



GMO's Go Global: Should they be labeled? COUNTRY AND ORGANIZATION CARDS

Distribute these facts to student groups after they have satisfactorily completed background research. This information could be used to help develop/support a final position on mandatory labeling.

Countries:

Ethiopia Facts

1. Ethiopia has embarked on an ambitious five-year economic plan to boost exports from the textile and garment industry to meet a target of \$1 billion by 2015. But so far it is struggling, as the domestic supply of cotton lags behind demand from industry. Officials hope that planting GM cotton will achieve higher yields than regular varieties. As yet, there are no plans to introduce other GM crops in Ethiopia. But environmental activists who oppose the use of GM technology in food production fear the policy shift on cotton could open the door to more GM crops.
2. More than 8 million people live in Ethiopia – representing 15% of the country's population – had been locked into "famine zones".
3. 44% of children under 5 years of age are stunted and 29% are underweight (Ethiopia DHS 2011) Household expenditures are \$367 on food and \$211 on non-food items.

Brazil Facts

1. Brazil is the second largest producer of genetically modified organisms (GMOs) in the world, behind only the United States.
2. Brazilian farmers are very price-sensitive and want to keep seeds that have higher yield and require fewer pesticides.
3. The Brazilian government is pushing energy independence through sugar cane ethanol, which supports GMO programs.

Turkey Facts

1. After becoming an associate member of the European Economic Community in 1963, Turkey has enjoyed good trade relations with its continental neighbor, Europe.
2. Turkey's biosafety law has had a substantial negative economic impact on the food manufacturing and livestock production sectors. Turkey has approved 16 genetically modified soybean and maize plants for feed use and introduced a zero tolerance threshold for the presence of unapproved GMOs. This number stands in stark contrast to the 56 GM crops, which are marketed globally for food, and animal feed production.
3. According to Goldman Sachs, Turkey will be the 9th largest economy in the world and the 3rd largest economy in Europe by 2050.
4. Despite emigration, modern-day Turkey continues to have a significant Jewish Population. The Torah (Jewish written laws) is against cross breeding and it is only allowed under the special conditions specified by the Torah. Once performed, a Jew is permitted to benefit from the results.



Mexico Facts

1. Mexico bans cultivation of GMO corn, but not imports bearing the same label.
2. In 2013, the cultivation of GM crops was completely banned by a Mexican judge. Despite this ruling, the general public is unaware of the issues surrounding GMOs.
3. Corn is part of Mexico's religion, culture, society, so GMO corn is a very controversial issue. Due to NAFTA, corn production/exports are down in recent years, so GMO backers were not permitted to allow Monsanto and other firms to plant corn crops. They argue that the GMO corn will increase corn yield and reduce the need for fertilizers.
4. There is concern that large GMO plantings are linked to toxins that could present problems for insects and pollination of other plants.
5. Both Brazil and Mexico are power agricultural economies in Latin America.

South Africa Facts

1. The (agriculture) sector's significance lies in its potential to create jobs, and is a key focus of the New Growth Plan, a government initiative to create 5 million new jobs by 2020. Plans include programs to promote commercially oriented small-scale farming.
2. There are many benefits to GM crops, including farmers saving money by spending less on fertilizer and other inputs, as well as getting higher yields. However, some pests have developed a resistance against both cotton and maize in some areas of South Africa which means "the value of GM technology" has been lost in these areas.
3. The African Centre for Biosafety lodged a complaint with the ASA following an advertisement on Radio 702 that claimed genetically engineered crops "enable [\[Monsanto\]](#) to produce more food sustainably whilst using fewer resources; provide a healthier environment by saving on pesticides; decrease greenhouse gas emissions and increase crop yields substantially." The Advertising Standards Authority gave Monsanto an opportunity to prove its claims, but all they received were links to documents on the agriculture giant's website. Since Monsanto didn't provide independent data—which is required by South African law—the order was given to pull the ad from airing in the country's heavily populated areas including the capitol.

Organizations:

Food And Agribusiness Industry

1. Gregory Baker, director of the Institute, states that from a scientific perspective, much of the fears about "Frankenfood" or new allergens being introduced are not backed by scientific research, while genetic modification is necessary to adapt to climate and population changes.
2. It appears that consumers most resistant to purchasing the products of genetic engineering are probably motivated by the same reasons that make them reluctant to purchase other new products, that is, they are risk averse and slow to change.



