge volumes. In some regions of the world where resources are thin and people are suffering from hunger, having access to these types of food definitely makes sense, but in other places, the risks may outweigh the benefits. Now, where do you stand on genetically modified foods?

### 8: Genetically engineered foods: MedlinePlus Medical Encyclopedia

*Pros and Cons of Genetically Modified Foods* There is a great debate going on right now on the subject of genetically modified foods, or GMOs. For some, the idea of GMO food is a good one because the modifications allow crops to become resistant to drought and infestations, letting more people have more regular meals.

However, genetically modified organisms (GMOs) — also called genetically modified foods or GM foods — are another significant environmental issue that has disappeared in the shadows lately. Genetically modified organisms are created by taking genes from organisms such as bacteria, viruses or animals and inserting them into other, often unrelated, species. GM food refers to any food product containing or is derived from GMOs. Proponents of genetically modified foods point to their many benefits which includes: However, critics of GMOs, warn that creating new organisms, which would never occur in nature, pose serious unknown and unpredictable health and environmental risks. The Big Eight The United States is the world leader in the production of biotechnology crops accounting for nearly two-thirds of all biotech crops planted globally. Approximately 70 percent of foods in our supermarkets contain genetically engineered ingredients including products made from these most common genetically modified foods. Products that may contain GMO soy derivatives: Products that may contain GMO corn derivatives: Read more about severe illness associated with GMO soy and corn 3. Products that may contain GMO cotton derivatives: Products that may contain GMO canola: Products that may contain GMO sugar beets: Products that may contain GMO alfalfa: Products that may contain aspartame: Some of these dangers are: Allergic reactions — Genetic engineering transfers proteins into the food supply from organisms that have never been consumed before. Some of these proteins could be food allergens. Sensitive individuals would not know which foods to avoid. These genes could reduce the long-term effectiveness of antibiotics to fight disease. Development of super-weeds and super-pests — Genetically engineered plants and animals have the potential to become organisms with unwanted effects. New weeds and pests could severely reduce crop yield and would require increased use of toxic pesticides to control. Cross-contamination of organic and conventional crops — Experimental genes placed in crops will not necessarily remain contained. These genes can easily move via pollen to crops growing nearby. Foods containing GMOs are not labeled in the U. In other countries where products containing GMOs are labeled, public outcry has forced food manufacturers to remove GE ingredients. Some developing countries have rejected biotech crops as well. GMOs have already caused ecological and economic problems in some areas where they have been grown.

### 9: Genetically Modified Food Pros and Cons List - Vision Launch

*Corn starch is a highly processed corn product made from corn - genetically modified (GM) corn. It offers no nutritional value and carries all the dangers associated with GMO foods. It is used as an additive in many products and as a processed food, it creates digestive problems.*

