

Required Report: Required - Public Distribution

Date: November 12, 2024

Report Number: GT2024-0009

Report Name: Agricultural Biotechnology Annual

Country: Guatemala

Post: Guatemala City

Report Category: Biotechnology and Other New Production Technologies

Prepared By: Karla Tay

Approved By: Marcela Rondon

Report Highlights:

The Ministry of Agriculture Livestock and Food (MAGA) regulates Guatemala's genetically engineered (GE) plants and animals. Although a science-based regulation allowing applications to approve biotechnology seeds for cultivation entered into force in 2019, the government of Guatemala has maintained a de facto ban on planting GE crops and animals since March 2022.

Executive Summary:

Guatemala is the largest economy in Central America, with an estimated GDP of \$102.8 billion. Agriculture comprises about 6.8 percent of this total, and agroindustry adds another 3.2 percent. In 2023, Guatemala ranked as the 15th largest U.S. agricultural export market, primarily importing feed ingredients like corn, soybean meal, soybean oil, and distillers dried grains with solubles (DDGS). Imports include poultry, pork, and beef, as local production cannot satisfy demand.

In Guatemala, all feed ingredients are imported and mostly sourced from genetically engineered (GE) crops while the country maintains a de facto ban on their cultivation. Currently, there are no active projects related to GE or innovative biotechnologies, despite regulations that support research and product development. The government's negative perception of GE crops limits progress in this field, leading to stagnation in national corn yields, which have remained at around two metric tons per hectare, comparable to levels seen in the late 1800s. A March 2023 report by the [USDA-CATIE](#) highlights a significant connection between climate change, corn production, and migration trends in Central America's Northern Triangle, underscoring the broader implications of Guatemala's agricultural policies.

While Guatemala restricts the planting of GE crops, this ban does not apply to other sectors, such as pharmaceuticals or textiles. For more information on Guatemala's regulatory system and ban, refer to the [GAIN Biotechnology Annual Report 2023](#).

Note: the links provided in this report reference documents are only available in Spanish, except for the USDA-CATIE study

Content

CHAPTER 1: PLANT BIOTECHNOLOGY	1
PART A: PRODUCTION AND TRADE.....	1
PART B: POLICY	2
PART C: MARKETING.....	10
CHAPTER 2: ANIMAL BIOTECHNOLOGY	11
PART D: PRODUCTION AND TRADE.....	11
PART E: POLICY	11
PART F: MARKETING	12
CHAPTER 3: MICROBIAL BIOTECHNOLOGY	13
PART G: PRODUCTION AND TRADE.....	13
PART H: POLICY	14
PART I: MARKETING	14

CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE

a) RESEARCH AND PRODUCT DEVELOPMENT

There are no activities related to genetically engineered (GE) or innovative biotechnologies underway in Guatemala despite the existence of regulations governing research and product development under "[RT 65.06.01:18, Biosafety Technical Regulation for Live Modified Organisms \(LMOs\) for Agricultural Use](#)" ([Annex 1](#)) (in Spanish) and its implementation [manual](#) (in Spanish), approved by [Ministerial Decree 271-2019](#) (in Spanish). This stagnation stems from the de facto ban, as the Ministry of Agriculture (MAGA) has not received or responded to any biotech application requests since March 2022. Consequently, universities and other potential stakeholders show no interest in pursuing GE or innovative biotechnologies for plant or drug development that involves plant use.

b) COMMERCIAL PRODUCTION

Currently, as explained in Part A, subparagraph (a) of this chapter, no GE or innovative biotechnologies have been applied to approved plant or drug products.

c) EXPORTS

Given the de facto ban on the use of GE or innovative biotechnologies, Guatemala does not export any plant or product derived from these technologies.

d) IMPORTS

Guatemala's de facto ban on GE or innovative biotechnologies pertains solely to live organisms related to agricultural goods, for which the country has specific regulations. This regulation and ban do not extend to other sectors utilizing GE or innovative biotechnologies. Guatemala's regulations do not classify processed or unprocessed GE plant products as GE.