Union Concerned Scientists

1. A self-described group of scientists and other engineers who develop and implement innovative, practical solutions to the planet's most pressing problems from combatting global warming and developing sustainable ways to feed, power, and transport ourselves, to fighting misinformation and reducing the threat of nuclear war.
2. Quote from their website: "The technology may be introducing new allergens that have never been in the food supply before because some of the genes that are being added come from soil microorganisms that have never been eaten before."
3. Quote from their website: "... How would we know if someone had gotten ill from genetically engineered food if it's not labeled? How could there be evidence if they haven't allowed the food to be labeled? They're now saying, 'Well, there's no evidence of harm.' But that's because they haven't allowed any way to track any harm." --Jane Rissler, senior staff scientist at the Union of Concerned Scientists in *Harvest of Fear* (NOVA special).

Monsanto

1. This global corporation strives to empower farmers to produce more from their land while also conserving natural resources. The organization was among the first to genetically modify a plant cell, along with other researchers in 1983.
2. Millions of farm animals have consumed nutritious feed rations made with grain from biotech crops and people have consumed hundreds of millions of meals containing foods derived from biotech crops—all without a single substantiated instance of illness or harm due to the GM ingredient.
3. Field trials are a standard part of crop research and are essential for the responsible development of any technology. The USDA (United States Department of Agriculture), including shipment, storage, isolation, separation and monitoring requirements, regulates all field trials in the United States. Monsanto trials are planted to meet or exceed the USDA and state regulatory requirements.

Roman Catholic Church

1. The Roman Catholic Church is among the oldest religious groups in the world with over one billion followers. The Catholic social teachings promote support for the ill, underprivileged and poor. The organization is the world's largest provider of non-government medical services and education.
2. In Catholic thought, "nature" is viewed as a gift offered by the Creator to the human community to be lived in and used. Therefore it is okay for humans with the correct attitude to intervene in nature and make modifications.
3. The Roman Catholic Church did not approve an 11-page final statement in favor of easing restrictions on and allowing more widespread use of genetically modified crops, especially in poorer nations.



Research Center for Islamic Legislation and Ethics (CILE)

1. Founded in 2012, CILE specializes in ethical thought with a focus on applied ethics. The organization brings scholars and global experts together to discuss the critical topics of the day from an Islamic perspective.
2. The Quran has many passages regarding food, specifically stressing that food must be good, pure and wholesome, or 'tayyib' in Arabic.
3. The major concern, that genetic modification violates 'nature,' revolves around whether GM foods violate the natural order of things. The Quran teaches that no one should change the creations of Allah, but other verses stress that believers who feed the hungry will be rewarded in the afterlife. There are also passages in the Quran, which "motivate Muslims to conduct research and investigate God's creation." These passages could be seen as promoting the use of biotechnology to genetically alter crops that withstand drought or are resistant to disease or herbicide or enhance nutrition.
4. Scientific knowledge of nutrition and food is essential to develop a comprehensive understanding of the subject. These two components (Islamic teachings and science) are essential to issue a legitimate legislation (fatwa) and therefore it is essential for Islamic scholars to work closely with food scientists and experts.
5. Muhammad was said to have once witnessed farmers graft branches of different species of date palms together to produce higher yields. He is said to have told the farmers to stop, and they obeyed him, but their yields decreased. When the farmers told Muhammad this, he replied that he is only a human being and the farmers should continue grafting. (Grafting is an early form of selective breeding.)

Coalition for Safe and Affordable Food

1. The Coalition for Safe Affordable Food, whose members include the American Farm Bureau Federation, Biotechnology Industry Organization and the National Corn Growers Association, called the anti-GMO groups "misguided" in their push for mandatory labeling; studies have shown that mandatory labeling laws will raise food costs for consumers and place unnecessary burdens on farmers and food producers.
2. This group is dedicated to providing policy makers, media, consumers and stakeholders with the facts about ingredients grown through GM technology. They promote 'common sense' policy that may increase the safety of GM products and protect the role they play in the food chain. The organization is comprised of American farmers and representatives from industry and NGOs (non-governmental organizations).
3. Quote from their website: "A federal labeling solution is the only way to ensure that consumers maintain access to safe, quality and affordable food while protecting small businesses from new costs that many will simply be unable to bear. Congress should stand with America's consumers and small businesses by passing the bipartisan proposed Safe and Accurate Food Labeling Act, which would strengthen America's food safety policies while also giving consumers the information they need to make informed choices in the marketplace without creating unnecessary confusion and burdening small businesses."