

The U.S.-Mexico Genetically Engineered Corn Dispute

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The U.S.-Mexico Genetically Engineered Corn **Dispute**

In August 2023, the United States requested a dispute settlement panel under the United States-Mexico-Canada Agreement (USMCA) concerning Mexico's February 2023 presidential decree banning genetically engineered (GE) corn in dough and tortillas and directing the gradual substitution of GE corn used for animal feed and industrially for human consumption. Mexico defends the decree as protecting its environment, native corn, agricultural practices, biodiversity, peasant communities, gastronomic heritage, and the diet of its people. The United States is concerned the decree is not science-based, violates Mexico's USMCA obligations, and is unfair to U.S. producers and exporters.

Mexico ranks consistently as a top market for U.S. corn exports. In 2023, the United States exported about 18.6 million metric tons (worth more than \$5 billion) of corn to Mexico. Most U.S. corn exported to Mexico is GE yellow corn used mainly for livestock feed. Mexico produces mostly white corn primarily used to make corn-based foods for human consumption, such as tortillas. Mexico does not permit domestic commercial production of GE corn following a 2013 decision by a Mexican federal district court.

Corn is an important food source for Mexico historically and is a culturally and a politically sensitive commodity. The GE corn ban decree raised concerns for segments of the U.S. and Mexican agricultural industries, as well as for the U.S. government. Before assuming power in December 2018, Mexican President Andrés Manuel López Obrador and his administration's officials stated their opposition to the planting of GE corn; the risks of GE corn contaminating native, non-GE varieties; and their focus on strengthening Mexico's food production system. In December 2020, Mexico issued a presidential decree calling for the phaseout of both GE corn for human consumption and glyphosate no later than January 31, 2024.

Between 2021 to 2022, the United States engaged with Mexico on numerous occasions about the decree. In December 2022, Mexico offered to modify the decree, but in January 2023, the United States rejected the proposal, stating that the proposed modifications would jeopardize bilateral trade and stifle innovation in agricultural biotechnology.

In February 2023, Mexico issued a revised decree prohibiting GE corn in dough and tortillas. The 2023 decree phases out GE corn used for animal feed and industrial use for food. Despite assurances from Mexico's government that the decree would have no commercial impact, the United States continues to express concerns that Mexico's stance on GE corn could harm bilateral trade and biotechnology innovation. The United States also has raised concerns about the delays and denials of approvals for new GE products, which essentially block the importation and sale of those products in Mexico.

In March 2023, the United States held technical consultations under USMCA's Sanitary and Phytosanitary Measures Chapter with Mexico about its agricultural biotechnology measures. In the same month, Canada also requested technical consultations with Mexico. Unable to resolve the dispute through technical consultations, in June 2023, the United States escalated the issue by requesting and then holding USMCA dispute settlement consultations with Mexico. After the June consultations failed to resolve the issue, the United States requested the establishment of a panel under USMCA to examine Mexico's biotechnology measures on GE corn and determine whether Mexico's measures violate its USMCA obligations. Canada joined the panel proceedings as a third party. A tentative schedule estimates that the hearing for the dispute before the panel is to be held at the end of June 2024, the panel would issue an initial report approximately in September 2024, and it would issue a final report approximately in November 2024.

Many in Congress have taken an interest in the U.S.-Mexico GE corn dispute. Some Members have engaged directly with the executive branch through hearings or letters on the issue. As the dispute continues to unfold, Congress may use its oversight responsibilities to monitor developments.

SUMMARY

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Introduction

In February 2023, Mexico issued a presidential decree banning genetically engineered (GE)¹ corn in dough and tortillas and directing the gradual substitution of GE corn used for animal feed and other forms of food for human consumption.² In August 2023, the United States requested a dispute settlement panel under the United States-Mexico-Canada Agreement (USMCA) to escalate a dispute with Mexico concerning its GE corn decree after failing to resolve the issue in previous engagements.³ USMCA contains a chapter with provisions related to sanitary and phytosanitary (SPS) measures.⁴ The United States heavily cited Mexico violating the chapter's provisions. Many in Congress have an interest in this dispute due to the potential negative impact Mexico's policies on GE corn and biotechnology could have on the U.S. agricultural economy.

The February 2023 presidential decree modifies a December 2020 presidential decree that required the phaseout of both GE corn for human consumption and glyphosate (a widely used herbicide) by January 31, 2024. The 2023 decree states that its main purpose is "to protect the rights to health and a healthy environment, native corn, the milpa,⁵ biocultural wealth, peasant communities, and gastronomic heritage; as well as to ensure the nutritious, sufficient and quality diet."⁶ The United States contends that, among numerous concerns, the 2023 decree's measures to ban GE corn are not based on science, violate Mexico's obligations to USMCA, and are unfair and harmful to U.S. producers and exporters.⁷

¹ In this report, the term *genetically engineered* (GE) refers to the use of genetic modification techniques on organisms. Other common terms for GE include *genetically modified organism* (GMO) and *biotech* as noun modifiers. For more information about agricultural biotechnology, see CRS Report R46737, *Agricultural Biotechnology: Overview, Regulation, and Selected Policy Issues*, by Eleni G. Bickell.

² The English title of the decree is *Decree Establishing Various Actions Regarding Glyphosate and Genetically Modified Corn.*

³ For more information about the United States-Mexico-Canada Agreement (USMCA), the free trade agreement that entered into force on July 1, 2020, and replaced the North American Free Trade Agreement (NAFTA), see CRS Report R44981, *The United States-Mexico-Canada Agreement (USMCA)*, by M. Angeles Villarreal; CRS In Focus IF10997, *U.S.-Mexico-Canada (USMCA) Trade Agreement*, by M. Angeles Villarreal; and CRS Report R45661, *Agricultural Provisions of the U.S.-Mexico-Canada Agreement*, by Anita Regmi. For more information about U.S.-Mexico economic and trade relations, see CRS Report RL32934, *U.S.-Mexico Economic Relations: Trends, Issues, and Implications*, by M. Angeles Villarreal; and CRS In Focus IF11175, *U.S.-Mexico Trade Relations*, by M. Angeles Villarreal.