Despite this, the country heavily depends on GE-derived products for its feed and food industries. In 2023, Guatemala imported 1.6 million metric tons of corn, primarily from the United States (988,000 MT), Brazil (570,000 MT), and South Africa (43,000 MT). The country also imported 510,000 MT of soybean oil cake, almost exclusively from the United States, to support its feed industry and 99,000 MT of soybean oil, mainly sourced from Argentina, for both the feed and food industries. The food processing sector relies on imported white and yellow corn to produce chips, cereals, porridges, and nutritious drinks, primarily from GE-derived sources, to meet international mycotoxin

standards. Locally produced corn in Guatemala rarely complies with these food safety standards, with few exceptions. Over the past decade, numerous reports have highlighted the high levels of mycotoxin contamination in locally sourced corn and its relationship with neural tube defects and chronic malnutrition, mainly observed in indigenous communities¹.

e) FOOD AID

Despite being a net agricultural exporter, Guatemala is a food-aid recipient country. It has the highest rate of chronic malnutrition in Latin America and the sixth highest rate worldwide. According to the [United Nations Food Security Action Plan for 2024](#), 5.3 million people in Guatemala required food assistance in 2023, 300,000 more than in 2022. Food assistance is strongly related to poverty and lack of access to more productive staple crops. Food aid consists primarily of corn and beans, mostly imported and some locally sourced.

Given that Guatemala is a high-risk country regarding climate change vulnerability, seasonal food aid is also required yearly. The need for food aid in Guatemala amounts to approximately \$300 million, primarily for staple foods such as corn and beans. In the past, some officials from the National Protected Areas Council ([CONAP](#)) have attempted to discourage the importation of GE-derived food products.

f) TRADE BARRIERS

Guatemala imposes no significant barriers to importing GE or innovative biotechnology products for food, feed, or processing. However, the country's de facto ban acts as a trade barrier for live organisms associated with GE and innovative biotechnologies, including seeds and propagative materials.

PART B: POLICY

a) REGULATORY FRAMEWORK

i) Applicable Laws

Despite the de facto ban on GE and innovative biotechnologies live organisms, Guatemala has a science-based regulatory framework under [RT 65.06.01:18–Biosafety Technical Regulation for Live](#)

1

https://www.researchgate.net/publication/373093484_MICOTOXINAS_EN_MAIZ_PRODUCIDO_Y_CONSUMIDO_POR_FAMILIAS_DE_LA_REGION_CHORTI_DE_CHIQUIMULA_GUATEMALA, [Human health implications from co-exposure to aflatoxins and fumonisins in maize-based foods in Latin America: Guatemala as a case study in: World Mycotoxin Journal Volume 8 Issue 2 \(2015\) \(brill.com\)](#), [Dietary and socioeconomic risk factors for fumonisin exposure among women of reproductive age in 18 municipalities in Guatemala from 2013 to 2014 | PLOS Global Public Health](#), [https://www.researchgate.net/publication/275976979_Human_health_implications_from_co-exposure_to_aflatoxins_and_fumonisin_in_maize-based_foods_in_Latin_America_Guatemala_as_a_case_study_\(PDF\)](https://www.researchgate.net/publication/275976979_Human_health_implications_from_co-exposure_to_aflatoxins_and_fumonisin_in_maize-based_foods_in_Latin_America_Guatemala_as_a_case_study_(PDF)), [Estimated fumonisin exposure in Guatemala is greatest in consumers of lowland maize | Olga Torres - Academia.edu](#), [Dietary, socioeconomic, and maize handling practices associated with aflatoxin and fumonisin exposure among women tortilla makers in 5 departments in Guatemala - PubMed \(nih.gov\)](#), [Publication : USDA ARS](#)

[Modified Organisms-LMO- for Agricultural Use](#) (in Spanish), Ministerial Decree 270-2019– Creation of the Guatemalan Biosafety Agricultural Technical Committee, and [Ministerial Decree 271-2019–Manual of Technical Procedures for the Confined Use of Experimental, Pre-Commercial and Commercial Use of Genetically Modified Seed](#) (in Spanish), establishing technical procedures for field trials, pre-commercial field tests, and commercial approvals of biotech plants.

