

**Required Report:** Required - Public Distribution

**Date:** December 16, 2025

**Report Number:** NU2025-0011

**Report Name:** Biotechnology and Other New Production Technologies  
Annual

**Country:** Nicaragua

**Post:** Managua

**Report Category:** Biotechnology and Other New Production Technologies

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**Report Highlights:**

Nicaragua's biotechnology framework has become more complex over the past year, as enactments of Ministerial Resolutions 028-2024 and Ministerial Resolution 034-2024 significantly increased regulatory requirements for biotechnology studies and genetically engineered grain imports, respectfully. Despite these actions, Nicaragua's Biotechnology Law 705 remains non-operational.

## EXECUTIVE SUMMARY

### Nicaragua: Agricultural Biotechnology Overview

Nicaragua is a signatory to the Cartagena Protocol on Biosafety and requires notification for imports of genetically engineered (GE) crops, along with a risk analysis for biotechnology events. The National Commission for Risk Analysis of Living Modified Organisms (CONARGEM) has not approved any GE crops for human consumption or cultivation. Consequently, GE crop utilization is limited to animal feed, and imports are regulated through shipment-specific government-issued permits.

Corn and soybean meal are the primary imported GE products, with the United States supplying over 80 percent of total imports in 2024. U.S. exports of GE corn and soybean meal to Nicaragua reached \$160 million in 2024. Soybean meal imports increased by 23 percent in volume due to the expansion of cattle feedlots, while U.S. corn exports experienced a slight two percent decline in 2024. Despite this decrease, market prospects for U.S. corn remain strong, driven by growth in cattle feedlots and poultry production.

In April 2024, the Nicaraguan Government (GON) published [Ministerial Resolution 028-2024](#), adding a new layer to the approval process for biotechnology studies. The resolution requires environmental studies and any project approvals, including those related to biotechnology, to obtain clearance from the Attorney General's Office (PGR) in addition to technical approval from the Ministry of Natural Resources and Environment (MARENA) and the Nicaraguan Institute of Agricultural Protection and Health (IPSA). Exporters and importers must now know that MARENA's and IPSA's technical studies for environmental analysis are not sufficient without the PGR approval. On the other hand, Nicaragua's Biotechnology Law (Law 705) remains non-operational due to the absence of implementing regulations.

In June 2024, the GON published [Executive Resolution 034-2024](#) to strengthen oversight of GE grain imports. The resolution introduced new mitigation measures, including mandatory inspections of trucks and silos by IPSA inspectors, as well as stricter monitoring of grain warehouses, transportation companies, and importers. While these resolutions directly impact the regulation of biotechnology products, they fail to address the lack of implementing regulations for Law 705, which continues to hinder the operationalization of Nicaragua's biotechnology framework.

Without implementing regulations to activate Nicaragua's biotechnology law and with the added approval requirement from the Attorney General's Office, research, development, and cultivation of biotech plants, animals, and microbes face significant challenges. Despite these legal and regulatory hurdles, imports of GE grains and ingredients for animal feeds remain relatively stable, with approvals granted on a case-by-case basis.

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## CHAPTER 1: PLANT BIOTECHNOLOGY

### PART A: PRODUCTION AND TRADE

#### PRODUCT DEVELOPMENT

Nicaragua has not developed any genetically engineered (GE) crops.

#### COMMERCIAL PRODUCTION

There is no commercial production of GE crops in Nicaragua.

#### EXPORTS

Nicaragua does not export GE crops to the United States or to other countries.

#### IMPORTS

The Nicaraguan livestock industry relies upon imported GE corn, GE soybeans, and GE soybean meal. Imports of GE products from countries other than the United States are limited.

#### FOOD AID

Nicaragua is a food aid recipient due to its limited capacity to supply food for human and animal consumption. U.S. food aid to Nicaragua has included non-GE crops and some food products processed from GE crops, such as textured soy protein, soybean flour, and refined vegetable oils. The National Commission for Risk Analysis of Living Modified Organisms (CONARGEM) has only approved GE crops for animal feed.