For more information about dispute settlement under USMCA, see CRS In Focus IF11399, *Enforcing International Trade Obligations in USMCA: The State-State Dispute Settlement Mechanism*, by Nina M. Hart; and CRS In Focus IF10645, *Dispute Settlement in the WTO and U.S. Trade Agreements*, by Christopher A. Casey and Cathleen D. Cimino-Isaacs.

⁴ Sanitary refers to human and animal health, including food safety, and *phytosanitary* refers to plant health. Sanitary and phytosanitary (SPS) measures are laws, regulations, standards, and procedures that governments enforce to protect human, animal, or plant life or health. For more information about SPS measures, see CRS In Focus IF11903, *Addressing Nontariff Barriers to Agricultural Trade at the WTO*, by Renée Johnson.

⁵ Milpa refers to a traditional agricultural system of production for a variety of plants, such as corn, beans, and squash.

⁶ Translation of the 2023 decree excerpt is provided in United States of America, Mexico - Measures Concerning Genetically Engineered Corn (MX-USA-2023-31-01): Initial Written Submission of the United States of America, October 25, 2023, p. 26 (hereinafter, Initial Written Submission of the United States of America). A copy of the initial written submission is available at the U.S. Department of Commerce, International Trade Administration, Trade Agreements Secretariat Electronic Filing System at https://www.trade.gov/about-us/trade-agreements-secretariat/, registration is required (documents available from author to congressional clients on request).

⁷ Office of the U.S. Trade Representative (USTR), "United States Establishes USMCA Dispute Panel on Mexico's Agricultural Biotechnology Measures," press release, August 17, 2023; USTR, "What They Are Saying: U.S. (continued...)

This report provides an overview of the dispute between the United States and Mexico over Mexico's measures to ban GE corn. The report examines the Mexican government's initial views on GE corn and its first presidential decree to ban GE corn in December 2020, as well as the reactions from stakeholders and the U.S. government. It then describes developments of the second GE corn ban issued in February 2023. It explores the related issue of Mexico's delay and denial of approvals for new GE agricultural products, including GE corn. Next, it examines the U.S. escalation of the issue through USMCA's dispute settlement mechanism. Finally, the report considers congressional interest in this trade dispute. **Table A-1** provides additional details on U.S. concerns about Mexico's biotechnology measures and the U.S. assertions that these measures are inconsistent with USMCA obligations.

U.S.-Mexico Trade in Corn

Mexico is an important market for U.S. corn exports, ranked as either the number one or two market for U.S. corn exports by quantity for more than the past two decades.⁸ In 2023, the United States exported about 18.6 million metric tons (worth more than \$5 billion) of corn to Mexico (**Figure 1**). Corn is consistently the largest U.S. agricultural commodity product group by value exported to Mexico. Mexico's corn imports from the United States generally make up about a third of Mexico's overall corn supply (**Figure 2**). Most U.S. corn exported to Mexico is used for livestock feed; it is also used to make cereals, starches, and other processed products.⁹ Over 90% of all U.S. corn acres planted are GE.¹⁰ Mexico does not permit commercial domestic production of GE corn following a 2013 decision by a Mexican federal district court.¹¹ Concerning corn as a commodity, the United States produces and exports mostly GE yellow corn, and Mexico mainly produces white corn used to make corn-based foods, such as tortillas, for human consumption.¹² Mexico imports about 5% of its white corn supply to fulfill domestic demand.¹³

Establishes USMCA Dispute Panel on Mexico's Agricultural Biotechnology Measures," press release, August 21, 2023.

⁸ Trade data from U.S. Department of Agriculture (USDA), Foreign Agricultural Service (FAS), "Global Agricultural Trade System Online: GATS Home," https://apps.fas.usda.gov/gats/default.aspx.

⁹ FAS, *Mexico Publishes Decree to Ban Glyphosate and GE Corn*, Global Agricultural Information Network Report (GAIN) Report MX2021-0003, January 6, 2021. For marketing year October 2022-September 2023, Mexico's Secretariat of Agriculture and Rural Development (Spanish acronym SADER) estimated Mexico's yellow corn supply to be 64% for livestock consumption, 17% for ending stock for use the next year, 13% used for the starch industry, 4% for human and household consumption, and the rest either exported, used for seed for planting, or losses. SADER estimates and forecasts for key agricultural commodities are available at SADER, "Cosechando Números del Campo," http://numerosdelcampo.agricultura.gob.mx/publicnew/index.php.

¹⁰ USDA data about GE crop adoption in the United States can be found at USDA, Economic Research Service (ERS), "Adoption of Genetically Engineered Crops in the U.S.," https://www.ers.usda.gov/data-products/adoption-ofgenetically-engineered-crops-in-the-u-s/. In 1996, GE seeds were commercially introduced in the United States for major field crops including corn. For more information, see USDA, ERS, "Recent Trends in GE Adoption," https://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-u-s/recent-trends-in-geadoption/.

¹¹ FAS, *Agricultural Biotechnology Annual*, GAIN Report MX2022-0070, December 30, 2022. In October 2021, the Mexican Supreme Court upheld an indefinite injunction against permits for domestic commercial cultivation of GE corn. See "Supreme Court Upholds Suspension of Permits to Commercialize GM Corn in Mexico," *CE Noticias Financieras English*, October 15, 2021; and USDA, FAS, *Mexican Judge Blocks GE Corn Permits*, GAIN Report MX3075, October 28, 2013. Mexico allows cotton to be commercially produced only as a GE crop.

¹² Steven Zahniser et al., *The Growing Corn Economies of Mexico and the United States*, ERS, Feed Outlook no. FDS-19F-01, August 2019, p. 15.

¹³ Thomas Capehart et al., "U.S. Corn Exports to Mexico Have Increased with the Transition to Free Trade Under the North American Free Trade Agreement," ERS, August 3, 2020.



Figure 1. U.S. Corn Exports to Mexico (2014-2023)

Source: U.S. Census Bureau Trade Data via U.S. Department of Agriculture (USDA), Foreign Agricultural Service (FAS), "Global Agricultural Trade System Online: GATS Home," BICO-10, May 2024, https://apps.fas.usda.gov/gats/default.aspx.