Guatemala’s regulation uses the following legal terms:

Legal term (in Spanish)	Legal Term (in English)	Laws and Regulations where the term is used	Legal Definition (in English)
Organismo Vivo Modificado (OVM) u Organismo Genéticamente Modificado (OGM)	Living Modified Organism (LMO) or Genetically Modified Organism (“GMO”)	Law 44-2003 (2006)	Any living organism with a new combination of genetic material obtained using modern biotechnology.
Nueva combinación de material genético	New combination of genetic material	Regulation RT 65.06.01:18 (2018)	A new combination of genetic material is a stable insertion in the genome of one or more genes or DNA sequences that codify for double-strand DNA, RNA, proteins, or regulatory sequences that could not be obtained through conventional breeding or that may not be found in nature.

Source: [RT 65.06.01:18 - “Biosafety Technical Regulation for Live Modified Organisms-LMO- for Agricultural Use – Annex 1](#) (in Spanish)

Guatemala applies the LMO definition of Art. 3 (h) of the Cartagena Protocol on Biosafety, considering a GE plant as any new combination of genetic material obtained through modern biotechnology. In addition, the [manual](#) (in Spanish) defines the new combination of genetic material as a stable insertion in the genome of one or more genes or DNA sequences that codify for double-strand DNA, RNA, proteins, or regulatory sequences that could not be obtained through conventional breeding or that may not be found in nature.

Aside from regulations from the Ministry of Agriculture, there are few additional requirements, except one from the Ministry of Environment. [This regulation](#) (in Spanish) mandates an environmental license, which is granted based on approval from the Ministry of Agriculture (MAGA) and an environmental risk analysis. The permit applies to multiple industries, including agriculture.

ii) Biosafety Committee

The regulatory process requires that a national biosafety committee reviews, inquires, and decides whether to approve a petition for the pre-commercial or commercial phases. [The Agricultural Biosafety Committee](#) (in Spanish) is composed of representatives from the Animal Health Directorate, Plant Health Directorate, Food Safety Directorate, and Plant and Animal Genetics Directorate within the Ministry of Agriculture, Ministry of Environment, the Biotechnology Committee at the Council of Science and Technology, representatives of the Chamber of Agriculture, and private and public universities. Members must have technical and scientific backgrounds and knowledge of biotechnology.