Consumers across the United States are getting anxious about the safety of genetically modified foods. This awareness comes as no surprise as it is yet to be proven safe. In , even the U. FDA admitted in court saying it has made "no dis-positive scientific findings," about the safety of genetically engineered foods Genetically Modified Food is defined as food items that has had their DNA changed through genetic engineering. Unlike conventional genetic modification that is carried out through time-tested conventional breeding of plants and animals. Combining genes from different organisms is known as recombinant DNA technology, and the resulting organism is said to be "genetically modified," "genetically engineered," or "transgenic. Genetic modification of food is not new - For centuries, food crops and animals have been altered through selective breeding. While genes can be transferred during selective breeding, the scope for exchanging genetic material is much wider using genetic engineering. In theory, genetic engineering allows genetic material to be transferred between any organism, including between plants and animals. For example, the gene from a fish that lives in very cold seas has been inserted into a strawberry, allowing the fruit to be frost-tolerant. By far the most common genetically modified GM organisms are crop plants. But the technology has now been applied to almost all forms of life, from pets that glow under UV light to bacteria which form HIV blocking "living condoms" and from pigs bearing spinach genes to goats that produce spider silk. This food alteration was fueled by a single Supreme Court ruling. It allowed, for the first time, the patenting of life forms for commercialization. Since then thousands of applications for experimental GM organisms have been filed with the US Patent Office alone, and many more abroad. The first commercially grown genetically modified whole food crop was the tomato called Flavr Savr , which was made more resistant to rotting by Californian company Calgene. The tomatoes were released into the market in without any special labeling. In February , J. A variant of the Flavr Savr was used by Zeneca to produce tomato paste which was sold in Europe during the summer of Following GM crops included insect resistant cotton and herbicide-tolerant soybeans both of which were commercially available in Between and , the total surface area of land cultivated with GMOs had increased by a factor of 50, from 17, km<sup>2</sup> 4. Today many Gmod crops are grown in North America. India has also come aboard the bandwagon in with a rapid and continuing expansion of GM cotton varieties. Red tomato with 4 syringes stuck in it Genetically modified foods, or GM foods, are often mentioned in the news lately. European environmental organizations and public interest groups have been actively protesting against GM foods since they were first created, and recent controversial studies about the effects of genetically modified corn pollen on monarch butterfly caterpillars have brought the issues of genetic engineering plants and animals to the attention of the public. The benefits of genetically modified food crops include being able to breed disease resistant crops and herbicide tolerant strains. Genetically modified crops can also be made to include vitamins that may be lacking in some staple varieties. According to the UK Greenpeace website - The introduction of genetically modified GM food and crops has been a disaster. The science of taking genes from one species and inserting them into another was supposed to be a giant leap forward, but instead they pose a serious threat to biodiversity and our own health. In addition, the real reason for their development has not been to end world hunger but to increase the stranglehold multinational biotech companies already have on food production. Using sustainable and organic farming methods will allow us to repair the damage done by industrial farming, reducing the excessive use of fertilizer, herbicides and other man-made chemicals, and making GM crops redundant. Many scientists argue that there is more than enough food in the world and that the hunger crisis is caused by problems in food distribution and politics, not production, so people should not be offered food that may carry some degree of risk. Activists are opposed to genetic engineering as with current recombinant technology there is no way to ensure that genetically modified organisms will remain under control, plus the use of this technology outside secure laboratory environments represents multiple

unacceptable risks to both farmed and wild ecosystems. In , Brazil nut genes were spliced into soybeans by a company called Pioneer Hi-Bred. Some individuals, however, are so allergic to this nut, they go into anaphylactic shock similar to a severe bee sting reaction which can cause death. Many opponents of current genetic engineering realize that the increasing use of GM in crops has caused a power shift in agriculture towards Biotechnology companies, which are gaining more control over the production chain of crops and food, and over the farmers that use their products, as well. In , dozens of Americans died and several thousands were afflicted and impaired by a genetically altered version of the food supplement - L-tryptophan. Mayeno and Gleich, On August 18, , American exports of rice to Europe were interrupted when much of the U. Monsanto then sued Schmeiser for piracy. In the past few years more and more crops have started to cross-pollinate which leaves a problem that is yet to be solved. In Environmentalists say Australia faced "the most serious genetic contamination event" in its history, after the West Australian government confirmed low levels of genetically modified canola had been found in non-GM canola. Also in a decade-long project to develop genetically modified peas with built-in pest-resistance has been abandoned after tests showed they caused allergic lung damage in mice. In other parts of the world such as the European Union, Japan, Malaysia and Australia consumers demand labelling so they can exercise choice between foods that have genetically modified, conventional or organic origins. These requirements became law in December and were put in place by food ministers to assist consumers to purchase or avoid GM foods, depending on their own views and beliefs. The Canadian Federation of Agriculture says the industry faces huge losses if mandatory labelling is implemented. The fear is that consumers will see the labels as a warning and avoid these foods, and that food processors will reformulate their products to avoid GM foods rather than place labels. It also says labels will increase the price of foods produced and processed in Canada. Professor of Food Safety, Leeds University.