#### TRADE BARRIERS

Though dependent upon annual or semi-annual import permit issuances, U.S. GE corn, GE soybean, and GE soybean meal have generally not faced barriers or disruptions to trade, despite the absence of a Nicaraguan regulatory framework for products of genetic engineering or innovative biotechnologies.

### PART B: POLICY

#### REGULATORY FRAMEWORK

Terminology used in Nicaraguan legal instruments referring to agricultural biotechnology:

Legal Term (in Spanish)	Legal Term (in English)	Laws / Regulations Containing Term	Legal Definition (in English)
Organismo Vivo Modificado	Living Modified Organism	<ul style="list-style-type: none"><li>Law No. 705</li></ul>	Any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology.

Legal Term (in Spanish)	Legal Term (in English)	Laws / Regulations Containing Term	Legal Definition (in English)
(OVM)	(LMO)		
Biotecnología Molecular	Molecular Biology	<ul style="list-style-type: none"> <li>• Law No. 705</li> </ul>	<p>The application of:</p> <p>a. In vitro nucleic acid techniques, including recombinant deoxyribonucleic acid (DNA) and direct injection of nucleic acid into cells or organelles, or</p> <p>b. Fusion of cells beyond the taxonomic family, that overcome natural physiological reproductive or recombination barriers and that are not techniques used in traditional breeding and selection.</p>

The two Nicaraguan institutions responsible for regulating GE plants and animals are the Institute of Agricultural Protection and Health (IPSA) and the Ministry of Environment and Natural Resources (MARENA). Two commissions – the National Biosafety Commission (CONABIO) and CONARGEM – serve as advisory bodies to the Government of Nicaragua (GON) on issues related to GE crops and animals. In April 2024, the GON published [Ministerial Resolution 028-2024](#), adding a new layer to the approval process for biotechnology studies. The resolution requires environmental studies and any project approvals, including those related to biotechnology, to obtain clearance from the Attorney General’s Office (PGR) in addition to technical approval from MARENA and IPSA.

In 2003, Nicaragua became a party to the Cartagena protocol. Subsequently, the GON began requiring notifications for imports of GE crops and risk analyses for biotech events. In 2004, CONARGEM was formed as the GON’s biosafety advisory body on GE crops and animals.

On April 13, 2010, the GON published the Prevention of Risks Arising from Organisms Derived from New Technologies through Molecular Biotechnology Law (better known as Law 705). This law supersedes chapter XVI of the Basic Law of Animal and Plant Health (Law 291) and establishes a comprehensive, science-based GE organism framework for confined use, research, and release into the environment, commercialization (exports and imports), reproduction, multiplication, evaluation of field production, transportation, transit, bio-medication, conservation, and other uses. To date, Law 705 is not operational because it lacks implementing regulations, and without which virtually all aspects of plant biotechnology research, development, and cultivation are effectively prohibited. The text of Law 705 can be found [here](#) (Spanish only).

## IPSA

The Institute of Agricultural Protection and Health (IPSA) is the competent authority for the implementation of Nicaragua’s Biotechnology Law 705, specifically in the fields of agriculture, forestry, and aquaculture. In 2014, IPSA superseded the former Directorate General of Agricultural

Protection and Health (DGPSA), which was responsible for risk analysis of GE traits. Though the absence of implementing regulations prevents IPSA from performing risk analysis of or approving new GE traits, import permits for U.S. GE corn and soybean meal continue to be issued. More information about IPSA regulatory authorities is available [here](#) and on its official website [here](#) (Spanish only).

## **MAG**

The Ministry of Agriculture (MAG) formulates, implements, and monitors agricultural policies (including biotechnology policies) that can have a positive economic, social, and environmental impact and improve the livelihoods of small-, medium-, and large-scale farmers.

## **MARENA**

The Ministry of Environment and Natural Resources (MARENA), through its Directorate General of Biodiversity and Natural Resources, is the competent authority for the implementation of Law 705 on issues related to bioremediation, conservation, preservation, and other uses related to biological diversity. As noted before, [Ministerial Resolution 028-2024](#) grants PGR the final authority to issue environmental certifications. With this change, MARENA can no longer grant complete, functional permission for research.

