

Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24

With the Panel's authorization to issue a view on the dispute over the measures related to corn as a product of Agricultural Biotechnology, (MBA) and for the settlement of the dispute that, according to their initial submissions, confronts the Parties, ANEC provides facts, experiences, scientific information, legal reasoning and data on two fundamental premises recognized by the multilateral conventions and that the USMCA mandates its compliance: the precautionary principle and the protection of human health.

**A. Measure preventing the use of MBA as a staple food in corn masa and tortilla**

**1. The U.S. cannot require risk assessment on the MBA ban for human food because this measure is based on international standards.**

The initial written submission by the United States exhibits accepted protocols for risk analysis, although there is an insufficient and tangential amount of concerns related to corn in its center of origin (Mexico) and associated diversity. It is essential to consider the health status of corn and its environment, as well as the ongoing processes that contribute to its maintenance, as these elements are crucial to ensure the current and future health of the population. This is in line with one of the objectives of Chapter 9 of the USMCA, human health, which the World Health Organization (WHO) describes as a state of complete physical, mental and social well-being.

In the context of international agreements, the need for risk analysis is emphasized for a number of reasons that are important to the parties involved. Among these reasons is the promotion of safety and security, since these methodologies are instrumental for the identification and assessment of potential threats and hazards, thus allowing the adoption of preventive measures aimed at safeguarding people, the environment and the economy.

The performance of such risk analyses under transparent processes based on scientific evidence of renown, subject to peer review free of potential conflicts of interest, is an essential element for building trust among the signatory countries, by demonstrating a shared commitment to objectivity and impartiality in decision making. In addition, the inclusion of multiple countries in these analyses facilitates the reaching of agreements on appropriate measures to address the risks identified.

Although the signatory countries of the United States-Mexico-Canada Agreement (USMCA) have accepted this premise, it is imperative to recognize that there are other commitments enshrined in said agreement that must be equally respected and applied. Regrettably, on multiple occasions, the United States seeks to have the Panel refrain from paying attention to these commitments by Mexico, as well as to the standards that the agreement itself recognizes.

In the context of the obligations derived from the United States-Mexico-Canada Agreement (USMCA), Mexico is obliged to comply with and observe the provisions established in said agreement. Despite the actions taken by U.S. government officials to address the dispute in question, Mexico has maintained its commitment to comply with the USMCA provisions. These actions,

Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24

characterized by ungrounded and offensive accusations, denote a disregard for the country's sovereignty and a lack of adherence to the procedures established in the USMCA. It is relevant to highlight that such actions seem to be aimed at destabilizing trade processes and have been accompanied by an investment of resources by the United States in its official submission, including elements unrelated to the subject of the dispute, such as the case of glyphosate.

In this sense, Mexico has been the target of accusations that go beyond the scope of the dispute, unfairly attributing to it responsibilities in matters related to the effectiveness of the Mexican scientific work. Such actions reflect a lack of genuine commitment on the part of the U.S. government to seek a fair and transparent settlement of the dispute, and hinder the consultation resolution mechanisms provided for in the agreement. It is crucial to highlight that the position adopted by the Mexican government has been diametrically opposed to the aforementioned, demonstrating a real and active commitment in the resolution of the dispute, as well as in the investigation, attention and clarification of comments when issuing the second decree in 2023. This position has been supported in the initial written submission, rejecting the ungrounded accusations and reasserting the reasons that justify the decisions adopted, supported by solid, impartial science and in strict adherence to the USMCA and its mechanisms.

#### The precautionary principle as a mechanism for settling the dispute

The U.S. cannot require risk assessment on the MBA ban for human food because this measure is based on international standards (precautionary principle). This assertion is based on Article 9.6.3 of the USMCA, which establishes that sanitary measures may be based on an adequate level of protection in accordance with international standards

In the interpretation and application of the USMCA, the environment and the rule of law must be respected, as stated in the preamble of the agreement. Chapter 9 falls within these principles, and consequently apply to chapter 24 of the USMCA for this dispute settlement procedure, as it is part of the rule of law that must be applied and because it applies also to the environment. What would be the point, unlike NAFTA, for the Parties to include the principle of environmental protection in the preamble of the agreement and to dedicate a chapter to it and then failing to apply it in the settlement of their disputes? - None.