iii) Timeline for Approval/Denial

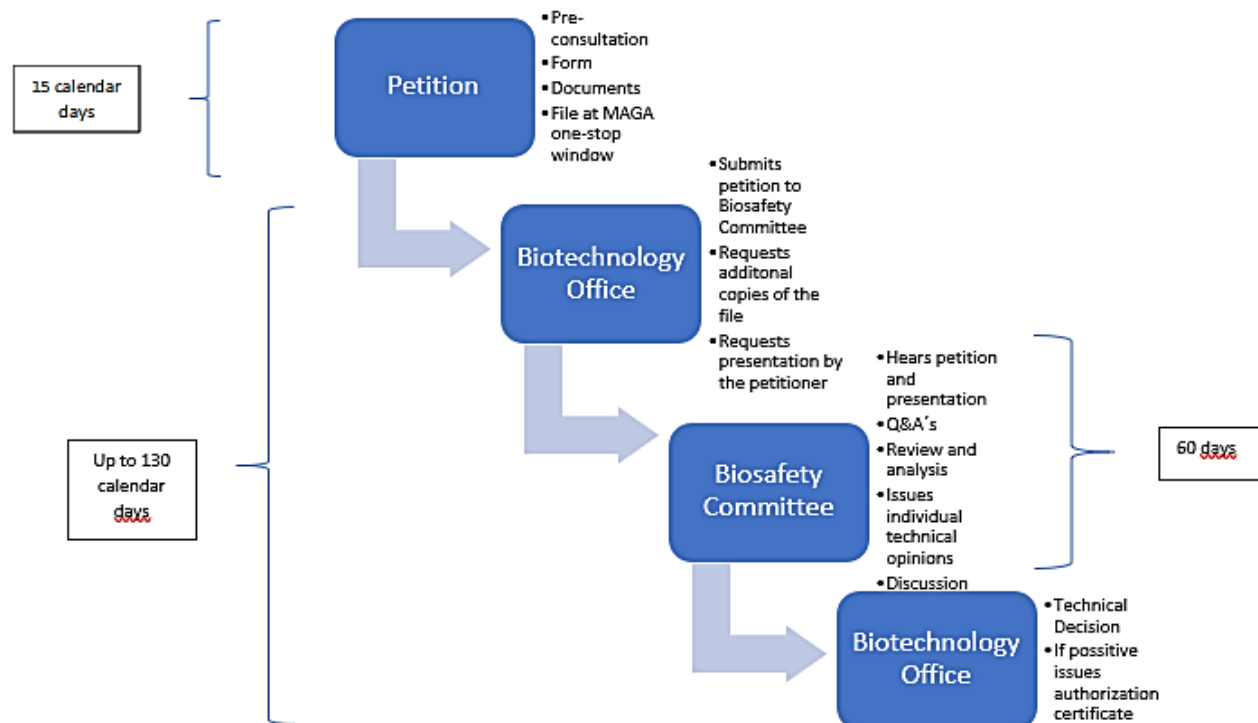
According to the regulation, petitions for approval are subject to a maximum review period of 130 days. However, MAGA has yet to respond to applications submitted since April 2022. Approvals pertain solely to planting agricultural seeds or propagation materials in designated agricultural areas, leaving protected zones under [CONAP](#)'s authority unaffected. Notably, MAGA does not require approvals for GE food, feed, or processing, as these do not fall under the definition of LMO in the regulation. Given the current de facto ban, there is no established timeline for how long an approval might take.

If a confined-use experimental field trial receives approval through a risk evaluation, MAGA grants a certification permit and oversees a monitoring and evaluation process. Should the trial prove effective and safe, a new petition process begins for a pre-commercial field test. This phase allows for evaluating GE plant traits at various sites to assess their safety and effectiveness. The pre-commercial phase follows a similar petition and approval process as the confined-use trial, starting with a thorough review of the previous trial's results, which must include the destruction of GE plants. If the pre-commercial phase demonstrates effectiveness and safety again, a new petition may be submitted for the commercial phase.

Petitions start Form [DFRN-01-R-042](#) (in Spanish) to MAGA regulators with an interested party submitting to MAGA regulators Form [DFRN-01-R-042](#) (in Spanish), which is a strictly technical consultation process to verify that the genetic material complies with the LMO definition. MAGA responds to the petition, and if confirmed to be an LMO, the petitioner can request a pre-consultation with MAGA regulators to understand the regulatory process and verify all the required information. The petition for confined use is for greenhouse or field experimental purposes and can be filed by a company, university or research center using Form [DFRN-01-R-044](#) (in Spanish).

If a petition for experimental confined use field trial is approved, a certification is issued. The following diagram is a summary of the approval process which can be found as part of Annex 1 of the operative [manual](#) (in Spanish) and constitutes the standard mechanism for review and approval of a petition, either for experimental confined use field trial or pre-commercial field trial.

Figure 1. GE approval process for a petition, either for experimental confined use field trials or pre-commercial field trials.



Source: Summary based on Annex 1 - “[Manual](#) (in Spanish) of Technical Procedures for the Confined Use of Experimental, Pre-Commercial and Commercial Use of Genetically Modified Seed”, which establishes technical procedures for field trials, pre-commercial evaluations, and commercial approvals of biotech plants.