## **PGR:**

The Procuraduría General de la República (PGR), or the Attorney General's Office of Nicaragua, is a governmental institution primarily responsible for the legal representation of the State in various matters concerning its interests. The PGR grants an environmental certification on permits or authorizations for environmental studies, including the ones related to biotechnology, that have already been issued by the Ministry of Environment and Natural Resources (MARENA). While MARENA remains the primary authority in charge of environmental protection and directly approves the environmental impact studies and issues the initial permits, the PGR now provides a final certification.

## **CONABIO**

The National Biosafety Commission (CONABIO) is responsible for harmonizing and recommending policies related to the use and implementation of GE crop biosafety measures. CONABIO also advises government leadership on issues related to biosafety. CONABIO consists of representatives from MAG, MARENA, Ministry of Trade, Ministry of Health, the Secretary of the Nicaraguan Council of Science and Technology, an independent plant scientist, and four independent academics with biosafety expertise.

## **CONARGEM**

The National Commission for Risk Analysis of Living Modified Organisms (CONARGEM) is overseen by MAG and MARENA, with leadership rotating between the two ministries every six months. CONARGEM reviews new biotech event approval requests, proposes guidelines for GE crop risk analysis, develops procedural norms, and assists the GON in formulating biosafety policies and strategies. Note: CONABIO is best characterized as an advisory body to the Presidencia, while

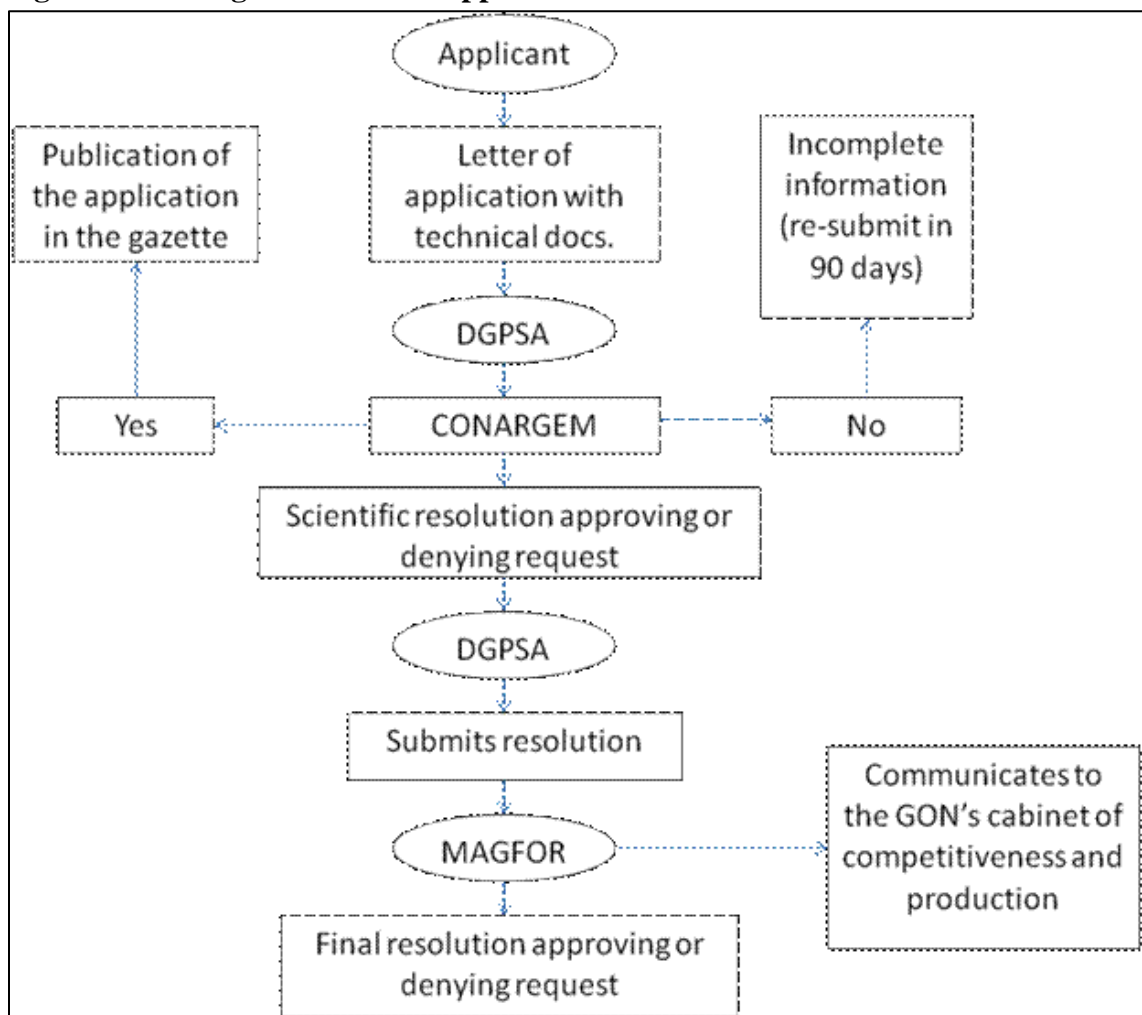
CONARGEM is the commission that would be responsible for analyzing requests related to the approval of new biotech events.

