

Caso Chihuahua:

Illegal Sowing and Seed Contamination with Genetically Engineered Maize, 2007-2008

Cauhtémoc Valley, Chihuahua, México

Since the passage of the Mexican Biosafety Law, the biotechnology industry and allied agricultural producer organizations have until now unsuccessfully pressed for authorization of experimental trials of genetically engineered maize. They have continued to press for field trials even though important provisions of the law have not yet been implemented, including the Special Regimen for the Protection of Maize, an official determination of centers of origin and genetic diversity for maize, as well as an elaboration of the geographical areas where maize varieties to be protected can be found and the means to protect them. (Articles 2, section XI, 86, 87, and 88 of the Biosafety Law) The lack of implementation of these provisions has made it impossible to carry out field trials of genetically engineered maize in Mexico.

Illegal sowing

In view of the prohibition on release of genetically engineered (GE) maize into the environment, and as a form of pressure against the prohibition, Armando Villarreal Marta, director of Agrodinámica Nacional, A. C., through a newspaper article published on September 19, 2007, announced that genetically engineered maize had been illegally sown in the cooperative Benito Juárez of the municipality of Namiquipa, Chihuahua. The Unión de Productores de Maíz (UNIPRO), directed by Rubén Chávez Villagrán, concurred.

Armando Villarreal was explicit in his signaling that the producers of the state of Chihuahua would sow 2,500 hectares of genetically engineered maize that year without permission. The maize would come illegally from the United States and cross through customs by paying \$10 per sack.

In view of this evident and cynical violation of the law, the peasant organizations El Barzón and the Frente Democrático Campesino, as well as Greenpeace, in October 2007, demanded that the Ministry of Agriculture (la Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación — SAGARPA) carry out the tests necessary to determine what type of seed had been sown in Benito Juárez and inform the public accordingly. If the tests showed that the seeds were transgenic, they asked that nearby fields be tested for contamination, that all the contaminated seed be destroyed, and to apply the law to those responsible.

Eager to accumulate more evidence, Greenpeace, in collaboration with the peasant organizations of Chihuahua, took up the task of sampling fields in Namiquipa, Ascensión, Álvaro Obregón, Buenaventura and Cuauhtémoc. They took seven random samples of 50 maize leaves each from each of the fields sampled. The samples were sent to the Centro Nacional de Investigación y Capacitación Ambiental (CENICA) for PCR analysis. The laboratory detected both 35S and NOS sequences in the maize samples taken from a field in the Valley of Cuauhtémoc. The owner of the parcel had no idea that his crop contained GMOs.

Contaminated seed

Also in June 2008, Greenpeace tested a sack of maize seed imported into Mexico from the United States by the seed supplier Producer Hybrid seeds. In 40 grams of seed from one sack, three different transgenic varieties of Monsanto were detected: NK603, MON810, and MON862. The seed had been distributed throughout the Valley of Cuauhtémoc as Producer Hybrid variety 7525. None of the producers in the valley were aware that the seed they were sowing was contaminated, nor did the customs officials know that the imported seed was contaminated with illegal varieties.

In spite of these alerts, it was not until September 2008 that the national phytosanitary body, the Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria (SENASICA), detected and scientifically confirmed the presence of genetically engineered maize in 70 hectares of four properties in the Rural Development District of the Valley of Cuauhtémoc, in Chihuahua, after taking 180 samples.

On November 23, 2008, the government formally revealed a study carried out by the National Institute of Ecology and the federal attorney for environmental matters, PROFEPA, both part of the environment ministry (Secretaría de Medio Ambiente y Recursos Naturales – SEMARNAT), that confirmed the presence of genetic contamination in the fields of Chihuahua. The information was made public through a newspaper article that appeared in the newspaper *Reforma*, first national section, page 2, but the specific results of the study were not revealed.

A lack of political will

The case of Chihuahua is compelling and condemning evidence of the lack of effective capacity and political will of the Mexican government to stop the release of genetically engineered maize into the environment. It is inadmissible that in a center of origin and genetic diversity, as is Mexico for maize, the government has failed to effectively apply environmental legislation. Moreover, the delay of more than fifteen months between the first announcement of illegal growing and evidence of action, as well as the lack of transparency and communication on the part of the Mexican authorities with those who initially reported the crime and society in general, demonstrate the clear lack of regard of the Mexican government to fulfill its legal responsibilities to protect the center of diversity of maize.

The responsible authorities do not have sufficient inspectors or capacity to verify, inspect, and take samples of GMOs. This lack of capacity was demonstrated by an

inspector of PROFEPA, Delegación Chihuahua, when at the moment of inspection he found that the parcels had already been harvested. According to the inspector: “I could only collect remains of maize plants; however, later they informed me that for the analysis of GMO samples it is necessary that the samples be of living tissue and stored in liquid nitrogen to keep them fresh.”