Note: Data are not adjusted for inflation.

Corn in Mexico is historically and culturally important as well as a politically sensitive topic. Corn was domesticated around 9,000-10,000 years ago in southwest Mexico and has been a staple in the country to this day. Concerns about GE corn in Mexico gained prominence after a 2001 article in the science journal *Nature* reported gene flow from GE corn to native corn varieties in southern Mexico.¹⁴ Although some challenged the study and *Nature* later concluded that the evidence available in the study was not sufficient for publication, there is ongoing scientific debate about the extent of transgenic gene flow to native corn varieties.¹⁵ National campaigns in Mexico, such as "Sin Maíz No Hay País" (Spanish for "Without Corn, There is No Country"), lead the effort to prevent the cultivation of GE corn in Mexico with the aim to protect native varieties of corn and ensure biodiversity.¹⁶

¹⁴ David Quist and Ignacio H. Chapela, "Transgenic DNA Introgressed into Traditional Maize Landraces in Oaxaca, Mexico," *Nature*, vol. 414 (November 29, 2001), pp. 541-543. *Transgenic* refers to organisms bearing recombinant DNA from an organism of a different species.

¹⁵ Janice E. Thies, "Co-existence in the Fields? GM, Organic, and Conventional Food Crops," in *The Oxford Handbook of Food, Politics, and Society*, ed. Ronald J. Herring (Oxford: Oxford University Press, 2015), p. 699; Nick Kaplinsky et al., "Maize transgene results in Mexico are artefacts (see editorial footnote)," *Nature*, vol. 416 (April 11, 2002), pp. 601-602; Lizzie Wade, "Mexico's New Science Minister Is a Plant Biologist Who Opposes Transgenic Crops," *Science*, October 4, 2018.

¹⁶ Karen Hansen-Kuhn, *Mil-palabras for Milpas and Trade and Food Justice*, Institute for Agriculture and Trade Policy (IATP), November 20, 2023.



Figure 2. Mexico's Annual Corn Supply

Source: U.S. Department of Agriculture (USDA), Foreign Agricultural Service (FAS), "Production, Supply, and Distribution Online," May 2024, https://apps.fas.usda.gov/psdonline/.

Notes: Mexico's corn marketing year is from October to September. A marketing year is a 12-month period following harvest. *Beginning Stocks* refers to corn stock carried into the marketing year from the previous year. *Production* refers to domestically produced corn in Mexico.

Mexico's Genetically Engineered Corn Ban

Administration of Mexican President López Obrador and GE Corn

Before becoming president of Mexico in December 2018, Andrés Manuel López Obrador and incoming administration officials stated their opposition to the planting of GE crops in Mexico, their concern about GE corn contaminating native varieties of corn, and their focus on strengthening Mexico's food production system.¹⁷ In September 2020, the outgoing Mexican Secretary of Environment and Natural Resources stated in his resignation speech that President López Obrador planned to publish a decree in the coming days to prohibit GE corn and phase out glyphosate.¹⁸

GE Corn Ban Decree of 2020

On December 31, 2020, Mexico published a presidential decree calling for the phaseout of both GE corn for human consumption and glyphosate no later than January 31, 2024.¹⁹ The decree

¹⁷ For examples, see Timothy A. Wise, *Making Rural Mexico Great Again: Leading Candidate Endorses Farmers' Reform Program*, Food Tank, April 2018; Lizzie Wade, "Mexico's New Science Minister Is a Plant Biologist Who Opposes Transgenic Crops," *Science*, October 4, 2018; Jorge Monroy, "AMLO Dice No a Transgénicos," *El Economista*, July 27, 2018; and "AMLO's Government Pledges to Ban GMO Corn," *teleSUR*, August 23, 2018. For more background on Mexico and U.S. relations, see CRS Report R42917, *Mexico: Background and U.S. Relations*, by Clare Ribando Seelke.

¹⁸ "Mexico's Environment Minister Resigns, President Defends Government's Green Record," Reuters, September 2, 2020. The former environment minister stated that his decision to resign was due to health reasons.

¹⁹ For an unofficial translation of the decree, see FAS, *Mexico Publishes Decree to Ban Glyphosate and GE Corn*, (continued...)

specifically directed relevant authorities to revoke approvals and cease authorizing the use of GE corn in the "diet of Mexican women and men" by the set deadline.²⁰ Additionally, the decree instructed authorities to revoke and cease permit approvals for the release of GE corn seeds into the environment. The decree stated that these measures were implemented to contribute to food security and sovereignty and to protect native corn, the traditional agricultural production system of the milpa, biocultural wealth, peasant communities, and the gastronomic heritage and health of the Mexican population.²¹

After the decree's publication, it was uncertain to what extent the ban on GE corn would affect U.S. corn exports to Mexico. Mexican agricultural groups against the decree initially expressed concerns about the GE corn ban's effect on the agrifood supply chain, which includes imported feed for Mexico's livestock sector and food products that use corn-based ingredients.²²

In March 2021, a group of U.S. agricultural organizations wrote a letter to the U.S. Secretary of Agriculture Tom Vilsack and U.S. Trade Representative Katherine Tai (Ambassador Tai) expressing concerns about the risk and uncertainty the decree posed for U.S. corn and corn products.²³ In October 2022, a study sponsored by certain Mexican and U.S. agricultural groups was released that highlighted the potential negative economic impact of a Mexican GE corn ban on USMCA countries. The study estimated a 10-year forecast showing an economic loss of \$13.61 billion for the U.S. corn industry and a 19% rise for the cost of non-GE corn in Mexico.²⁴

Some proponents of the decree, including international advocacy organizations such as Greenpeace and the Pesticide Action Network, have called for the United States to respect Mexico's sovereignty and its policies aiming to protect human health and the country's farming sector from glyphosate and GE corn.²⁵ Some groups, such as the Mexican advocacy group Red Tsiri, argue that GE corn threatens Mexico's native corn biodiversity and the traditional agricultural practices of indigenous peoples.²⁶ Other proponents argue that Mexico has the sovereign right to determine its own food system and what it is allowed to import while not being beholden to large agribusinesses.²⁷

Mexican government senior officials have conveyed various messages about the extent to which the GE corn ban would apply to imports. For example, Mexican Secretary of Agriculture and Rural Development Víctor Villalobos Arámbula stated that Mexico would continue allowing the

GAIN Report MX2021-0003, January 6, 2021. A prior draft decree was released on December 9, 2020, and was available for public comment.