The experimental confined use is approved through the process outlined in Figure 1. The approval is notified through a certification authorization valid for two years. If the field testing needs to be extended, a renewal petition must be presented 15 days before the end of the confined use authorization. The pre-commercial authorization also follows the same approval process outlined in Figure 1. In this case, the experimental confined use must have been closed, and results must be presented within 60 days after closure. The results will be part of the pre-commercial petition process. The authorization for pre-commercial use will be valid for five years, and its renewal can be

presented 30 days before the due date. The closed pre-commercial phase should also be reported 60 days after the closure. For commercial approval, the report for the pre-commercial phase must be presented, and the petition is analyzed; if approved, a commercial certificate is authorized, requiring the registration of the seed. Commercial approvals are suitable for five years and may be renewed. Pre-commercial and commercial authorizations will be notified to the Biosafety Clearing House of the Cartagena Protocol.

MAGA's operative [manual](#) (in Spanish) specifies that a prior consultation process is required with Indigenous groups before submitting a petition for planting LMOs in Indigenous-recognized communities. It recognizes centers of origin and genetic diversity of wild relatives, where LMOs will not be authorized, as spelled out in Articles 12.2 and 12.3:

Article 12.2 Planting of Genetically Modified seeds in the territories.

The applicant must obtain the free, prior, and informed consent of the community, whenever it is legally recognized as an indigenous group, to comply with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the Convention on Biological Diversity and Convention 169 of the International Labor Organization. A written consent must be presented as part of the petition process. The absence of consent will imply that these areas do not have authorization for use and, therefore, are considered areas of restricted use according to article 21 of [RT: 65: 06.01: 18](#) (in Spanish) until the corresponding consent is obtained.

12.3 Areas recognized as centers of origin and genetic diversity of wild relatives of cultivated species.

The Directorate of Plant and Animal Genetics and Native Resources will be recognized through scientific studies carried out with the technical and scientific support of the Biosafety Committee and other relevant institutions like [CONAP](#). Areas will be defined as centers of origin and genetic diversity of wild relatives of cultivated species.

iv) Other Regulatory Requirements

Per the existing regulation, once a GE or innovative biotechnology live organism gets approved, the plant material must comply with plant health requirements such as [Phytosanitary Certification](#) from APHIS/USDA. If the plant variety or hybrid is intended for commercial use, it must be registered with the [Plant and Animal Genetics Directorate of MAGA](#) (in Spanish). If the plants will be propagated commercially for seed commercialization in the country, the seed production sites must also be registered with [MAGA](#) (in Spanish).

v) Political Factors Influencing Regulatory Decisions

The Ministry of Agriculture has been historically politicized, focusing its policy on giveaways to maintain political votes rather than providing regulatory tools to meet productivity, food safety, or agricultural competitiveness. As a result, regulatory decisions related to GE and innovative

biotechnologies lack independence, with the de facto ban highlighting a departure from science-based regulation.

b) APPROVALS/AUTHORIZATIONS

No approvals or authorizations exist, given the de facto ban on GE live plants, seeds, or propagative materials. Please refer to [Guatemala's GAIN Biotechnology Annual Report 2023](#) for former approvals before the de facto ban.

c) STACKED OR PYRAMIDED EVENT APPROVALS/AUTHORIZATIONS:

The regulation considers stacked events as a sole petition request if they have been previously evaluated and approved in any other country, either as singles or stacked. If the events have yet to be evaluated somewhere else, they must be evaluated both as singles and as stacked as part of the confined experimental field test phase.

d) FIELD TESTING

[RT 65.06.01:18](#) (in Spanish) and the [manual](#) (in Spanish) establish three phases for the final commercial release of an LMO. These phases are as follows:

1. Confined experimental field testing on a small scale
2. Pre-commercial field testing of the technology on a medium scale
3. Commercial approval