The lack of surveillance regarding compliance with biosafety laws and lack of investigation of the alleged violations on the part of the federal attorney (Procuraduría General de la República – PGR), PROFEPA (SEMARNAT), and SENASICA (SAGARPA) confirms the lack of capacity to carry out adequate sampling and the absence of coordination between the authorities charged with implementing the biosafety laws of Mexico.

To date, the government has not settled who was responsible for the illegal growing and import, much less applied sanctions, fines or detained those responsible; neither is there knowledge whether the authorities have undertaken emergency measures, or at least, it is not known publicly, nor plans to address those cases of contamination caused by GE maize in the region.

Actually the extent of the contamination is still unknown and this puts at risk the 23 races and the rest of the local varieties of maize that are found in the state of Chihuahua. (see boxes below)

The objective of the Cartagena Protocol, in accordance with the precautionary approach contained in Principle 15 of the Rio Declaration, is “to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of those living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements.” Beyond being out of compliance with this objective, the Mexican government has ignored compliance with the legal requirements in the Federal Penal Code, in the sense of not having taken administrative measures and imposed penalties, considering that the illegal sowing of GE crops in Mexican territory is classified as an environmental crime (article 240 ter.), and this finding could be extended to cases of transgenic contamination as well.

In this sense, the failure on the part of the Mexican authorities to adopt measures that guarantee an adequate level of protection for native varieties and maize hybrids, against illegal import and sowing of GE seeds in the region of Chihuahua, including monitoring and border control between Mexico and the United States, until adequate risk assessments have been carried out; goes against national rules on biosafety that are contained in the General Law of Ecological Equilibrium and the Protection of the Environment (LGEEPA), the Biosafety Law and the Federal Penal Code, and are acts and omissions against the environment, biosafety and environmental management in the state of Chihuahua.

The only response that the government has given with respect to this case has been to unfairly persecute the producers on whose parcels contaminated seed was detected. The lack of a mechanism of liability and compensation leaves peasants and indigenous groups in a state of vulnerability against the large biotechnology companies.

Civil society once again petitions the Commission for Environmental Cooperation

For all of the aforementioned reasons and for having violated the LGEEPA, the Biosafety Law and the Federal Penal Code, as well as the Cartagena Protocol on Biosafety, peasant organizations as well as environmental and human rights groups recently filed a case before the Commission for Environmental Cooperation (CEC) of North America for permitting the entrance and illegal plantings of GE maize in the Valle de Cuauhtémoc, Chihuahua.

The organizations El Barzón, Frente Democrático Campesino, Centro de Derechos Humanos de las Mujeres, and Greenpeace filed the case before the CEC after exhausting all other recourse under Mexican law. In the case, they are requesting the CEC to open a factual investigation on the lack of application of Mexico's environmental law, given the systematic pattern of illegal planting of GE maize and the refusal of the Mexican government to sanction or detain the farmers who are carrying out the illegal sowing. In their petition to the CEC, the organizations also denounced the illegal traffic of genetically engineered seeds and grains entering the country unimpeded through Mexican customs. Finally, the petitioners accused the government of non-compliance with regulations over "activities of confined use, experimental release, pilot phase release, commercial release, commercialization, import and export of GMOs," with the aim of preventing, avoiding, or reducing the risks these activities could cause to human health, the environment and biological diversity from gene flow from transgenic maize to native and hybrid varieties of maize in distinct regions of Chihuahua.

Races of Maize in Chihuahua

Tuxpeño, Celaya, Cónico, Cónico Norteño, Chalqueño, Tabloncillo, Reventador, Tabloncillo Perla, Bolita, Maíz Dulce, Harinoso de Ocho, Palomero, San Juan, Dulcillo del Noroeste, Tuxpeño Norteño, Azul, Lady Finger, Blandito, Cristalino de Chihuahua, Gordo, Tehua, Apachito y Maizon.

Source: Data compiled by Dr. José Antonio Serratos Hernández, researcher at the Universidad Autónoma de la Ciudad de México, based upon Cárdenas, F. en Taba, S. 1995^a, "Maize germplasm: Its spread, use, and strategies for conservation. In Taba, S. (ed). Maize genetic resources. Maize Program special report. México, D.F. CIMMYT.

Teosintles (ancestral relative of maize) in Chihuahua

The race "Nabogame" has been documented in the municipalities of Guadalupe and Calvo, in the region of Nabogame, as well as an uncatalogued race in the municipality of Urique, Chihuahua.

Source: Information obtained from the germplasm bank of the Instituto Nacional de Investigaciones Forestales y Agropecuarias (INIFAP) in Chapingo, México, under the direction of Dr. Francisco Cárdenas Ramos.