

Required Report: Required - Public Distribution

Date: December 01, 2025

Report Number: VE2025-0014

Report Name: Biotechnology and Other New Production Technologies
Annual

Country: Venezuela

Post: Caracas

Report Category: Biotechnology and Other New Production Technologies

Prepared By: FAS

Approved By: Rachel Nelson

Report Highlights:

The Venezuelan private sector supports the use and application of agricultural biotechnology. Nevertheless, Venezuelan regulations maintain a ban on the domestic use and research of modern biotechnology-derived agriculture, based on the 2015 Seed Law, which also prohibits the import of genetically engineered (GE) seed. However, Venezuela allows imports of GE-derived products, and the United States is the leading supplier, including corn, soybeans, soybean meal, and soybean oil. In 2024, the United States supplied an estimated 1,314,000 metric tons (MT) of GE-derived products to Venezuela.

Executive Summary

Venezuela does not use modern agricultural biotechnology on a commercial scale. Due to legal restrictions, Venezuelan producers cannot cultivate or develop any commercial biotechnology crops, and the importation and use of GE seeds is prohibited. Corn, the country's most important staple, which would benefit from agricultural biotechnology through increased crop yields, is grown entirely with conventional seeds. Venezuela's Seed Law of December 2015 prohibits plant biotechnology research and the use of GE-seed in agricultural production. However, the importation of biotechnology-derived crops and processed products is allowed.

Despite Venezuelan authorities' efforts to portray modern agricultural biotechnology as dangerous, private industry groups openly support it for its potential to increase productivity and reduce the use of agricultural chemicals, and advocate for a regulatory framework that allows its legal use. They also note the contradiction of prohibiting domestic biotech use while permitting imports of biotechnology-derived products and crops.

The United States is the leading exporter of biotechnology-derived crops to Venezuela, followed by Brazil and Argentina, with corn, soybeans, soybean meal, and soybean oil among the top exports. In 2024, the United States exported an estimated 1,314,000 MT of GE-crops to Venezuela, accounting for 58 percent of the market share. In 2025 (January-July), U.S. GE-crops exports have declined 23 percent year-over-year, holding a 54 percent market share.

Table of Contents

Executive Summary

Chapter 1: Plant Biotechnology

Part A: Production and Trade

Part B: Policy

Part C: Marketing

Chapter 2: Animal Biotechnology

Part D: Production and Trade

Part E: Policy

Part F: Marketing

Chapter 3: Microbial Biotechnology

Part G: Production and Trade

Part H: Policy

Part I: Marketing

Chapter 1: Plant Biotechnology

Part A: Production and Trade

a) Research and Product Development

Venezuela has not developed any GE plant products. The only ongoing biotechnology research is related to molecular genetics and tissue cultures, conducted by public universities and private extension and research institutions, with minimal involvement by the Venezuelan authorities. The Seed Law of 2015 bans the research and development of biotechnology-derived crops.

b) Commercial Production

There are no commercial biotechnology crops or genetic engineering under development.

c) Exports

Venezuela did not export biotechnology-derived products in 2024.

d) Imports

There are no barriers to importing or marketing GE-crops or processed products. However, the importation of GE seeds for any crop is banned. Venezuela is a significant importer of GE-soybeans, soybean meal and oil, and corn (Table 1).

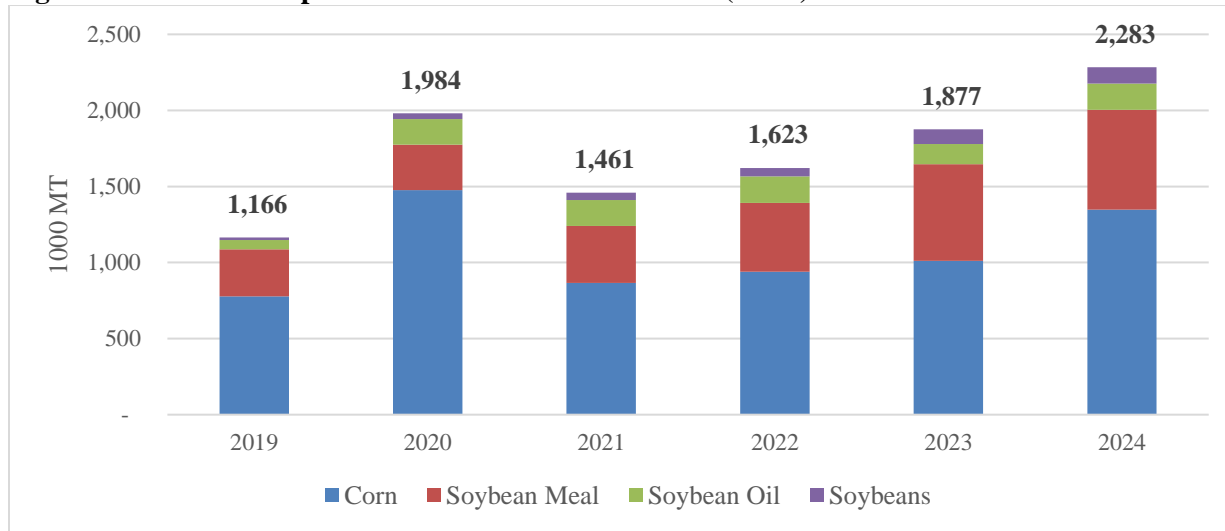
Between 2019 and 2024, Venezuela's GE-crop imports increased 96 percent by volume. In 2024, these imports consisted of 59 percent corn, 29 percent soybean meal, 8 percent soybean oil, and 5 percent soybeans (Figure 1).