²⁰ Ibid. For more information about Mexico's GE regulatory framework and policies, see FAS, *Agricultural Biotechnology Annual*, GAIN Report MX2023-0052, November 20, 2023.

²¹ FAS, *Mexico Publishes Decree to Ban Glyphosate and GE Corn*, GAIN Report MX2021-0003, January 6, 2021, p. 5.

²² For examples, see Laura Gottesdiener, "Mexico Farm Lobby Blasts Ban on GMO Corn; Organic Growers Welcome It," Reuters, January 2, 2021; and David Alire Garcia, "Bans on GMO Corn, Glyphosate in Mexico Would Shrink Food Supplies, Industry Says," Reuters, January 15, 2021.

²³ Dan Dupont, "Major Ag Groups Lament 'Quickly Deteriorating Trade Relationship' with Mexico," *Inside U.S. Trade*, March 22, 2021. The U.S. Trade Representative holds the rank of Ambassador.

²⁴ Biotechnology Innovation Organization, *Implications and Consumer Price Impacts of Mexico's Biotech Corn Ban*, October 3, 2022.

²⁵ See, for example, Pesticide Action Network, 80 Organizations Oppose U.S. Interference in Mexico's Phaseout of Glyphosate and GM Corn, April 29, 2021; and Viridiana Lázaro, Mexico banned GMOs. What Are the Next Steps?, Greenpeace, January 21, 2021.

²⁶ Ann Deslandes, "Activists Push for Mexico's GM Corn Ban to Include Imports," Al Jazeera, February 9, 2022.

²⁷ Karen Hansen-Kuhn, *Time for New Approaches to US-Mexico Corn Trade*, IATP, November 21, 2022; and Enrique Perez S., *Collective Action, Democracy and Mexico's Defense of Its Corn and Food Sovereignty*, IATP, December 20, 2022.

import of GE corn for animal feed.²⁸ Meanwhile, Undersecretary of Food Self-Sufficiency Víctor Suárez Carrera, a key architect of the decree, stated that Mexico's goal is to be self-sufficient in food and that the decree's ban covers all foods with GE corn that will reach human consumption.²⁹ In November 2022, President López Obrador stated that Mexico would continue allowing GE corn for animal feed after the decree's implementation but did not specify for how long.³⁰

Throughout 2021 and 2022, senior officials from the Office of the U.S. Trade Representative (USTR) and the U.S. Department of Agriculture (USDA) engaged with their Mexican counterparts on the GE corn ban decree, including a November 2022 meeting between Secretary Vilsack and President López Obrador.³¹ In these meetings, the United States emphasized the economic costs of banning GE corn for Mexico's livestock industry and asserted that the ban would hurt innovation in biotechnology.³²

On December 16, 2022, a Mexican delegation that included its secretaries of foreign affairs, agriculture, and economy met with Secretary Vilsack and Ambassador Tai in Washington, DC. In the meeting, Mexico provided possible amendments to the decree, and the United States agreed to review the proposal.³³ After a follow-up meeting on January 23, 2023, between U.S. and Mexican senior officials in Mexico City, USTR and USDA issued a statement contending that Mexico's proposed changes to the decree were not sufficient and that Mexico's approach was "not grounded in science."³⁴ The statement added that the decree still threatened "to disrupt billions of dollars in bilateral agricultural trade, cause serious economic harm to U.S. farmers and Mexican livestock producers, and stifle important innovations needed to help producers respond to pressing climate and food security challenges."³⁵

On January 30, 2023, the United States sent a letter under the SPS chapter of USMCA requesting by February 14, 2023, an explanation and relevant information regarding Mexico's measures on agricultural biotechnology and specifically on the 2020 GE corn ban decree. The United States would state that Mexico's response by the deadline was not satisfactory, with Mexico directing the United States to the second GE corn ban decree, described below.³⁶

GE Corn Ban Decree of 2023

On February 13, 2023, Mexico issued a second presidential decree that replaced the December 2020 decree. Unlike the 2020 decree, the February 2023 decree instructs the relevant authorities

35 Ibid.

²⁸ David Alire Garcia, "Clashing Visions of Mexico's GMO Corn Ban Cloud Impact," Reuters, July 8, 2021.

²⁹ David Alire Garcia, "Mexico Pressing Ahead with GMO Corn, Glyphosate Bans, Says Key Official," Reuters, February 19, 2021.

³⁰ Cassandra Garrison and Dave Graham, "Mexico Open to Deal with U.S. on GMO Corn as Farmers Demand Clarity Over Ban," Reuters, November 29, 2022.

³¹ For examples, see Katie Peikes, "The U.S. Agriculture Secretary Says Mexico's GMO Ban Won't Hurt Corn Exports," *KCUR*, October 20, 2021; and USDA, "Secretary Vilsack Statement on Trip to Mexico, Meetings with President López Obrador and Cabinet Officials," press release, November 28, 2022.

³² Hannah Monicken, "Tai, Vilsack: Biotech Talks with Mexico Have Been Difficult, but U.S. Is 'Hopeful'," *Inside U.S. Trade*, August 18, 2022; and Maydeen Merino, "Vilsack: U.S. to Ramp Up Pressure on Mexico Ahead of Looming Biotech Ban," *Inside U.S. Trade*, September 28, 2022.

³³ USTR, "Joint Statement from Ambassador Tai and Secretary Vilsack after Meeting with Mexican Government Officials," press release, December 16, 2022.

³⁴ USTR, "Statement by USTR and USDA Officials Regarding Meetings in Mexico City," press release, January 23, 2023.