### Approval Process for New GE Events

According to Law 705, the approval process of GE events for food, feed, processing, and environmental release should be the same. However, applicants cannot apply for approval of GE events at this time, because Law 705 lacks implementing regulations. Complete approval is expected to take 270 calendar days, beginning the day after the competent authority receives completed applications. Please refer to the flow chart below for more details.

With the recent passing of [Ministerial Resolution 028-2024](#), the Attorney General’s Office has the final word on any approvals of biotechnology studies and new biotech events.

**Figure 1: Nicaragua Model GE Approval Flow Chart**



**Source:** *Valoración de la situación actual de la bioseguridad en los aspectos normativos jurídicos y organizativos en Nicaragua.* José René Orue, 2009. **Note:** IPSA replaced DGPSA in 2014. MAGFOR is the acronym for MAG’s antecedent, the Ministry of Agriculture and Forestry.

In June 2024, the GON published [Ministerial Resolution 034-2024](#) to strengthen oversight of GE grain imports. The resolution introduced new mitigation measures, including mandatory inspections of trucks and silos by IPSA inspectors, as well as stricter monitoring of grain warehouses, transportation companies, and importers.

### **APPROVALS / AUTHORIZATIONS**

There are currently no GE events approved in Nicaragua, and all importation of GE products is facilitated by annual / semi-annual import permits from the Government of Nicaragua. The 2005 GON Ministerial Resolution 034-2005 approved the issuance of phytosanitary import permits for 15 GE corn events (676, 678, and 680, MS3, MS6, BT 176, BT11, CT 1507, MON 863, MON 810, T14, T25, DLL25, and GA21). However, this ministerial resolution is no longer in effect as Law 705 superseded its regulatory authority. The GON has not completed the implementing regulations of Law 705 and there have not been any recent approvals of GE events.

### **STACKED or PYRAMIDED EVENT APPROVALS / AUTHORIZATIONS**

Law 705 does not distinguish between the approval process for plants that combine two or more approved traits (i.e., stacked or pyramid events) and plants that have just one approved trait. Stacked event approvals would follow the same procedures as any other GE crop under Law 705.

### **FIELD TESTING**

CONARGEM has not approved any GE crop for cultivation, and therefore, field-testing is not allowed.

### **INNOVATIVE BIOTECHNOLOGIES**

Nicaragua has not established any specific regulations for innovative biotechnologies. Law 705 encompasses all organisms derived from biotechnologies, including those from new genomic techniques, new breeding techniques, precision breeding, targeted mutagenesis, and genome editing among others.

### **COEXISTENCE**

As part of the risk assessment process for GE events stipulated in Law 705, the competent authority, with the advice of the CONARGEM, may establish restricted areas for the release and use of “living modified organisms.” Therefore, policy measures related to the co-existence of GE and non-GE crops will be considered on a case-by-case basis according to risk analyses.

### **LABELING AND TRACEABILITY**

Nicaragua does not have a specific law for the labeling and traceability of GE crops. However, according to Law 705, exporters of GE crops will need to comply with the provisions established in the Cartagena Protocol on Biodiversity and international and regional agreements on this matter. For the specific case of labeling seeds, exporters will need to comply with [Law 280 on Production and Trading of Seeds](#) (Spanish only).