Table 1. Venezuelan Imports of GE Products* in 2024-2025 (January-July) (Thousand Metric Tons [TMT])

Country	Corn	Soybeans	Soybean Meal	Soybean Oil	Total	Annual Change %
2024 - (U.S. Market Share: 58 percent)						
USA	553	59	653	49	1,314	37.6
Brazil	530	47	3	64	643	1.0
Argentina	263	-	-	-	263	7.1
Other	-	-	-	62	62	71.1
Total	1,347	106	656	174	2,283	21.8
January- July 2025 - (U.S. Market Share: 54 percent)						
USA	191	55	339	111	695	-22.8
Brazil	246	20	1	16	283	-26.0
Argentina	253	-	-	-	253	-3.0
Other	34	-	-	14	47	34.6
Total	723	75	340	141	1,279	-19.0

Data Source: Trade Data Monitor. *Commodity imports more than likely to be biotechnology derived.

Figure 1. Venezuela Imports of GE Products* 2019-2024 (TMT)



Data Source: Trade Data Monitor. *Imports more than likely to be biotechnology derived.

e) Food Aid

The World Food Program has been providing school meals in Venezuela since April 2021. There is no available data on the inclusion of food derived from GE-crops through this assistance, however there are no restrictions on importing biotechnology-derived products for food aid purposes.

f) Trade Barriers

On December 28, 2015, the Venezuelan authorities enacted a law outlawing the application and research of modern biotechnology in domestic agriculture. This law prohibits the production, importation, use, release, and propagation of GE or transgenic seed. The law also prohibits granting copyright and patent protection to any seeds, conventional or otherwise. Violations may result in penalties ranging from fines to imprisonment. Imports of GE-crops or biotechnology-derived processed products are not restricted.

Part B: Policy

a) Regulatory Framework

The Venezuelan Seed Law (2015)¹ effectively bans any transgenic or modern biotechnology agricultural research. The National Seed Commission (CONASEM) drafted the Seed Law under the authority of the National Institute of Agricultural Research (INIA), which registers and certifies legally permitted seeds.

The 2015 Seed Law forbids the use, application, and research of modern agricultural biotechnology. This includes the following prohibited techniques and technologies (Table 2):

- In vitro nucleic acid techniques, including the recombinant DNA technique and the direct injection of nucleic acids into cells or organelles.

¹ The law repealed the Law on Seeds, Animal Reproduction Material and Biological Inputs of 2002, and the Decree of 1986 that created the National Seed Service See: FAO FAOLEX Database [2015 Ley de Semillas](#). Link in Spanish only.

- The fusion of cells of species beyond the taxonomic family, which exceeds the natural reproduction or recombination barriers and is not used in traditional reproduction and selection.
- Although the law does not explicitly mention innovative methods for the development of plant products, these are considered modern agricultural biotechnology and are therefore restricted.

Table 2. Terminology Used in Venezuelan Legislation² Related to Agricultural Biotechnology