³⁶ Initial Written Submission of the United States of America, p. 27.

to revoke approvals and refrain from authorizing GE corn intended for human consumption, which is defined as "intended for human consumption through nixtamalization or flour processing" carried out in the dough and tortilla sector.³⁷ The decree still includes plans for Mexico to gradually substitute GE corn for animal feed and industrial use for human consumption (e.g., starch, sweeteners) "based on supply sufficiency criteria, consistent with the country's food self-sufficiency policies, in accordance with scientific principles and relevant international standards, guidelines or recommendations."³⁸ Additionally, the decree instructs Mexico's Federal Commission for the Protection Against Sanitary Risks (Spanish acronym COFEPRIS), the regulatory body that authorizes GE products intended for food and feed use, to coordinate with other countries to produce a study on GE corn consumption and its possible harm to human health.³⁹ The Mexican Ministry of Economy issued an accompanying press release stating that the new decree is strictly limited to corn and not for other agricultural commodities, such as canola, soybeans, or cotton, and claimed that prohibiting GE corn for dough and tortillas would not affect trade because Mexico is self-sufficient in GE-free white corn.⁴⁰

Following a February 24, 2023, virtual meeting between Ambassador Tai and Mexican Secretary of Economy Raquel Buenrostro Sánchez, Secretary Buenrostro Sánchez stated that Mexico is the center of origin of corn and seeks to guarantee biodiversity and conserve its native corn varieties.⁴¹ The Mexican Ministry of Economy assured that the decree would have no commercial impact because U.S. corn is for industrial and animal feed use, and, as it contended, the dispute with the United States is politically motivated.⁴² USTR responded that U.S. concerns are not politically motivated, and "Mexico's policies are not based on science; threaten to disrupt billions of dollars in agricultural trade, causing serious economic harm to U.S. farmers and Mexican livestock producers; and could stifle innovation that is necessary to respond to urgent climate and food security challenges."⁴³

Mexico GE Product Authorization

Before Mexico's GE corn ban decrees, the U.S. government and industry groups raised concerns about Mexico's process for authorizing GE products for food and feed and approvals for GE cotton for cultivation.⁴⁴ USDA reports that from 1995 to 2018, Mexico approved 188 GE

³⁷ Decree translation from *Initial Written Submission of the United States of America*, pp. 25-26. *Nixtamalization* is the process of cooking and steeping dried corn in an alkaline solution that adds nutritional value to dough or flour.

³⁸ Initial Written Submission of the United States of America, p. 27.

³⁹ Chris Clayton, "US-Mexican Corn Standoff: Mexico Tweaks Decree on Biotech Corn, Still Pushes to Ban Using Biotech Corn for Food," *DTN*, February 14, 2023.

⁴⁰ Gobierno de México, Secretaría de Economía, "Se publica el Decreto por el que se establecen diversas acciones en materia de glifosato y maíz genéticamente modificado," press release, February 13, 2023; and Zenyazen Flores, "Mexico's President Issues New Decree Prohibiting GM Corn Amid Ongoing Dispute with US," *Bloomberg Línea*, February 14, 2023.

⁴¹ "EU debe probar que decreto sobre maíz daña comercio: SE," *El Economista*, February 28, 2023.

⁴² Ibid.

⁴³ Margaret Spiegelman, "USTR: U.S. Quarrel with Mexican Biotech Policy Rooted in Trade, not Politics," *Inside U.S. Trade*, February 28, 2023.

⁴⁴ For examples, see USTR, *2020 National Trade Estimate Report on Foreign Trade Barriers*, March 31, 2020, p. 346; Ana Swanson, "As New NAFTA Takes Effect, Much Remains Undone," *New York Times*, July 1, 2020; and U.S. Grains Council, *Comments Regarding Foreign Trade Barriers to U.S. Export Exports for 2021 Reporting*, October 29, 2020, p. 3. Since the decree, these concerns remain. See Letter from Andrew LaVigne, President and Chief Executive Officer of the American Seed Trade Association, to USTR, October 25, 2021.

commodities for food and feed use, including 90 GE corn products.⁴⁵ Since May 2018, COFEPRIS has not publicly reported any authorizations for GE products. Media and Mexican government reports indicated that from late 2021 to November 2022, Mexico approved 8 GE products and rejected 14, all with traits for glyphosate tolerance, for a variety of agricultural products for food and feed use.⁴⁶ The delays and denials of approvals for new GE varieties limit the importation and sale of new GE products in Mexico.

United States Escalates Response Through USMCA

Technical Consultations Under the SPS Chapter

On March 6, 2023, the United States requested technical consultations with Mexico under the SPS chapter of USMCA about Mexico's measures on agricultural biotechnology.⁴⁷ This is the next step a party takes under USMCA procedures to resolve a trade dispute that falls under the SPS chapter.⁴⁸ The United States' letter to Mexico requesting technical consultations listed three agricultural biotechnology measures of concern:

- 1. the rejection of applications for new GE corn, canola, cotton, and soybean products, which results in bans of their import and sale;
- 2. the 2023 decree banning GE corn for nixtamalization or flour production (Tortilla Corn Ban); and
- 3. the decision to gradually substitute GE corn for animal feed and human consumption other than in dough or tortillas (Substitution Instruction).⁴⁹

The letter argued that Mexico's measures appear to be inconsistent with several USMCA obligations. These obligations include provisions that require SPS measures to be based on international standards, guidelines, or recommendations; ensure SPS measures are based on science; apply SPS measures only to the extent necessary to protect human, animal, or plant life or health; and ensure SPS measures are not a disguised restriction to trade.⁵⁰ For the full list of U.S. concerns about Mexico's measures and USMCA obligations in the letter, see the **Appendix**.

Canada requested similar technical consultations with Mexico on March 7, 2023.

⁴⁵ USDA, FAS, *Agricultural Biotechnology Annual*, GAIN Report MX2023-0052, November 20, 2023, p. 10. The technical term *event* is often used to differentiate GE crop products and refers to the insertion of a particular transgene into a specific location on a chromosome. See University of Nebraska-Lincoln, AgBiosafety, "Glossary of terms," https://agbiosafety.unl.edu/glossary.htm.

