

Maize Rage in Mexico

GM maize contamination in Mexico – 2 years later

Twenty-five months after the first scientific evidence became public, the Mexican government and the scientific community have acknowledged that Mexico's traditional maize crop is contaminated with DNA from genetically modified maize despite a government prohibition on the planting of GM seeds in Mexico. Mexico is the centre of origin for maize - one of the world's most important food crops.

Yesterday, peasant farmers and indigenous communities along with civil society organizations in Mexico publicly released the results of their own testing that found GM contamination of native maize in at least nine states – far more serious and widespread than previously assumed.¹ Click here for a detailed report of their findings, in Spanish:

<http://www.etcgroup.org/article.asp?newsid=408> and here for the news release:

<http://www.etcgroup.org/article.asp?newsid=407> (the documents will soon be available in English).

No fewer than four government-sponsored studies have been undertaken in Mexico over the past two years to determine whether or not transgenes are present in native maize (see details on p. 3). Although none of the studies has yet been published, each study found varying levels of contamination in two or more states. But acknowledgment of gene flow has *not* come with a clear plan of action to address contamination and to prevent it from continuing. Neither is there a plan to protect vital national and international collections of crop germplasm stored in gene banks in Mexico and elsewhere.

Given the appalling lack of action and follow-through by the Mexican government, international plant breeding institutes and the multinational Gene Giants, the true creators and custodians of maize decided to take matters into their own hands. At a news conference yesterday in Mexico City, indigenous and peasant farmer communities in Mexico joined with civil society organizations, including ETC Group, to announce the results of genetic testing of maize grown by traditional farmers in 138 communities. The results show that contamination has spread to

¹ The document released yesterday is a collective effort prepared by indigenous communities and peasant farmers from Oaxaca, Puebla, Chihuahua, Veracruz and CECCAM – Centro de Estudios para el Cambio en el Campo Mexicano, CENAMI – Centro Nacional de Apoyo a Misiones Indígenas, Grupo ETC – Grupo de Acción sobre Erosión, Tecnología y Concentración, CASIFOP – Centro de Análisis Social, Información y Formación Popular, AJAGI – Asociación Jalisciense de Apoyo a Grupos Indígenas, UNOSJO – Unión de Organizaciones de la Sierra Juárez de Oaxaca.

farmers' fields in nine states, including Chihuahua, Morelos, Durango, Estado de Mexico, Puebla, Oaxaca, San Luis Potosi, Tlaxcala and Veracruz.

Of 2,000 maize plants tested, samples from 33 communities in nine Mexican states tested positive for contamination. In some cases as many as four GM traits, all patented by multinational Gene Giants, were found in a single plant. The organizations were especially alarmed to find traces of the insecticidal toxin (Cry9c), the engineered trait found in StarLink maize (formerly sold by Aventis CropScience). StarLink was never approved by the US government for human consumption because of concerns it could trigger allergic reactions. Illegal traces of StarLink were found in US food products in 2000. Following a massive recall of tainted food products in the US, Aventis withdrew StarLink from the market. Apparently, StarLink sought asylum in Mexico.

Baldemar Mendoza, an indigenous farmer from Oaxaca, said at yesterday's news conference that people had come to his community to tell them that they needn't worry about GM contamination because transgenic crops have been available in some countries for six or seven years and there is no evidence that GM crops are harmful to health. "But we have our own evidence," asserts Mendoza. "We have 10,000 years of evidence that our maize is good for our health. To contaminate it with transgenics is a crime against all indigenous peoples and farming communities who have safeguarded maize over millennia for the benefit of humankind."

The coalition of indigenous communities, farmer and civil society organizations demanded that the Mexican government make public the results of all studies on GM contamination, stop all imports of transgenic maize, continue its moratorium on the cultivation of transgenic maize, and scrap the flawed "biosafety" bill crafted by biotech proponents, which is now under discussion in Congress.

Safe Contamination? At events leading up to today's news conference, many Mexican government officials and scientists acknowledged contamination, but insisted that it wasn't a problem.