Article 24.8.2 of the USMCA recognizes that the Parties must comply with their multilateral environmental commitments, so Mexico must comply with the Cartagena Protocol, a multilateral environmental agreements approved by Mexico. The first article of this Protocol establishes the precautionary principle. Which provides that the lack of scientific certainty (as in the case, neither the U.S. nor Mexico may claim that its position is a single truth) does not preclude the adoption of precautionary measures. The measures challenged in this dispute fall within the decree of February 2023, which in turn has as its fundamental axis, the precautionary principle established by the international standard.

Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24

Now, in order to determine whether the measures in dispute, in addition to being based on an international standard, are based on an adequate level of protection, as provided for in article 9.6.3 of the USMCA, it is necessary to take into account the provisions of article 24.15.2 of the same agreement. This article establishes that each Party shall encourage and promote biodiversity in accordance with its legal system. Therefore, it is concluded that the adequate level of protection that Mexico established since the signing of the USMCA is the protection of its biodiversity in the face of the reasonable doubt that it justifiably states in its initial written submission.

The above statements are reinforced by Article 9 of the Mexican Biosafety Law (LBOGM) which mandates that the regulations deriving from this law shall observe the precautionary approach included in the Cartagena Protocol. In consequence, the Panel may find that the decree derives from the Cartagena Protocol and the LBOGM and therefore the precautionary principle and approach should be applied

#### Application of the precautionary principle

The precautionary principle recognizes the health, social, environmental and economic impacts resulting from not taking precautions against products, situations or technologies for which there are warning signs, even if the precise mechanisms behind the impacts are not known. This principle addresses probable risks, which, although uncertain or not fully understood are unacceptable, thus allowing decisions to be made under uncertainty. Under this principle, the burden of proof falls on the advocate of a technology, who has to account for the safety of the technology. Thus, producers or proposers of potentially harmful technologies have the obligation to test their products, publicly disclose information about the potential harm and, if applicable, pay for damages and remediation if adverse effects occur, even inadvertently.

So far there is no documented case where the precautionary principle has not effectively prevented significant health or environmental risks<sup>1</sup>. On the contrary, unfortunately there are many examples of cases where not applying it has caused deep and irreparable damage to human health and ecosystems<sup>2</sup>. The damages and risks in the case of transgenic corn and the use of glyphosate in Mexico are associated with a technology that is impossible to withdraw, with cascading environmental effects that are often impossible to predict, as well as the destruction of farmers' livelihoods and production, with the corresponding consequences in terms of health, marginalization, migration and security.

---

1 World Health Organization. The precautionary principle: protecting public health, the environment and the future of our children. Report edited by Marco Martuzzi and Joel A. Tickner, (2004). ISBN

9289010983. [https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer\\_public/7e/2f/7e2fd355-5681-4376-93d6-3d3c2932ad87/cd3812\\_world\\_health\\_organization\\_2004\\_the\\_precautionary\\_principle\\_protecting\\_public\\_health\\_the\\_environment\\_and\\_the\\_future\\_of\\_our\\_children.pdf](https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer_public/7e/2f/7e2fd355-5681-4376-93d6-3d3c2932ad87/cd3812_world_health_organization_2004_the_precautionary_principle_protecting_public_health_the_environment_and_the_future_of_our_children.pdf)

2 EEA Report No 1/2013. Late lessons from early warnings, European Environment Agency. ISBN 978-92-9213-349-8. [https://www.eea.europa.eu/publications/environmental\\_issue\\_report\\_2001\\_22](https://www.eea.europa.eu/publications/environmental_issue_report_2001_22)

Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24

For Mexico it is not an option to apply the precautionary principle, it is a constitutional and conventional obligation. Given that the USMCA recognizes the conventions and regulations to which Mexico was previously subject, the Mexican State does not have to carry out any risk study regarding the consumption or use of transgenic corn or glyphosate, but rather it is the counterparty that must demonstrate the absence of risks. Despite this, the producers, proposers or promoters of these technologies and products have not conducted any risk study for the conditions of consumption in Mexico.