⁴⁶ Bill Tomson, "Mexico Quietly Ruling on GMO Traits as Biotech Corn Ban Looms," *Agri-Pulse*, October 26, 2022; USDA, FAS, *Agricultural Biotechnology Annual*, GAIN Report MX2023-0052, November 20, 2023. p. 6; and Government of Mexico, *Informe de avances para el cumplimiento del Decreto sobre glifosato*, November 11, 2022, p. 35. The *Agri-Pulse* article lists approvals for GE canola, cotton, potato, and corn products and rejections of GE corn, soybean, cotton, and canola product applications.

⁴⁷ Letter from Ambassador Katherine Tai, U.S. Trade Representative, to Raquel Buenrostro Sánchez, Secretary of Economy (Mexico), March 6, 2023.

⁴⁸ The USMCA SPS chapter encourages SPS trade issues to be resolved between the disputing parties' relevant competent authorities or through technical working groups before escalating the dispute by initiating technical consultations.

⁴⁹ *Tortilla Corn Ban* and *Substitution Instruction* are the simplified terms the United States later used to describe the two measures.

⁵⁰ International standard setting organizations recognized under the USMCA and World Trade Organization SPS Agreement include the Codex Alimentarius Commission (food safety) and the International Plant Protection Convention (plant health).

On March 30, 2023, the United States and Mexico held technical consultations in Mexico City with Canada as an observer, but no resolution was reached. Mexico defended its measures to prohibit GE corn and eventually ban all GE corn with the aim to protect biodiversity and human health and preserve its cultural and gastronomic heritage.⁵¹ The next day, the United States participated as an observer for the technical consultations between Canada and Mexico.

United States Launches Formal Dispute

Dispute Settlement Consultations

On June 2, 2023, the United States formally launched a dispute under the USMCA dispute settlement chapter and requested dispute settlement consultations with Mexico after failing to resolve the issue over Mexico's GE corn ban decree under the prior technical consultations.⁵² The United States cited the same three measures as the March 6 technical consultations request, with some modifications to specific provisions where the United States believes Mexico's measures to be inconsistent with its USMCA obligations. For the list of USMCA provisions the United States cited in the June 2 letter, see the **Appendix**.

On June 9, 2023, Canada provided notice of its intention to participate in dispute settlement consultations as a third party and stated similar concerns as the United States about Mexico's rejection of GE agricultural product applications, noting the possible trade disruptions caused by asymmetrical biotechnology regulatory conditions in North America.⁵³ Canada also stated that it is a major producer and exporter of agricultural products, including biotechnology products, and that Mexico's rejections of applications "may have a significant economic impact on Canadian producers, developers of innovative agricultural technologies, as well as consequences for trade flows into and out of Canada."⁵⁴

On June 29, 2023, the United States and Mexico held dispute settlement consultations in Mexico City with Canada as a third-party participant. The United States and Mexico did not reach a resolution.⁵⁵

Dispute Settlement Panel

On August 17, 2023, the United States requested the establishment of a panel to examine Mexico's biotechnology measures on GE corn and to determine whether the measures are inconsistent with the same USMCA articles from the June 2 consultations request.⁵⁶ The United States did not include Mexico's rejection of GE product authorization applications as part of its request to establish a panel but stated that it "will continue to evaluate and reserves the right to request a panel on this set of measures in the future."⁵⁷

⁵¹ Bill Tomson, "USTR Faces Decision on Dispute with Mexico over GM White Corn," Agri-Pulse, April 12, 2023.

⁵² Letters from Ambassador Katherine Tai, U.S. Trade Representative, to Raquel Buenrostro Sánchez, Secretary of Economy (Mexico), June 2, 2023. The USMCA dispute settlement procedures fall under USMCA Chapter 31.

⁵³ Letter from Rob Stewart, Deputy Minister of Public Safety Canada, to Jayme White, Deputy U.S. Trade Representative, and Dr. Alejandro Encinas Nájera, Undersecretary of Foreign Trade (Mexico), June 9, 2023.

⁵⁴ Ibid. Canada exports GE canola, GE soybean, GE corn, and GE sugar beets. It also exports GE canola seed and oil to Mexico.

⁵⁵ Initial Written Submission of the United States of America, p. 27.

⁵⁶ Letter from Ambassador Katherine Tai, U.S. Trade Representative, to Raquel Buenrostro Sánchez, Secretary of Economy (Mexico), August 17, 2023.

⁵⁷ Ibid.

On August 25, 2023, Canada provided notice of its intention to participate as a third party in the panel proceedings, citing its "strong systemic interest in ensuring the correct interpretation of the [SPS] obligations" of USMCA.⁵⁸ Canada specifically noted that SPS measures are to be "based on scientific principles, relevant international standards, guidelines and recommendations, or appropriate risk assessments" and "shall not be more trade restrictive than required to achieve a Party's appropriate level of protection and shall be applied only to the extent necessary to protect human, animal, or plant life or health."⁵⁹

On October 19, 2023, a three-person dispute panel was publicly announced to hear the GE corn ban decree dispute.⁶⁰ The parties to the dispute estimate that the dispute hearing is to be held during the week of June 25, 2024, the panel intends to issue an initial report approximately in September 2024, and that it intends to issue a final report approximately in November 2024.⁶¹

Written Submissions by USMCA Parties

The United States' initial written submission to the panel, dated October 25, 2023, stated that the GE corn ban decree is inconsistent with Mexico's obligations under USMCA. The United States highlighted the benefits of modern biotechnology, including increasing agricultural output and contributing to food security and environmental benefits by decreasing inputs such as pesticides and water.⁶² The United States also emphasized the safety of GE agricultural products.⁶³ The written submission also described why the United States asserts that Mexico's ban on GE corn violates the USMCA articles cited in the June 2 consultations request letter. Some of the United States' assertions in the written submission include the following: Mexico's GE corn ban is not based on international standards, guidelines, or recommendations concerning food safety or plant life or health; is not based on any scientific principles; and is an import restriction.