On September 7th Mexico's newly-appointed Minister of the Environment, Alberto Cárdenas told the Global Biodiversity Forum in Cancún that there is no doubt that GM contamination in Mexico is real but he insisted there is no harm to native maize biodiversity or to public health. The Minister offered no specific information on contamination levels, nor did he provide evidence supporting his claim that public health and the environment had not been compromised.

At a conference held September 29-30 in Mexico City, academics, and government officials confirmed –and even Gene Giant corporations accepted– that there has been a "flow" (contamination) of GM traits into traditional maize varieties in at least two states. The conference, titled "*Gene Flow: What Does It Mean for Biodiversity and Centers of Origin*," was organized by the Pew Initiative on Food and Biotechnology (PIFB) and the U.S.–Mexico Foundation for Science (FUMEC). www.maizegeneflow.org.

At the conference, Klaus Amman, Director of the University of Bern's Botanical Garden (Switzerland), argued that there are no known environmental impacts of transgenic gene flow.

Amman cited data from Novartis (one of the Gene Giants – now Syngenta) showing that under field conditions genetically engineered *Bt* maize posed minimal risk to Monarch butterflies in the United States. Jorge Soberón, the director of Mexico's National Commission on Biodiversity (CONABIO) pointed out that a comparison between field conditions in the US and those in mega-diverse Mexico may not be relevant. He noted that the USA has around 60 butterfly species whereas Mexico has more than 2,000. In the meeting, Soberón called for a strict application of the precautionary principle.

A representative of the Mexican Ministry of Agriculture, Dr. Victor Villalobos, recently described the GM contamination in Oaxaca as “a natural laboratory” to study the effects of gene flow, and he complacently urged that the moratorium on the planting of GM maize be lifted.²

“It is exasperating that many scientists refused to take action on gene flow for more than two years, insisting that they required stronger scientific evidence,” said Silvia Ribeiro of ETC Group. “Now those same scientists admit gene flow but are claiming – in the total absence of scientific proof – that gene flow poses no threat to biodiversity or to people. Using Mexico and its people as guinea pigs is good science?”

Studies Concur: According to Ezequiel Ezcurra, the director of Mexico's National Institute of Ecology of the Secretariat of Environment and Natural Resources, four government-sponsored studies have been undertaken in the past two years to determine whether or not transgenes are present in maize in Mexico. Although none of the studies has yet been published, Ezcurra stated that each study found varying levels of contamination in two or more states:

- The National Institute of Ecology, an agency that operates under Mexico's Secretariat of Environment and Natural Resources, conducted an initial study that was released in September 2001.
- The National Institute of Ecology (INE) and the National Commission for the Knowledge and Use of Biodiversity (CONABIO) jointly sponsored a study that was conducted by scientists at the National Autonomous University of Mexico (UNAM) and the Center for Research and Advanced Studies of the National Polytechnic Institute (CINVESTAV). The results of this study were announced in December 2002.
- The Secretariat of Agriculture, Livestock and Fisheries (SAGARPA) conducted a study that was commissioned by the Intersecretarial Commission for Biosafety and Genetically Modified Organisms (CIBIOGEM). The results of this study have not been made public.
- The National Institute for Agriculture and Forestry Research (INIFAP). The results have not been made public.

The studies corroborate the independent findings of two University of California (Berkeley) researchers who first reported their conclusions in *Nature* in September 2001. In an unprecedented move, the editor of *Nature* later disavowed the Berkeley scientists' peer-reviewed report in his own journal.

² Lourdes Rudino, “Aprueban experimentos con maiz transgenico – Tiene SAGARPA ‘laboratorio natural’ en Oaxaca,” *El Financiero*, October 3, 2003.