## **MONITORING AND TESTING**

On June 25, 2024, IPSA issued executive resolution 2024-01569, altering the monitoring and testing policy for GE corn imports. The new resolution imposes new mitigation measures on authorized grain warehouses, transportation companies, and grain importers such as the inspection of trucks, silos, and warehouses by IPSA inspectors to mitigate any grain management risks. More information can be found in the following [link](#).

## **LOW LEVEL PRESENCE (LLP) POLICY**

Nicaragua does not have a low-level presence policy.

## **ADDITIONAL REGULATORY REQUIREMENTS**

Beyond those requirements specified in Law 705, any environmental studies and biotechnology approvals must be granted by the Attorney General's Office, according to [Ministerial Resolution 028-2024](#).

## **INTELLECTUAL PROPERTY RIGHTS (IPR)**

Nicaragua's [Law 318](#) on Plant Variety Protection (Spanish only) establishes the standards to protect the rights of natural and legal persons that have created, discovered, or developed new plant varieties either by natural means or genetic manipulation.

## **CARTAGENA PROTOCOL RATIFICATION**

Nicaragua ratified the Cartagena Protocol on Biosafety to the Convention on Biological Diversity on August 28, 2002; related measures entered into force in September 2003.

## **INTERNATIONAL TREATIES / FORA**

Nicaragua is a member of several international organizations including Codex, the International Plant Protection Convention, and the World Organization for Animal Health.

## **RELATED ISSUES**

None at this time.

## **PART C: MARKETING**

### **PUBLIC / PRIVATE OPINIONS**

Public awareness of GE technologies and products is limited.

Agricultural producers are generally interested in cultivating GE corn and soybean varieties but cannot do so without implementing regulations under Law 705. While the private sector supports the use of GE seeds, there are nonprofit organizations opposed to GE technologies promoting initiatives to preserve and enhance native seeds.

## **MARKET ACCEPTANCE / STUDIES**

Public awareness of GE technologies and products is limited. FAS Managua is unaware of any Nicaragua-specific research or analysis of market acceptance of GE technologies and products. As mentioned previously, [Ministerial Resolution 028-2024](#) added a new layer to the approval process for biotechnology studies, which could complicate future research endeavors.

## **CHAPTER 2: ANIMAL BIOTECHNOLOGY**

### **PART D: PRODUCTION AND TRADE**

#### **PRODUCT DEVELOPMENT**

In the absence of implementing regulations, both research and development of GE animals or livestock clones are effectively prohibited.

#### **COMMERCIAL PRODUCTION**

Nicaragua does not commercially produce any livestock clones or GE animals, or products derived from animal biotechnologies.

#### **EXPORTS**

Nicaragua does not export any GE animals, livestock clones, or products from these animals at this time.

#### **IMPORTS**

Nicaragua has not imported GE animals or livestock clones or products from these animals.

#### **TRADE BARRIERS**

In the absence of implementing regulations and risk assessments, the importation of GE animals, livestock clones, or products from these animals is effectively prohibited.

### **PART E: POLICY**

#### **REGULATORY FRAMEWORK**

[Law 705](#) provides MAG and MARENA with the legal authority to regulate animal biotechnology in Nicaragua. However, because implementing regulations have yet to be developed for Law 705, there is presently no pathway for approval of GE animals, livestock clones, or products from these animals.

For more information on Nicaragua's biotechnology regulatory framework and terminology, see Chapter 1, Part B.

## **APPROVALS / AUTHORIZATIONS**

There are no GE animals, livestock clones, or products from these animals approved or registered in Nicaragua at this time.

## **INNOVATIVE BIOTECHNOLOGIES**

Nicaragua has not established any specific regulations for innovative biotechnologies. Law 705 encompasses all organisms derived from biotechnologies, including those from genome editing in animals.

## **LABELING AND TRACEABILITY**

Nicaragua has not developed regulations for labeling or traceability of products of animal biotechnology or cloning.

## **ADDITIONAL REGULATORY REQUIREMENTS**

Nicaragua has not developed additional regulatory requirements for animal biotechnology.

