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UNFAO

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# COPYRIGHT OF GMO SEEDS

# Directors Letter

Dear Delegates,

My name is Yingfan Bai and I am beyond honoured to serve as the Director of the United Nations Food and Agriculture Organization at AbbyMUN 2022. I am currently a high school student attending St. Michaels University School in Victoria, BC, Canada. Alongside the rest of my dias team, Chair Helga Chan and Assistant Director Apollin Lu, we would like to extend a warm welcome to all of you.

I still remember my first conference, at which I was too nervous to contribute much to the committee. Now, two dozen conferences later, I have developed many key skills from MUN, and made many connections with people all around the world. My unexpected dive into this community has not only reinvigorated my love for public speaking but has shaped me into the person I am today.

The United Nations Food and Agriculture Organization is undoubtedly a unique committee! This year, the UNFAO will be discussing the Copyright of GMO seeds. This topic was chosen because of its relevance and impact that it plays on the future of the society and wellbeing of people. With that said, to ensure success in this committee, we would recommend you to start researching the topic early or right after you get your committee and country assignment so that you have sufficient time to conduct thorough research and write an effective position paper on your country's stance and position. Additionally, we would encourage you to go beyond the background guide and conduct your own research on the various subtopics within the main topic of this committee. Finally, we would strongly encourage for you to reach out to us if you have any questions, comments, or concerns! Whether AbbyMUN marks your first venture

into the realm of MUN or your last conference, I hope that this topic will challenge you to craft innovative solutions, negotiate with fellow delegates, and seek collaboration with opposing viewpoints.

On behalf of the dias team, we thank you for choosing this committee and wish you the best of luck in your preparation and research, and we look forward to conversing and creating memories with each and every one of you. Let AbbyMUN 2022 be yet another step in your learning journey, and may you all have a memorable weekend.

Best Regards,

***Yingfan Bai***

*Director of the United Nations Food and Agriculture Organization - AbbyMUN 2022*

## **Topic Introduction**

The issue of copyright of GMO seeds is a large issue with many long term and short term consequences. Seeds labeled GMO—the acronym for “genetically modified organism”, a result from one of the industry's most controversial practices. GMO seeds are bred not in a garden but in a laboratory using modern biotechnology techniques like gene splicing. GMO seeds can speed up the growing process and harvesting, allowing more crop rotation. However, GMO seeds are generally viewed negatively, as they disrupt the natural process of gene flow because the “better” traits produced from engineering genes can result in the favoring of one organism. It endangers farmers and trade along with the environment. It is more inclined towards

marketization of farming that works on immoral profits. Some possible risks to humans include cancer, allergy reactions, antibiotic resistance, and loss of nutrition. A way to reduce these effects is switching to organic farming. However, GMO seeds often are easier to farm commercially and are the preferred choice of consumers. There have now been many occurrences of large firms winning millions of dollars from small firms. This can be troubling especially with the current disruptions of the supply chain, the world needs as much food as it can get. There is also the argument of whether or not food can be copyrighted. Food is a basic human right, and GMO can allow us to produce it more efficiently.

## Timeline of Events

**1700s:** Farmers and scientists begin cross-breeding plants within a species.

**Circa 8000 BCE:** Humans use traditional modification methods like selective breeding and crossbreeding to breed plants and animals with more desirable traits.

**1866:** Gregor Mendel, an Austrian monk, breeds two different types of peas and identifies the basic process of genetics.

**1922:** The first hybrid corn is produced and sold commercially.

**1940:** Plant breeders learn to use radiation or chemicals to randomly change an organism's DNA.

**1953:** Building on the discoveries of chemist Rosalind Franklin, scientists James Watson and Francis Crick identify the structure of DNA.

**1973:** Biochemists Herbert Boyer and Stanley Cohen develop genetic engineering by inserting DNA from one bacteria into another.

**1982:** FDA approves the first consumer GMO product developed through genetic engineering: human insulin to treat diabetes.