Each phase requires a petition and approval process, as outlined in Figure 1. The authorization for confined experimental field testing is valid for two years, and the pre-commercial field testing is valid for five years, and both can be renewed. The commercial phase authorization is valid for five years and requires seed registration. Each phase is subject to monitoring and evaluation by MAGA. Each phase must present its mitigation and final report before filing the next phase for that petition.

e) INNOVATIVE BIOTECHNOLOGIES

As a member of the World Trade Organization (WTO), Guatemala supported the 2018 International Statement on Agricultural Applications of Precision Biotechnology at the WTO Committee on the Application of Sanitary and Phytosanitary Measures in Geneva. [RT 65.06.01:18](#) (in Spanish) does not regulate innovative technologies, only LMOs. Any innovative technology that does not fit the LMO definition is not regulated under the present rule. The first process before a petition is requested consists of submitting Form [DFRN-01-R-042](#) (in Spanish) to the Biotechnology Office for its analysis, upon which it may request additional information. If the new genetic material does not meet the definition of an LMO and could be obtained through conventional breeding or occurs

naturally, the plant will follow the same commercialization process as conventional or non-GE planting materials.

f) COEXISTENCE

MAGA regulations allow for the coexistence of different production technologies through sound protocols with independent certification processes. The same Plant Genetics and Natural Resources Directorate is responsible for issuing approvals for organic and GE plantations, approving seed production operations, and seed registration. The Biosafety Committee may provide additional guidelines to preserve agricultural technologies and their corresponding stewardship to avoid displacing any issued certification, either conventional, organic, or GE.

Guatemala is a significant agricultural producer and exporter in Central America, with most conventional agriculture products exported worldwide. In contrast, organic products are mainly exported to high-end markets in the United States, Japan, and the European Union. In addition, MAGA maintains a positive list of approved agrochemicals, fertilizers, biopesticides, and biofertilizers for the different agricultural technologies utilized in Guatemala, regulated by the Central American Customs Union, following international guidelines.

g) LABELLING AND TRACEABILITY

Guatemala does not require labeling GE content in food or feed and follows Codex guidelines. Traceability is an option for export certification purposes.

h) MONITORING AND TESTING

Guatemala does not actively test for GE traits in imports or exports. [CONAP](#) is establishing a monitoring and testing laboratory with MAGA's Agricultural Institute for Science and Technology (ICTA), mostly intended to monitor GE traits in protected areas, especially in areas with local corn varieties.

i) LOW-LEVEL PRESENCE (LLP) POLICY

Not Applicable to Guatemala

j) ADDITIONAL REGULATORY REQUIREMENTS

Not Applicable to Guatemala

k) INTELLECTUAL PROPERTY RIGHTS (IPR)

Guatemala respects IPR through its Intellectual Property Rights Law, Decree 57-2000, ruled by the Ministry of Economy. MAGA protects intellectual property rights (IPR) through a registration process for agricultural inputs, including seeds. While Guatemala joined the International Union for the Protection of New Varieties of Plants (UPOV) in 2009, the law for full membership has yet to be approved. On September 6, 2023, the Agricultural Commission of the Guatemalan Congress introduced Law Initiative 6283-2023 to adopt UPOV-91. This initiative clarifies that the law does not apply to existing wild, native, creole, original, autochthonous, or endemic varieties, which remain protected under current biodiversity laws. UPOV law approval is necessary to ensure investments in the country and prevent Guatemalan developers from registering products or obtaining IPR to trade improved materials, including local developments.

l) CARTAGENA PROTOCOL RATIFICATION

The Guatemalan Congress approved the Cartagena Protocol in 2003 via Legislative Decree 44-03, which took effect in January 2005. [CONAP](#) serves as the decision body for the Protocol through its [Technical Office for Biodiversity \(OTECBIO\)](#) (in Spanish), which is part of the Council of Protected Areas. CONAP leads the LMO Biosafety National Policy, which is renewed every ten years. The current policy, which covers the period between 2013 and 2023, was established by Presidential Decree 207-2014, and a new policy starting in 2024 is being drafted. The policy requires CONAP to coordinate regulatory efforts with various ministries responsible for implementing their respective regulations, including agriculture, environment, and health. Guatemala also actively participates in the COP-MOP and the Subsidiary Body on Scientific, Technical, and Technological Advice (SBSTTA).