To date, there are no risk studies that consider the contribution of corn to the human diet in Mexico, which is much greater than in the U.S., it consistently takes place throughout life and in multiple socio-cultural contexts. While in the U.S. only 2 % of the corn produced is directly consumed by people, in Mexico most of the corn produced is for direct human consumption<sup>3</sup>. These consumption patterns derive from Mexico's historical relation with corn, which encompasses many dimensions of social life and makes impossible to ignore the environmental and social damages and risks that are also major and unique to Mexico. Now then, the studies conducted to date regarding the safety of these technologies are not sufficient nor conclusive in Mexico's case and its dietary patterns.

#### Products with MBA

The Codex alimentarius establishes a series of standards to be followed for the risk assessment of foods obtained by modern biotechnological methods. To follow this methodology, it is necessary to start with the comparison between the existing plant and the genetically modified plant, with the purpose of knowing whether or not it is safe for human consumption. Undoubtedly these processes should be improved, but we note below the complexity of their application and again, U.S. demands to keep open the use of MBA in these foods without providing the prior information needed for the evaluations in a transparent manner.

In the case of Mexican corn, this comparison would have to be made under identical agronomic conditions. If we consider that there are 59 native corn breeds in Mexico and thousands of varieties derived from these breeds, adapted to the most diverse ecosystems, in a country that occupies the fifth place in biodiversity in the world, it is evident that making this useful comparison, and not average, is very difficult both in the experimental design and in the socioeconomic evaluation that is also indicated in the Cartagena Protocol.

It gets even more complex when we move on to the use of these plants in food. In Mexico, corn is consumed in the most diverse ways (each must be evaluated). If we concentrate only on the corn masa that results from the Mesoamerican technology called nixtamalization, we find that, in each region of the country, even in each family, this process varies. It depends on the type of corn used, the type and amount of lime added, the cooking times, among other factors. Then this masa can also be prepared in very different ways: it may be cooked in "comal" or in pots called comixcales to make tortillas; the masa for the tortillas, in turn, may be mixed with other ingredients of animal and plant

<sup>3</sup> Erenstein, O., Jaleta, M., Sonder, K., Mottaleb, K., & Prasanna, B. M. (2022). Global maize production, consumption and trade: Trends and R&D implications. *Food security*, 14(5), 1295-1319.  
<https://link.springer.com/article/10.1007/s12571-022-01288-7>. FAOSTAT <https://www.fao.org/faostat/en/#data/FBSH>

Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24

origin, such as shrimp, banana in different degrees of maturity, seeds such as sesame or coconut, various chili peppers, just to mention a few.

The tortillas may also be fried and thus the chemical effect may be different. But it is also boiled, as in the case of atoles made with masa, which in turn are mixed with a high number of ingredients, or it is steamed too, to make tamales by mixing the masa with various ingredients. It is a very wide universe and conditions impossible to control and homogenize, as it is an artisanal process.

If we add to this the heterogeneity of the population: sex, age, eating habits, health conditions, we will face an even greater complexity. Therefore, the precautionary principle guaranteed by the Mexican State must be complied with pursuant to article 9 of the Law on Biosafety approved in this country.

### The Adoption of Dilation Strategies in Mexican Agroindustry: A Comparison with the Tobacco Strategy.

Agroindustry has adopted a strategy similar to that of tobacco, resorting to known tactics to delay the precaution. Taking advantage of the fact that under the framework of the USMCA Mexico's capacity is limited to the submission of a request for compensatory or corrective measures in case of an adverse ruling after a dispute panel, so Mexico is being congruent in the case of corn with the application of the precautionary principle, with the aim of preventing to repeat the case of genetically modified cotton described below.