As noted previously, [Ministerial Resolution 028-2024](#) added a new layer to the approval process for biotechnology studies.

## **INTELLECTUAL PROPERTY RIGHTS (IPR)**

Nicaragua has not developed IPR laws for GE animals or for livestock clones.

## **INTERNATIONAL TREATIES / FORA**

Nicaragua participates in the World Organization for Animal Health (WOAH), although FAS Managua is not aware of any specific interventions by Nicaraguan officials on animal biotechnology or cloning.

## **RELATED ISSUES**

None at this time.

## **PART F: MARKETING**

### **PUBLIC / PRIVATE OPINIONS**

Public awareness of GE animals, livestock clones, or products from these animals is limited. Though unaware of any research into public acceptance of animal biotechnology, FAS Managua anticipates the subject could be controversial, based on broader cultural attitudes.

### **MARKET ACCEPTANCE / STUDIES**

Public awareness of GE technologies and products is limited. FAS Managua is unaware of any Nicaragua-specific research or analysis of market acceptance of GE technologies and products.

## **CHAPTER 3: MICROBIAL BIOTECHNOLOGY**

### **PART G: PRODUCTION AND TRADE**

#### **PRODUCT DEVELOPMENT**

In the absence of implementing regulations, research into and development of microbial biotechnology are effectively prohibited.

#### **COMMERCIAL PRODUCTION**

The only microbial biotech-derived food ingredients produced by Nicaragua are those traditionally used in the production of alcoholic beverages, dairy products, and processed products.

#### **EXPORTS**

There are neither official statistics nor estimates on exports of microbial biotechnology products. Nicaragua exports alcoholic beverages, dairy products, and processed products which may contain microbial biotech-derived food ingredients.

#### **IMPORTS**

There are neither official statistics nor estimates on imports of microbial biotechnology products. Nicaragua imports alcoholic beverages, dairy products, and processed products which may contain microbial biotech-derived food ingredients.

#### **TRADE BARRIERS**

In the absence of implementing regulations, risk assessments and importation of microbial biotechnology products is effectively prohibited.

### **PART H: POLICY**

#### **REGULATORY FRAMEWORK**

The legal framework for microbial biotechnology is Nicaragua's Law 705 on the prevention of risks arising from organisms derived from new technologies through molecular biotechnology.

[Law 705](#) provides MAG and MARENA with the legal authority to regulate microbial biotechnology in Nicaragua. This law establishes a complete comprehensive science-based framework for the use of GE organisms in confined use, research, release into the environment, commercialization (exports and imports), reproduction, multiplication, evaluation of field production, transportation, transit, bio-medication, conservation, and other uses. Although the current legislation is very broad, it doesn't have specific provisions for microbial biotechnology.

For more information on Nicaragua's biotechnology regulatory framework and terminology, see Chapter 1, Part B.

## **APPROVALS / AUTHORIZATIONS**

Nicaragua has not yet approved any microbial agricultural biotechnology products.

## **LABELING AND TRACEABILITY**

Nicaragua has not developed regulations for labeling or traceability of products of microbial biotechnology.

## **MONITORING AND TESTING**

Nicaragua does not monitor or test for the presence of microbial biotech products in imports or exports.

## **ADDITIONAL REGULATORY REQUIREMENTS**

There are no additional regulations for microbial biotech products.

## **INTELLECTUAL PROPERTY RIGHTS (IPR)**

Nicaragua has not developed IPR laws for microbial biotechnology products.

## **RELATED ISSUES**

None at this time.

## **PART I: MARKETING**

### **PUBLIC / PRIVATE OPINIONS**

Microbial biotechnology is a new term for most of the key biotechnology stakeholders in Nicaragua, let alone the general public. FAS Managua is not aware of any public/private opinions regarding microbial biotechnology.

### **MARKET ACCEPTANCE / STUDIES**

Though unaware of any research into public acceptance of microbial biotechnology, FAS Managua anticipates the subject could be controversial, based on broader cultural attitudes. FAS Managua is unaware of any Nicaragua-specific research or analysis of market acceptance of microbial biotechnology.

### **Attachments:**

No Attachments