m) INTERNATIONAL TREATIES AND FORUMS

Guatemala is a member of the World Trade Organization (WTO) and its Sanitary and Phytosanitary (SPS) Agreement, which includes the International Plant Protection Convention (IPPC) and CODEX Alimentarius, where MAGA plays an active role as a competent authority in each SPS organization. In addition, the Ministry of Environment and CONAP participate in the United Nations (UN) environmental chapters, including the climate change meetings (COP) and the UN annual conferences on biological diversity (COP-MOP) and other related forums. The Ministry of Economy has an active role in the WTO. It leads the Central American Customs Union process, where Central American regulations are discussed in technical working groups and approved through the Council of Ministers of Economy.

n) RELATED ISSUES

The de facto ban on GE and innovative biotechnologies hamper the pursuit of food security and undermines efforts to tackle climate change and environmental and economic sustainability in agriculture. With 70 percent of the population engaged in agriculture, lacking productivity tools exacerbates food insecurity, poverty, and migration. Initially enacted in 1985, the Biofuels Law has recently regained momentum with [Presidential Decree 159-2023](#) (in Spanish), which mandates a 10 percent ethanol-gasoline blend, set to take effect on January 1, 2026. Guatemala is the fourth largest sugarcane exporter and is recognized as one of the most efficient producers globally. Over the past decade, the country has excelled in producing advanced biofuel, primarily destined for the European Union. Advanced biofuels are liquid fuels that are generally derived from non-food-based feedstocks and yield a lifecycle reduction in greenhouse gas emissions of at least 50 percent compared with fossil fuels. Biofuels are increasingly viewed as a pivotal environmental strategy for mitigating greenhouse gas emissions in Guatemala, highlighting the urgent need for policies that support agricultural innovation and sustainability.

PART C: MARKETING

a) PUBLIC/PRIVATE OPINIONS

In Guatemala, various food and agriculture chambers support GE plants and products, particularly for adapting to climate change. Innovative biotechnologies are essential for sustainably producing key commodities and accessing new markets. Commercial farmers recognize the advantages of GE plants, especially those with drought, pest, and disease tolerance traits. With significant rural migration to the United States, women farmers now play a crucial role in food production and are interested in traits that reduce labor, such as herbicide tolerance.

In contrast, the National Network for Guatemala's Defense of Food Sovereignty ([REDSAG](#)) (in Spanish) is an organization that opposes GE plants, advocating for biodiversity and indigenous knowledge. The spread of misinformation about agricultural biotechnology in national and international media has led to public opposition to GE plants, with many expressing concerns without clear evidence. Common claims include that GE plants harm biodiversity, threaten local corn varieties, limit indigenous livelihoods, force mandatory seed purchases, lead to the disappearance of local seeds, and put food in the hands of transnational companies, ultimately resulting in starvation, among others.

b) MARKET ACCEPTANCE/STUDIES

Negative public opinion has hindered the adoption of GE plants, but it has not affected the consumption of their products. While interest in organic food is growing, supermarkets need more dedicated organic sections, as certified organic items are often too expensive for Guatemalan consumers. Consumers are aware that many corn-based products likely originate from GE plants.

Still, after years of safe consumption without evidence of harm, their concerns have diminished, even in the face of disinformation campaigns. Importers, retailers, processed food producers, and consumers worry little about consuming GE products. In Guatemala's price-sensitive market, consumers prioritize affordability over the methods or technologies used in food production.

CHAPTER 2: ANIMAL BIOTECHNOLOGY

PART D: PRODUCTION AND TRADE

a) RESEARCH AND PRODUCT DEVELOPMENT

Guatemala has no GE animal research or development.

b) COMMERCIAL PRODUCTION

Guatemala does not produce GE animals.

c) EXPORTS

Guatemala is not a GE animal exporter.

d) IMPORTS

Guatemala does not import GE animals.

e) TRADE BARRIERS

There are no known trade barriers.