The tobacco strategy, used by various industries such as tobacco, pesticides and oil, consists of a series of repetitive steps aimed at sowing doubts about products or technologies harmful to health or the environment. To do this, these industries hire public relations firms and influential leading figures to question the evidence of harm, highlighting the existence of scientific controversies and arguing the lack of evidence, even when there is research to the contrary. In addition, they seek to persuade the media of the legitimacy of these controversies and request balanced coverage to support their interests.

The strategy also includes investment in prizes, funding and academic journals to make look that independent knowledge has been generated on the subject at hand. In addition, scientists, organizations and precautionary institutions are defamed and discredited. Examples such as the "Monsanto papers" illustrate this scientific corruption. The goal is to recruit a group of scientists or experts who can support the industry's position in controversies, litigation, and the media.

Finally, promoters of potentially harmful products turn to organizations politically influential to disseminate favorable opinions about their products, while accusing their opponents of having outdated ideologies or offering unfeasible solutions. They often argue that science will eventually solve any problem. In addition, they place representatives in government bodies to influence regulation and decisions. This strategy converts the scientific doubt in an unjust and manipulated political controversy.

In the context of genetically modified corn (MBA), there is an affront of irremediable and irreplaceable nature to national identity, which underlines the urgency of maintaining the extreme diplomacy that Mexico has exercised. The strategy implemented by the agroindustry consists of the introduction of complex and novel concepts to divert the attention of the core issues, while promoting

Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24

opacity and restricting public access to relevant information, such as risk assessments, innovative features and unbiased analysis of the performance, limiting its use for research purposes. This practice is reflected in the confidential management of the genetically modified information in the recipient organism by genetic engineering, protected by intellectual property.

At the same time, there is an appropriation of recipient organisms, such as corn, considered common property. This action is carried out without considering not only the opinion of Mexico, but also that of the peoples of the United States with native varieties and that of the rest of the world, that significantly depend on this genetic resource protected by Mexico, which is diverse and healthy without the need for genetic modification. The deliberate generation of uncertainty and the spread of misinformation contribute to increasing mistrust in society, which is seen subject to attacks and discredit in order to depreciate the validity of the questions expressed. It is important to note that, in the specific case of corn in its center of origin, the warnings about the risks associated with introgression in native corn go back to the years before its introduction, and transgene detection began in 2001, becoming more and more complex, frequent and associated with risks to human, animal, plant, and aquatic health and the biodiversity.

However, companies persisted in denying the concerns expressed, which turned out to be clearly incorrect or misleading. This shows that errors related to genetically modified living organisms in the centers of origin have irreversible and inadmissible consequences, which cannot be equated with economic benefits or damage remediation through tariff measures.

In Mexico, we already have an example of the damage caused by the release of organisms that are product of genetic engineering in the center of origin, extrapolating information generated for places of low diversity and absence of wild and native varieties, where the consequences are unquantifiable. Mesoamerica is the center of origin and diversity of the cotton species most cultivated in the world, and genetically modified cottons have been released since 1996. Similar to the corn case, companies ensured compliance with the biosecurity proposals, however, the evolution of pest and weed resistance in a megadiverse country has been greater than expected, justifying the need to increase the amount of transgenes and herbicides used. Each of the inserted transgenes has had a different and cumulative effect in wild populations, spreading to faraway places such as the coastal dunes of the Yucatan Peninsula<sup>4</sup>. Transgenes imported to feed livestock are now present in all the populations of the country and have introverted with the native varieties cultivated by indigenous communities in their milpas.<sup>5</sup> Changes in biodiversity associated are so deep that the species that feed on cotton with and without transgenes show differences in their microbiota, which could potentially make them as

---

4 Vázquez-Barrios, V., Boege, K., Sosa-Fuentes, T.G. et al. Ongoing ecological and evolutionary consequences from the presence of transgenes in a wild cotton population. *Sci Rep* 11, 1959 (2021). <https://doi.org/10.1038/s41598-021-81567-z> <https://rdcu.be/dB186>.

5 Vega, M., Quintero-Corrales, C., Mastretta-Yanes, A., Casas, A., López-Hilario, V., & Wegier, A. (2023). Multiple domestication events explain the origin of *Gossypium hirsutum* landraces in Mexico. *Ecology and Evolution*, 13, and9838. <https://doi.org/10.1002/ece3.9838>

Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24

more harmful pests, as is the case with chinch bugs<sup>6</sup>.