Mexico's initial written submission to the panel, dated January 15, 2024, argues that the decree's objectives include protecting human health from the exposure of glyphosate as an agricultural chemical and from consuming GE corn, as well as protecting native corn from transgenic gene flow from GE corn plants that are described by Mexico as "pests."⁶⁴ The written submission highlighted the relative higher consumption of corn by Mexico also cited provisions under USMCA and the General Agreement on Tariffs and Trade 1994 justifying its measures to restrict GE corn that include conserving the biodiversity of native Mexican corn as "exhaustible natural resources;" protecting the biocultural, agricultural, and gastronomic wealth of its native corn from GE corn from GE corn as a "public moral" objective; and being necessary to fulfill its legal obligations to its

⁵⁸ Letter from Aaron Fowler, Associate Assistant Deputy Minister, Trade Policy and Negotiations, Global Affairs Canada, to Daniel Watson, Assistant U.S. Trade Representative for the Western Hemisphere, and Daniel Alberto García Martínez, Director General, North American Affairs, Mexican Secretariat of Economy, August 25, 2023. A copy of the letter is available at https://www.international.gc.ca/trade-commerce/trade-agreements-accordscommerciaux/agr-acc/cusma-aceum/notice-mexico-gep-avis-mexique-pgm-08-25.aspx?lang=eng.

⁵⁹ Ibid.

⁶⁰ Doug Palmer, "Swiss Expert to Chair USMCA Panel in U.S.-Mexico Corn Dispute," PoliticoPro, October 19, 2023.

⁶¹ USMCA Secretariat, Mexican Section, *Timetable: "Mexico—Certain Measure Concerning Genetically Engineered Corn*," January 29, 2024.

⁶² Initial Written Submission of the United States of America, pp. 7-12.

⁶³ Ibid., pp. 12-15.

⁶⁴ Initial Written Submission of the United Mexican States, pp. 5-6.

⁶⁵ Ibid., p. 59.

indigenous peoples.⁶⁶ Mexico stated that its measures have not affected U.S. corn imports into Mexico; instead, imports have increased.⁶⁷

Canada, as a third party to the dispute, also submitted a written submission to the panel, dated March 15, 2024. Canada agrees with the United States on several points, including the safety of GE agricultural products and that Mexico's measures are not based on international standards, guidelines, and recommendations and are not based on scientific principles.⁶⁸ The written submission stated that Mexico's risk assessment for the Tortilla Corn Ban "does not appear to fall within the meaning of risk assessment" defined under the World Trade Organization SPS Agreement.⁶⁹ Canada also pointed out that one of Mexico's purposes for substituting GE corn with non-GE corn is to increase the reliance on domestic corn, which may appear to be a disguised restriction on international trade.⁷⁰

The United States' written rebuttal to Mexico, dated April 2, 2024, described Mexico's written initial submission as containing cited articles as "an after-the-fact attempt" to justify its measures that are "largely irrelevant to assessing the disputed measures."⁷¹ The United States reiterated the safety of GE corn as food and noted the authorizations of GE corn by the United States, Mexico, and other countries' regulatory agencies.⁷² The rebuttal also stated that Mexico's claim on the harm of glyphosate exposure from consuming GE corn is not based on a risk assessment and that U.S. regulatory pesticide program data indicate that detectable glyphosate residue, if any, on U.S. corn is a fraction of Mexico's level of tolerable pesticide levels.⁷³ Additionally, the United States argued that Mexico's measures lack scientific support that GE corn imports present a risk to the life or health of native corn.⁷⁴ The United States also challenged Mexico's assertion that its measures are to conserve native corn as an exhaustible natural resource. The U.S. rebuttal referred to a lack of evidence that gene flow from imported GE corn is a threat to Mexico's native corn.⁷⁵ The United States also noted that Mexico does not have similar concerns for non-GE non-native corn threatening the genetic integrity of native corn.⁷⁶ The rebuttal also disputed Mexico's "public moral" objective in restricting GE corn imports by characterizing the objective as a desired economic outcome rather than "a standard of good or bad behavior."77 The United States stated that Mexico fails to show its measures are not disguised restrictions on trade or arbitrary or unjustified discrimination against another USMCA trading partner when Mexico justifies its measures as being necessary to fulfill its legal obligations to its indigenous peoples.⁷⁸ The United States also argued against Mexico's claim that its measures have had no effects on U.S. corn

⁶⁶ Ibid., pp. 100-101 and pp. 143-153. Mexico cited provisions under USMCA's chapters on the environment, general exceptions, and the General Agreement on Tariffs and Trade (GATT) 1994 general exceptions article which are incorporated in USMCA. For more information about GATT 1994, see CRS Report R45417, *World Trade Organization: Overview and Future Direction*, by Cathleen D. Cimino-Isaacs and Rachel F. Fefer.

⁶⁷ Initial Written Submission of the United Mexican States, p. 1.

⁶⁸ Third Party Written Submission of Canada, pp. 18-19, 29-35.

⁶⁹ Ibid., p. 12.

⁷⁰ Ibid., pp. 57-59.

⁷¹ Rebuttal Submission of the United States of America, p. 4.

⁷² Ibid., pp. 9-13.

⁷³ Ibid., pp. 35-36.

⁷⁴ Ibid., pp. 37-38 and 45-48.

⁷⁵ Ibid., pp. 71-74.

⁷⁶ Ibid.

⁷⁷ Ibid., pp. 65-70.

⁷⁸ Ibid., p. 77.

export to Mexico by pointing out the significant fall in U.S. white corn exports to Mexico following the 2023 Corn Decree.⁷⁹

Figure 3 presents a timeline of selected events of the dispute.



Figure 3. Timeline of Selected Events of the U.S.-Mexico GE Corn Ban Dispute

Source: CRS from Initial Written Submission of the United States of America, U.S. Department of Commerce, U.S. Department of Agriculture, U.S. Trade Representative and *Inside U.S. Trade.*

Notes: GE = genetically engineered; USTR = U.S. Trade Representative or Office of the U.S. Trade Representative; USMCA = United States-Mexico-Canada Agreement; and SPS = Sanitary and Phytosanitary.

⁷⁹ Ibid., p. 17.