Legal Term (Spanish)	Legal Term (English)	Legal Definition
Biología Moderna	Modern Biotechnology	In vitro nucleic acid techniques, including the recombinant DNA technique and the injection of nucleic acids into cells. The fusion of cells of different species that could not occur naturally and are not used in traditional breeding and selection.
Organismos Genéticamente Modificados o Transgénicos	Genetically Modified or Transgenic Organisms	Any living or non-living organism having a novel combination of genetic material obtained through the application of modern biotechnology.
Híbrido	Hybrid	The result of controlled crossbreeding between genetically distinct and stable parents of the same species, whose generations will express different traits.
Semilla	Seed	Any botanical structure intended for the sexual or asexual reproduction of a species.
Semilla Transgénica	Transgenic Seed	Any seed that carries a novel combination of genetic material, which has been obtained through the application of modern biotechnology.
Agrobiodiversidad	Agro-biodiversity	Set of components of biological diversity for agricultural production, including food production, livelihood sustainability, and the conservation of agricultural systems.
Biopiratería	Biopiracy	Illegal appropriation and use of local genetic and biological resources, undermining national sovereignty and affecting biological diversity.
Bioseguridad	Biosafety	A set of safety measures required to prevent or minimize potential adverse effects on ecosystems and biological diversity resulting from the application of modern biotechnology.

The 2015 Seed Law forbids the production, importation, use, release, and multiplication of GE-seeds. Furthermore, the law prohibits granting copyrights and patents on any biotechnology-derived and naturally produced, non-GE seed. There are no regulatory differences between GE plant products that contain DNA in their final form and those that do not. Additionally, there are no regulatory distinctions between living GE plant products and those that are considered non-living.

The Venezuelan authorities oppose the pursuit of private profit from biotechnology research and the commercialization of its results.

² All terms all apply to 2015 Seed Law.

Venezuela's [Ministry of Eco-Socialism](#)³ (MINEC) is responsible for creating agricultural biotechnology policy and regulation enforcement. The Directorate of Biosecurity and Bio-commerce at MINEC administers and regulates all genetic resources and biosecurity issues in Venezuela. This ministry is also responsible for encouraging activities that improve biodiversity within the country, including assessing all biotechnology and biosecurity issues, assessing biological diversity information, and establishing contracts to provide access to genetic resources.

b) Approvals

There are no GE-cultivars approved for cultivation or export in Venezuela.

c) Stacked Events or Pyramided Event Approvals

Not applicable.

d) Field Testing

Not applicable.

e) Innovative Biotechnologies

Venezuela has no regulations related to innovative biotechnologies, but these fall within the field of modern biotechnology and, as such, are prohibited under current law.

f) Coexistence

Not applicable.

g) Labeling and Traceability

Venezuela does not require special labeling for products derived from GE plants or containing GE-derived plant ingredients.

h) Monitoring and Testing

A reference laboratory affiliated with INIA in the city of Maracay has been used for the detection and analysis of biotechnology products. The laboratory's operational status is presently unknown.

i) Low-Level Presence (LLP) Policy

No LLP policy.

j) Additional Regulatory Requirements

Not applicable.

k) Intellectual Property Rights (IPR)

³ See: [Venezuela's Ministry of Eco-Socialism](#). Link in Spanish only.

The Seed Law prohibits copyright protections and patents on any biotechnology seeds.

l) Cartagena Protocol Ratification

On May 24, 2000, Venezuela signed the Cartagena Protocol on Biosafety (CPB) and ratified the agreement on September 11, 2003, and national measures are partially in place. To date, the CPB has not impacted trade, including agricultural trade from the United States.

m) International Treaties and Forums

Venezuela is a member of Codex Alimentarius. The Venezuelan authorities' Codex representation is managed by the Ministry of Industry and Commerce, [National Autonomous Service for Norms, Quality, Metrology, and Technical Regulations \(SENCAMER\)](#). Venezuela is a signatory to the International Plant Protection Convention (IPPC). The Ministry of Agriculture and Land's [National Institute of Agricultural Health \(INSAI\)](#) represents the Venezuelan authority at IPPC events.⁴

n) Related Issues

None.

Part C: Marketing

a) Public/Private Opinions

The Venezuelan authorities routinely conduct public campaigns against modern agricultural biotechnology, falsely promoting myths associated with its use in both the environment and human consumption. In contrast, private organizations such as the [Venezuelan Federation of Agricultural Producers \(FEDEAGRO\)](#) and the [Venezuelan Association of Seed Producers \(AVESEM\)](#) openly support agricultural biotechnology and have highlighted the potential of genetic engineering to improve agricultural production and boost farmers' incomes. However, these organizations constantly warn the public about the legal risks of using uncertified or illegal seeds, including GE seeds, that include strict penalties.

b) Market Acceptance/Studies

Despite the ban on developing and marketing agricultural biotechnology in Venezuela, local producers continue to advocate for the acceptance of GE crops. For instance, FEDEAGRO consistently promotes the potential for increased agricultural production if a regulatory framework were established to permit GE-seed cultivation. Corn, the crop that farmers would benefit the most from agricultural biotechnology, is grown exclusively from conventional seeds (either hybrid or open-pollinated). Some agricultural leaders have criticized Venezuelan authorities for banning the domestic use of agricultural biotechnology while allowing the importation of biotechnology-derived products and crops, which undermines local production.