PART E: POLICY

a) REGULATORY FRAMEWORK

For information on regulatory terms relating to the use of animal agricultural biotechnology in Guatemala, see Chapter I, Part B, paragraph a). Guatemala has no regulatory process that would allow for the domestic use of animal biotechnology.

b) APPROVALS/AUTHORIZATIONS

Guatemala has not approved GE animals.

c) INNOVATIVE BIOTECHNOLOGIES

Guatemala has yet to discuss the use of innovative biotechnologies in animals.

d) LABELING AND TRACEABILITY

Guatemala has yet to discuss GE animals.

e) ADDITIONAL REGULATORY REQUIREMENTS

Guatemala has no regulation in place for GE animals.

f) INTELLECTUAL PROPERTY RIGHTS (IPR)

Guatemala has no regulations in place for GE animal IPR.

g) INTERNATIONAL TREATIES and FORUMS

As a member of the WTO, Guatemala reports to the World Organization for Animal Health (WOAH) and CODEX and follows their guidelines.

h) RELATED ISSUES

Guatemala approved [RT 65.06.01:18](#) (in Spanish), which regulates plants and animals, in 2019, but only a specific application [manual](#) (in Spanish) for plants has been developed. At this point, drafting a regulation for biotech animals is not considered.

PART F: MARKETING

a) PUBLIC/PRIVATE OPINIONS

Neither Guatemala's public nor private sector are familiar with GE or innovative biotech animals and their products.

b) MARKET ACCEPTANCE/STUDIES

No assessments exist on the potential market acceptance of GE or innovative biotech animals in Guatemala.

CHAPTER 3: MICROBIAL BIOTECHNOLOGY

PART G: PRODUCTION AND TRADE

a) COMMERCIAL PRODUCTION

Guatemala's food processing industry accounts for 46 percent of the country's manufacturing GDP. This sector encompasses sauces, condiments, fruit and vegetable juices, fermented and unfermented liquors, bread, pastries, cakes, biscuits, beer, prepared foods from cereals, cheese, curd, and enzymes. The industry has the potential to utilize microbial biotechnology, which remains unregulated in the country.

b) EXPORTS

In 2023, Guatemala exported \$2.5 billion in processed food products worldwide. While there are no official statistics or estimates for exports of microbial biotechnology products, the country exports alcoholic beverages, dairy products, and processed foods that may include ingredients derived from microbial biotechnology. Exports from the food industry accounted for 16 percent of total national exports in 2023.

c) IMPORTS

Guatemala imported \$2.7 billion in processed food products in 2023, accounting for nine percent of total imports. While there are no official statistics or estimates for imports of microbial biotechnology products, the country imports alcoholic beverages, dairy products, and processed foods that may include ingredients derived from microbial biotechnology.

d) TRADE BARRIERS

There are no known trade barriers.

PART H: POLICY

a) REGULATORY FRAMEWORK

For information on regulatory terms relating to the use of microbial biotechnology in Guatemala, see Chapter I, Part B, paragraph a). Guatemala has not ruled on microbial biotechnology, but the existing regulation applies to LMO use in agriculture.

b) APPROVALS/AUTHORIZATIONS

Not applicable to Guatemala

c) LABELING AND TRACEABILITY

Not applicable to Guatemala

d) MONITORING AND TESTING

Not applicable to Guatemala

e) ADDITIONAL REGULATORY REQUIREMENTS

Not applicable to Guatemala

f) INTELLECTUAL PROPERTY RIGHTS (IPR)

Not applicable to Guatemala

g) RELATED ISSUES

Not applicable to Guatemala

PART I: MARKETING

a) PUBLIC/PRIVATE OPINIONS

Not applicable to Guatemala

b) MARKET ACCEPTANCE/STUDIES

Not applicable to Guatemala

Attachments:

No Attachments