Congressional Interests

Many in Congress have taken interest in the dispute over Mexico's measures to ban GE corn and its GE agricultural product authorization process. Congress has held several hearings with USDA and USTR that included discussions about the trade dispute.⁸⁰ Several Members of Congress have written letters to USDA and USTR, which included concerns about the impact Mexico's actions may have on U.S. agriculture, urged USTR to initiate the dispute settlement process under UMSCA, and expressed appreciation for taking the issue to the dispute settlement phase.⁸¹

Congress may continue to use its oversight tools to monitor this trade issue as it unfolds. For example, Congress may continue to hold hearings with relevant executive branch agencies and stakeholders to discuss the dispute.⁸² USTR also is required to annually submit a report to Congress that includes information about U.S. trade enforcement activities, which include issues such as the U.S.-Mexico GE corn dispute.⁸³

⁸⁰ For examples, see U.S. Congress, Senate Committee on Finance, *The President's 2021 Trade Policy Agenda*, 117th Cong., 1st sess., May 12, 2021, pp. 14-15; U.S. Congress, House Committee on Agriculture, Subcommittee on Biotechnology, Horticulture, and Research, *Agricultural Biotechnology: 21st Century Advancements and Applications*, 117th Cong., 1st sess., October 26, 2021, pp. 19, 34-35; and Chris Clayton, "Mexico Corn Ban a Concern for Senators," *DTN*, February 1, 2023.

⁸¹ For examples, see Letter from Rep. David Scott, Chairman of House Agriculture Committee et al. to Tom Vilsack, Secretary of Agriculture, and the Honorable Katherine Tai, U.S. Trade Representative, September 2, 2021; Letter from Sen. Joni K. Ernst and Sen. Charles E. Grassley to the Honorable Katherine Tai, U.S. Trade Representative, November 14, 2022; and Letter from Rep. Adrian Smith, Rep. Michelle Fischbach, and Rep. Jason Smith, Chairman of House Committee on Ways and Means, to the Honorable Katherine Tai, U.S. Trade Representative, June 1, 2023.

⁸² For example, see House Ways and Means Committee, "Hearing on the Biden Administration's 2024 Trade Policy Agenda with United States Trade Representative Katherine Tai," April 16, 2024.

⁸³ The Trade Act of 1974 (P.L. 93-618, §163; 19 U.S.C. §2213), as amended, directs the President to submit to Congress every year a report on U.S. trade agreements and the national trade policy agenda for the year.

Appendix.

Obligations			
USMCA Provision Cited	Mexico Measures Cited as Inconsistent with USMCA Obligations: March 6, 2023, U.S. Letter to Mexico Requesting Technical Consultations	Mexico Measures Cited as Inconsistent with USMCA Obligations: June 2, 2023, U.S. Letter to Mexico Requesting Consultations	
Article 9.6.3: Base SPS measures on relevant international standards, guidelines, or recommendations or on an assessment, as appropriate to the circumstances, of the risk to human, animal, or plant life or health	 Event Authorization Rejections and Resultant Bans Mexico's Ban on Genetically Engineered (GE) Corn for Nixtamalization or Flour Production (Tortilla Corn Ban) Mexico's Instruction to Gradually Substitute GE Corn Used for Other Human Consumption and for Animal Feed (Substitution Instruction) 	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction 	
Article 9.6.6(a): Ensure SPS measures are applied only to the extent necessary to protect human animal, or plant life or health	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction 	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction 	
Article 9.6.6(b): Ensure SPS measures are based on relevant scientific principles, taking into account relevant factors	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction 	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction 	
Article 9.6.6(c): Ensure SPS measures are not maintained if there is no longer a scientific basis	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction 	None	
Article 9.6.6(e): Ensure SPS measures are not applied in a manner that constitutes a disguised restriction on trade between the Parties of USMCA	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction 	None	
Article 9.6.7: Conduct its risk assessment with respect to an SPS regulation in a manner that is documented and provides the other Parties of USMCA an opportunity to comment	Tortilla Corn BanSubstitution Instruction	Tortilla Corn BanSubstitution Instruction	

Table A-I. U.S. Concerns About Mexico Biotechnology Measures and USMCA Obligations

USMCA Provision Cited	Mexico Measures Cited as Inconsistent with USMCA Obligations: March 6, 2023, U.S. Letter to Mexico Requesting Technical Consultations	Mexico Measures Cited as Inconsistent with USMCA Obligations: June 2, 2023, U.S. Letter to Mexico Requesting Consultations
Article 9.6.8: Ensure each risk assessment conducted is appropriate to the circumstances and takes into account relevant guidance of the WTO SPS Committee and relevant international standards, guidelines, and recommendations	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction 	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction
Article 9.6.10: Select an SPS measure not more trade restrictive than required to achieve the level of protection that the Party has determined to be appropriate Article 2.11: No Party shall adopt or maintain any prohibition or	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction 	 Event Authorization Rejections and Resultant Bans Tortilla Corn Ban Substitution Instruction Event Authorization Rejections and Resultant Bans
restriction on the importation of a good of another Party.		Tortilla Corn BanSubstitution Instruction

Source: Letters from Ambassador Katherine Tai, U.S. Trade Representative, to Raquel Buenrostro Sánchez, Secretary of Economy (Mexico), March 6, 2023, and June 2, 2023.

Notes: The table presents U.S. concerns about Mexico's biotechnology measures and the U.S. assertions that these measures are inconsistent with United-States-Mexico-Canada Agreement (USMCA) provisions. Articles that begin with the number 9 fall under USMCA Chapter 9: SPS Measures, and Article 2.11 falls under UMSCA Chapter 2: National Treatment and Market Access for Goods. *Event authorization rejections* refers to Mexico's rejection of applications for the authorization of GE products for uses other than environmental release (i.e., planting), such as for human consumption or animal feed. *Nixtamalization* refers to the process of cooking and steeping dried corn in an alkaline solution that adds nutritional value to dough or flour. Mexico refers to the Tortilla Ban as End-Use Limitation and Substitution Instruction as Gradual Substitution.

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