List of genetically modified foods: Some estimates say as many as 30, different products on grocery store shelves are "modified. Rapeseed - Resistance to certain pesticides and improved rapeseed cultivars to be free of erucic acid and glucosinolates. Glucosinolates, which were found in rapeseed meal leftover from pressing, are toxic and had prevented the use of the meal in animal feed. In Canada, where "double-zero" rapeseed was developed, the crop was renamed "canola" Canadian oil to differentiate it from non-edible rapeseed. Honey - Honey can be produced from GM crops. Some Canadian honey comes from bees collecting nectar from GM canola plants. This has shut down exports of Canadian honey to Europe. Cotton - Resistant to certain pesticides - considered a food because the oil can be consumed. The introduction of genetically engineered cotton plants has had an unexpectedly effect on Chinese agriculture. The so-called Bt cotton plants that produce a chemical that kills the cotton bollworm have not only reduced the incidence of the pest in cotton fields, but also in neighboring fields of corn, soybeans, and other crops. Rice - Genetically modified to contain high amounts of Vitamin A. Rice containing human genes is to be grown in the US. Rather than end up on dinner plates, the rice will make human proteins useful for treating infant diarrhea in the developing world. Soybean - Genetically modified to be resistant to herbicides - Soy foods including, soy beverages, tofu, soy oil, soy flour, lecithin. Other products may include breads, pastries, snack foods, baked products, fried products, edible oil products and special purpose foods. Sugar cane - Made resistant to certain pesticides. A large percentage of sweeteners used in processed food actually comes from corn, not sugar cane or beets. Genetically modified sugar cane is regarded so badly by consumers at the present time that it could not be marketed successfully. Tomatoes - Made for a longer shelf life and to prevent a substance that causes tomatoes to rot and degrade. Corn - Resistant to certain pesticides - Corn oil, flour, sugar or syrup. May include snack foods, baked goods, fried foods, edible oil products, confectionery, special purpose foods, and soft drinks. Sweet corn - genetically modified to produces its own insecticide. Officials from the US Food and Drug Administration FDA have said that thousands of tonnes of genetically engineered sweetcorn have made their way into the human food supply chain, even though the produce has been approved only for use in animal feed. Canola - Canola oil. May include edible oil products, fried foods, and baked products, snack foods. Potatoes - Atlantic, Russett Burbank, Russett Norkatah, and Shepody - May include snack foods, processed potato products and other processed foods containing potatoes. Flax - More and more food products contain flax oil and seed because of their excellent nutritional properties. No genetically modified flax is currently

grown. An herbicide-resistant GM flax was introduced in , but was soon taken off the market because European importers refused to buy it. Papaya - The first virus resistant papayas were commercially grown in Hawaii in Transgenic papayas now cover about one thousand hectares, or three quarters of the total Hawaiian papaya crop. Monsanto, donated technology to Tamil Nadu Agricultural University, Coimbatore, for developing a papaya resistant to the ring-spot virus in India. Squash - yellow crookneck - Some zucchini and yellow crookneck squash are also GM but they are not popular with farmers. Red-hearted chicory - radicchio - Chicory *Cichorium intybus* var. Scientists developed a genetically modified line of chicory containing a gene that makes it male sterile, simply facilitating the production of hybrid cultivars. Today there is no genetically modified chicory on the market. Cotton seed oil- Cottonseed oil and linters. Products may include blended vegetable oils, fried foods, baked foods, snack foods, edible oil products, and small-goods casings. It is engineered to produce low or no nicotine. Meat - Meat and dairy products usually come from animals that have eaten GM feed. Peas - Genetically modified GM peas created immune responses in mice, suggesting that they may also create serious allergic reactions in people. The peas had been inserted with a gene from kidney beans, which creates a protein that acts as a pesticide. Vegetable Oil - Most generic vegetable oils and margarines used in restaurants and in processed foods in North America are made from soy, corn, canola, or cottonseed. Sugarbeets - May include any processed foods containing sugar. Dairy Products - About 22 percent of cows in the U. Vitamins - Vitamin C ascorbic acid is often made from corn, vitamin E is usually made from soy. How can the public make informed decisions about genetically modified GM foods when there is so little information about its safety? Future planned applications of GMOs are diverse and may include drugs in foods, for example, bananas that produce human vaccines against infectious diseases such as Hepatitis B, metabolically engineered fish that mature more quickly, fruit and nut trees that yield years earlier, and plants that produce new plastics with unique properties.

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