Venezuelan consumers are largely unconcerned about biotechnology-derived foods, as they are impacted by high food inflation costs and a fragile food security situation. Venezuela imports significant volumes of GE-derived soybeans, soybean meal, soybean and vegetable oil, and corn, primarily from the United States, Brazil, and Argentina.

Chapter 2: Animal Biotechnology

⁴ All aforementioned links to Venezuelan ministries and institutions are in Spanish only.

Part D: Production and Trade

There are no animal biotechnology events under development in Venezuela, and no approvals have been provided by Venezuelan authorities for animal biotechnology from any source. However, domestic research centers and universities have shown interest in animal biotechnology techniques to enhance the quality of cattle and goats. Presently, in vitro fertilization and embryo transfer are used in genetic improvement in cattle, and several companies offer these services commercially. The use of modern animal biotechnology techniques is less developed. Animal cloning or genome editing are not currently being researched or used to improve animal genetics in public or private institutions. Venezuela has mainly utilized modern animal biotechnology to diagnose animal diseases, predominantly viral.

b) Commercial Production

Not applicable.

c) Exports

Not applicable.

d) Imports

Venezuela imports recombinant vaccines and diagnostic kits for animal diseases. The primary markets for these products include the poultry, swine, and livestock industries.

e) Trade Barriers

Not applicable.

Part E: Policy

a) Regulatory Framework

Because there is no policy governing animal biotechnology, no entity exists to regulate the use of GE-animals or livestock clones for food safety, animal welfare, or environmental safety issues. Animal biotechnology is mentioned in the [Seed, Animal Reproductive Material, and Biological Inputs Law of 2002](#). However, no regulations have been implemented to address animal biotechnology research and commercialization.

b) Approvals

Not applicable.

c) Innovative Biotechnologies

No regulation currently.

d) Labeling and Traceability

Not applicable.

e) Additional Regulatory Requirements

Not applicable.

f) Intellectual Property Rights (IPR)

Not applicable.

g) International Treaties and Forums

Not applicable.

h) Related Issues

None.

Part F: Marketing

a) Public/Private Opinions

There is no information on public or private sector opinions regarding the use of livestock cloning or genome-edited animals.

b) Market Acceptance, Studies

The Venezuelan livestock sector routinely uses advanced genetic improvement techniques such as artificial insemination, in vitro fertilization, and embryo transfer. As a result, the industry supports technological innovations that increase milk and beef production.

Chapter 3: Microbial Biotechnology

Part G: Production and Trade

a) Commercial Production

The only microbial biotechnology-derived food ingredients in Venezuela are those traditionally used to produce alcoholic beverages, dairy products, and processed food products.

b) Exports

Venezuela exports alcoholic beverages, dairy products, and processed products that may contain microbial biotechnology-derived food ingredients. In 2024, exports of these products totaled \$10.9 million, with the United States as their principal market (48 percent), followed by Chile (16 percent), and Peru (15 percent).

c) Imports

In 2024, Venezuela imported \$413 million of various processed products, including prepared foods, wine, beer, condiments and sauces, fruit juices, dairy products, and infant foods and enzymes—all products that may contain microbial biotechnology-derived food ingredients. The leading suppliers of these products included Brazil (41 percent market share), Colombia (17 percent), the United States (11 percent), and the European Union (11 percent).

d) Trade Barriers

None.

PART H: Policy

a) Regulatory Framework

The Ministry of Health enforces food safety standards and regulations. It is responsible for regulating food ingredients for human consumption through its [Sanitary Health Service](#) (Servicio Autónomo de Contraloría Sanitaria) and the Directorate for Food Safety and Inspection (Dirección de Inocuidad e Inspección de Alimentos y Bebidas Alcohólicas). No specific regulations involve the use of microbial biotechnology-derived ingredients.

b) Approvals

Not applicable.

c) Labeling and Traceability

No labeling regulations for microbial biotech-derived ingredients or food products have been developed in Venezuela.

d) Monitoring and Testing

Venezuela does not perform GE-testing on biotechnology-derived food products or ingredients, including in trade.

e) Additional Regulatory Requirements

No additional requirements.

f) Intellectual Property Rights (IPR)

Not applicable.

g) Related Issues

None.

Part I: Marketing

a) Public/Private Opinions

Not applicable.

b) Market Acceptance, Studies

The information provided in this report regarding plant biotechnology acceptance also applies to microbial biotechnology.

Attachments:

No Attachments