Accessing the use of the MBA has also produced bad experiences.

In Mexico, the introduction of transgenes into corn through the importation of seeds for livestock represents an environmental and biodiversity risk. Cry9C, a protein genetically modified to confer resistance to pests in transgenic corn was only classified as suitable for livestock in the U.S. but was found in Canada and Mexico, despite its potential as allergen, so it was withdrawn from the market, accepting that it was more complex to segregate. Mexico faces ongoing costs and risks to hail [sic] its absence in products since then and needs to prevent them [sic]. This situation highlights the importance of constant monitoring and irreversible public health implications. Mexico's options if one of the proteins or the sum of them is toxic is to change all our corn for another, stop eating corn or become ill. Today the least companies could do is to talk more about this and other stories that have been presented due to the inability to segregate, and to apply what we have learnt about the damages caused.

In addition to the case of the Cry9C gene, other transgenes also face obsolescence due to resistance issues and environmental regulations. For example, the gene that confers resistance to herbicide Dicamba, considered a successor to glyphosate, has recently been banned in the U.S. due to significant crop losses outside of planned areas. This same trend of obsolescence will affect glyphosate soon, as weeds develop more and more resistance to this herbicide. In addition, misinformation on labels and lawsuits contribute to its disuse and distrust among consumers. These examples demonstrate the need to carefully consider environmental and health risks associated with the introduction of transgenes into crops, as well as the importance of effective regulations and ongoing monitoring to address emerging issues in GM agriculture. The biggest problem is that these transgenes released in corn are left accumulated in the center of origin representing permanent potential risks, preventing their easy adaptation, use and management in the face of environmental changes, with intellectual property problems, among others, that are preventable and convenient for each signatory country of the USMCA. Therefore, as a society, we reaffirm that without healthy corn there will be no health for Mexico, without corn there is no country.

## B. Substitution

### **The U.S. cannot require risk assessment on MBA substitution because this substitution is conditioned precisely to this study**

In the dispute filed... The substitution measure that is part of the dispute lacks validity because it depends precisely on what the U.S. claims: an evaluation with scientific basis. Therefore, as Mexico

---

<sup>6</sup> Perez-Lopez, J.; Alavez, V.; Cerritos, R.; Andraca-Gómez, G.; Fornoni, J.; Wegier, A. Residual Effects of Transgenic Cotton on the Intestinal Microbiota of *Dysdercus concinnus*. *Microorganisms* 2023, 11, 261. <https://doi.org/10.3390/microorganisms11020261>

Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24

referred to in its initial written submission, the claim lacks merit because it contemplates to carry out what the claimant requests.

Additionally, Mexico has provided pertinent information in its initial written submission, demonstrating its will to clarify that the measure preventing MBAs from being used in masa and tortilla in the Mexican diet, represents at the same time a scientific basis for starting a deeper assessment on MBA substitution in general [sic].

Mexico presented sufficient scientific grounds to support the concerns that led it to issue the substitution measure. Scientific articles have been produced in which, in each, but above all, as a whole, the implications and consequences of the use of MBAs in Mexico, and reveal, as a reasonable doubt, the existence of the scientific controversy inherent in the data submitted by the U.S. in its initial written submission. The U.S. present its initial written submission as a unique, valid and solid truth. The U.S. aim to hide the scientific progress, the complexity and the difference in the magnitude of the consequences that Mexico would face if it initially considered the biased information that companies deliver to the authorities to be adequate for the performance of risk analyses in the U.S.A and Mexico. For the U.S. it might seem like sufficient evidence for its population, but, in the light of almost three decades of use, this is unsustainable for Mexico.