**1986:** The federal government establishes the Coordinated Framework for the Regulation of Biotechnology. This policy describes how the U.S. Food and Drug Administration (FDA), U.S. Environmental Protection Agency (EPA), and U.S. Department of Agriculture (USDA) work together to regulate the safety of GMOs.

**1992:** FDA policy states that foods from GMO plants must meet the same requirements, including the same safety standards, as foods derived from traditionally bred plants.

**1994:** The first GMO product created through genetic engineering—a GMO tomato—becomes available for sale after studies evaluated by federal agencies proved it to be as safe as traditionally bred tomatoes.

**1990s:** The first wave of GMO produce created through genetic engineering becomes available to consumers: summer squash, soybeans, cotton, corn, papayas, tomatoes, potatoes, and canola. Not all are still available for sale.

**2003:** The World Health Organization (WHO) and the Food and Agriculture Organization (FAO) of the United Nations develop international guidelines and standards to determine the safety of GMO foods.

**2005:** GMO alfalfa and sugar beets are available for sale in the United States.

**2013:** Monsanto sues small farmers to protect seed patents, the firm won more than 23\$ million from hundreds of small farms.

**2015:** FDA approves an application for the first genetic modification in an animal for use as food, a genetically engineered salmon.

**2016:** Congress passes a law requiring labeling for some foods produced through genetic engineering and uses the term “bioengineered,” which will start to appear on some foods.

**2017:** GMO apples are available for sale in the U.S.

**2019:** FDA completes consultation on first food from a genome edited plant.

**2020:** GMO pink pineapple is available to U.S. consumers.

**2020:** Application for GalSafe pig was approved.

**Specific Products:**

1995: Soy Beans

1995: Squash

1996: Corn

1996: Cotton

1997: Papaya

1999: Canola

2006: Alfalfa

2006: Sugar Beets

2013: Eggplant (only in Bangladesh)

2016: Potatoes

2017: Apples

2018: Sugar Cane (Brazil)

2020: Pink Pineapple

## **Past Actions**

As GMO seeds are generally viewed as a negative thing, not much action has been taken to solve the issue. Although GMO seeds are harmful and unsafe to us, there are also benefits in the farming industry. GMOs enable farmers to be better stewards of the environment, allowing farmers large and small to grow more crops on less land while using fewer pesticides and less water. To date, all of the GM foods we have reviewed are as safe and nutritious as non-GMO foods. We have not found any verifiable scientific evidence that shows GM foods are less safe than traditional varieties nor we have not found a study that caused us to change our conclusions about any assessed GM food product. After scientific reviews, it considers the microbiological

and chemical safety of the food, the potential of the GM food to cause allergic reactions, the potential for introducing new toxins into the GM food, and how the GM food was developed, including any genetic changes made to any plant, animal or microorganism used in the product.

## Potential Solutions

If new information concerning the safety of GM foods does arise, we should review the new data carefully, take appropriate action if we identify any risks or concerns from eating GM foods. Internationally, scientists have concluded that GM foods pose no more risk to human health than non-GM foods. In fact, GM foods are subject to a far higher level of regulatory oversight and scientific requirements than traditional organisms consumed as food. Techniques used to produce GM foods may permit the transfer of genetic material from unrelated species and transfer of a gene from an organism expressing a protein that has no history of use as a food. We could also implement a safety assessment. The safety assessment gives assurances that toxic or allergenic compounds are not transferred along with the desired characteristic when new DNA is introduced into an organism. It also assures us that any genetic changes made to an organism do not increase the level of allergenic compounds or anti-nutrients which are naturally present in some organisms consumed as food.

## Guiding Questions

1. Are GMO seeds a positive or negative thing?
2. Should GMO seeds be copyrighted?
3. Are GMO seeds a step forward or step backwards in the production of agricultural crops?
4. Should GMO seeds be created in the first place?
5. Who do GMO seeds impact the most?

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