Traveling transgenes are a global problem, not one confined to maize in Mexico. Among others, GM contamination of traditional varieties of cotton in Greece,³ canola (rapeseed) in Canada,⁴ soy in Italy,⁵ papaya in Hawaii have been reported.⁶

International Action Needed: In February 2002 La Via Campesina (the international organization of small farmers) and several hundred other civil society organizations worldwide joined forces to call upon the UN Food and Agriculture Organization (FAO) and CGIAR (Consultative Group on International Agricultural Research) to address the issue. Click here for more information. <http://www.etcgroup.org/article.asp?newsid=298> Although FAO has expressed concern, it has only been in touch with CIMMYT (International Maize and Wheat Improvement Centre), the CGIAR institute in Mexico, which has global responsibility for maize breeding and for the world's most important maize gene bank. CGIAR has refused to take decisive action until they are convinced there is solid scientific proof of contamination. However, CIMMYT did decide to halt its maize collection program in the region for fear that it could inadvertently introduce GM traits into its gene bank, and began to test for the presence of transgenes in its seed collection.

At yesterday's press conference in Mexico City, indigenous people and small farmers described CIMMYT's failure to acknowledge and take action on the contamination of traditional maize as "deplorable," and urged that responsibility for the CIMMYT gene bank as well as other banks in the CGIAR network be surrendered to an intergovernmental body such as FAO, under conditions that will make it more responsive to the concerns of small farmers and indigenous people. The group also condemned the Convention on Biological Diversity for its failure to effectively address GM contamination in centers of genetic diversity.

Next Steps:

The long-term impacts of GM contamination on crop genetic diversity are not known. Neither governments nor international institutions have taken action to stop GM contamination and to protect farmers and indigenous peoples' livelihoods. In February 2002 hundreds of civil society organizations called for a moratorium on the shipment of GM seed or grain in countries or regions that form part of the center of genetic diversity for the species. The communities and CSOs meeting yesterday in Mexico City repeated demands for a global moratorium.

ETC Group believes that a number of issues urgently require further study. Most obviously, studies are needed to determine the impact of GM contamination on traditional maize varieties in Mexico, not only looking at the traits that are currently contaminating the crop but also consider future introductions that might include traits for industrial or pharmaceutical compounds. Most importantly, we need to understand not only how to prevent further contamination but whether or

³ Dina Kyriakidou, "Greece to further test, destroy any GM cotton crops," July 4, 2000, Reuters News Service. Available on the Internet: <http://www.planetark.org/dailynewsstory.cfm?newsid=7343>

⁴ See www.percyschmeiser.com

⁵ David Brough, "Italy police seize more Monsanto seed in raid," April 10, 2001, Reuters News Service. Available on the Internet: <http://www.mindfully.org/GE/GE2/Italy-Seizes-Monsanto.htm>

⁶ Greenpeace, "Genetically Engineered (GE) Papaya -- Unknown Plant," June 2003. http://www.greenpeace.org/international_en/multimedia/download/1/290394/0/papaya_unknown_plant.pdf

not it is possible to de-contaminate without further harming diversity. Peasant farmers throughout the world, those who hold intimate knowledge of local farming systems and crop diversity, are the only ones capable of undertaking the task, but must have the support of the international community in this process. Globally, there is a pressing need to study more broadly the impacts of gene flow, which are already affecting other crops and regions. Most urgently, FAO and CGIAR need a specific strategy and procedure to ensure that gene bank accessions are protected from contamination and that the vitally important exchange of genetic resources between gene banks and breeders is not imperiled by concerns about contamination. Because all GM traits are patented, the intellectual property implications of accidental contamination and dissemination should also be studied. Until the studies can be completed and evaluated by farmers' organizations and the international community, existing national moratoria on GM crops should remain in place. These issues should be discussed at the next meeting of the FAO Commission on Plant Genetic Resources for Food and Agriculture and at the FAO Conference in November.

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The Action Group on Erosion, Technology and Concentration, formerly RAFI, is an international civil society organization headquartered in Canada. The ETC group is dedicated to the advancement of cultural and ecological diversity and human rights. www.etcgroup.org. The ETC group is also a member of the Community Biodiversity Development and Conservation Programme (CBDC). The CBDC is a collaborative experimental initiative involving civil society organizations and public research institutions in 14 countries. The CBDC is dedicated to the exploration of community-directed programmes to strengthen the conservation and enhancement of agricultural biodiversity. The CBDC website is www.cbdcprogram.org.