New information on harm and consequences for health reveals hidden biases, new information, [sic] or misjudgments. Mexico has recognized since Decree XXX, the need to direct, specific information to reduce this scientific controversy, and the abundance of obsolete, partial data potentially influenced by conflicts of interest. Mexico seeks clarity in the information on which decisions are made for the substitution of MBAs, so it foresees carrying out the studies in Article 8 of the decree. These studies, with the right designs, will be able to directly clarify concerns and guide future decisions on the possible substitution. This is how the panel with the Mexican defense is expected to resolve that the information presented has the pertinence and sufficiency, also recognizing the good faith of the country to acknowledge in article 8 of the decree the condition that studies need to be carried out, even in collaboration with other countries, to support any substitution decision.

The specific characteristics in productive, food and culinary habits in Mexico have their origin in millennial cultures and their production systems. Traditional systems of production and feeding based historically on corn are expressed far and wide of the country, and it is at the expense of these that the processed food, and animal food industry has grown and this industry is a recent user of MBA's. However, the assessment of the risks of use of MBA's within Mexico for these purposes was provided by the companies directly to COFEPRIS and individually, without generating the information for the proper management of the risks found, nor considering the differences in management required within the center of origin and diversity of corn, consumption habits, transport, storage and other characteristics necessary to ensure both the traceability of risks and the mitigation of damages.

In addition to the above, the complexity of the management of the MBA has increased exponentially, including the amount and type of herbicides, as well as antibiotic-resistant transgenes, insects and several other functions, which are now consumed together. Currently the “International Service for



Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24

the Acquisition of Agro-biotech Applications (ISAAA)” database "shows the use of 35 transgenes inserted into the MBA for cultivation and commercialization of 23 different species.<sup>7</sup>

Recently, little-informed action had to be taken around the world within the framework of the COVID-19 pandemic, especially at the beginning of the pandemic when there was little information about its etiology. In Mexico, we learned from this case that it is not possible to anticipate how different populations will respond to specific health factors or risks, and that our population is particularly vulnerable due to the deterioration suffered by the health sector in past decades. Indeed, we learned that local, regional, and cross-country differences that took place before the COVID pandemic are an example of how populations, their composition and prevalence of chronic diseases, access to health services, nutrition, environmental pollution and other socio-economic factors must be considered in the risk assessment. In particular, children have been the most vulnerable to exposure to harmful products or technologies, as the exposure time and exposure during the early development, among other things, often aggravate adverse effects. Thus, assuming that the Mexican populations are equivalent to U.S. populations in terms of risk to MBA is simply discriminatory.

Considering the arguments in the previous section, the U.S. cannot demand a risk assessment on the substitution of MBAs since the position adopted by Mexico has not yet materialized and to be carried out depends on a future risk assessment as established by the decree of February, 2023. Besides, Mexico demonstrated that there is enough solid and justified scientific evidence to issue the substitution measure, and yet Mexico issued a decree ordering to carry out a joint scientific assessment between the two countries.

It is important to mention that after carefully reviewing the written submissions and evidence presented by the parties, the fact that the translations that are presented to the panel and to the parts are insufficient and prone to misunderstanding. These translations have two types of serious faults in our opinion. On the one hand, they have omissions since not all the documents were translated and left out, at the discretion of the translators, sections that are allegedly not relevant. An example is the numerous pieces of evidence in which only the interpretation offered by an article is translated and not the article that is in fact the evidence, or the translations of only one of the articles of some referred agreements. The second type is about errors of interpretation or appreciation in translation. Example of this: in the translation into Spanish of the U.S. initial written submission we perceived a translation bias that creates uncertainty, since paragraph 11 of the original document contains the expression "GE products" while in the Spanish version the expression is translated as "transgenic products", when Spanish has a translation for the expression that would be “products from genetic engineering.” This shows that translations hinder the effective understanding between the parties and the parties with the panel.

---

<sup>7</sup> <https://www.isaaa.org/gmapprovaldatabase/cropslist/default.asp>

**Measures related to genetically modified corn, Chapter 31, Mexico - U.S.A.  
03-15-24**

[Illegible signature]

María Leticia López Zepeda  
Executive Director

Asociación Nacional de Empresas Comercializadoras de Productores del Campo  
(ANEC)

Contact for notifications: David Rivero Fragoso || david.rifra@gmail.com || +525513728021

[No text in this blank space]