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“Situation of GMO Maize in Mexico”

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The last 6th of March, a presidential decree put an end to the *de facto* moratorium, which had banned during ten years, the experimental and commercial planting of transgenic maize in Mexico. This moratorium had been established in 1998 by a group of aware scientists concerned by the commercial sowing of GMO maize in the United States and by the particular interest of the agribiotech companies for extending it to Mexico.

Mexico is centre of origin and diversity of maize. The grain is the core of peasant production, it is a staple food, the most consumed cereal and the heart of Mexican culture. In Mesoamerica men were not created of clay, but of maize. Maize is as well a world heritage for humanity.

Mexico exceeds any other country for the richness of its maize land races and varieties. At the present time there are 59 maize land races and hundreds of varieties, as well as its wild relatives or *teocintes*, that are a genetic reservoir from which human and animal food security depends on. The diversity of native races is threatened with the use of GMO crops as the contamination is inevitable.

The coexistence of transgenic and conventional varieties is not possible because the genetically modified varieties certainly contaminate the conventional. Maize is an

open pollinated crop. In the reproduction of maize, the pollen of a plant fertilizes the neighbouring plants, and all the plants in a plot become different from those of a previous generation and among them.¹

In Mexico the seed selection and seed exchange among farmers has been and still is a particularly important practice. There is a constant flow of genetic material among different communities and geographical areas in the country.² Unfortunately it seems that it is just a matter of time before the native varieties are polluted with transgenes.³ Contamination also happens in storage, in transportation and in the industry. “It is very easy to introduce new genes to the system, but it is very complicated, if not impossible, to eradicate them”.⁴

Notwithstanding, since 2001 the Mexican government admitted the contamination of native varieties of maize among the Zapotec communities of Sierra de Juárez in Oaxaca, but it did not do anything to stop it.

Ceccam, the organization to which I belong has done independent research on peasant and indigenous native maize detecting GMO contamination in nine states of Mexico. During 2003-2005 we did detect the presence of Bt, StarLink and herbicide tolerant maize. Some plants registered the combination of the three events.

¹ CIMMYT, “Assessing the Benefits of International Maize Breeding Research: An Overview of the Global Maize Impacts Study” in: *World Maize Facts and Trends*, CIMMYT, 2000 p. 26

² Louette, D. “Intercambio de semillas entre agricultores y flujo genético entre variedades de maíz en sistemas agrícolas tradicionales” en: CIMMYT, INIFAP, CNBA, *Flujo genético entre maíz criollo, maíz mejorado y teocintle: implicaciones para el maíz transgénico*. Memoria del Foro. México, septiembre de 1995. p. 60

³ According to Ellstrand, the flux of genes provide the plant with the ability to contravene other evolution forces, such as mutation or selection.

⁴Serratos-Hernández, J.A., F. Islas-Gutierrez, and J. Berthaud. 2001b, *ibid.*, p. 6

Recent research (2008) leading by Elena Alvarez Buylla pointed out the presence of GMO contamination of native maize in several regions of Mexico⁵.

Transgenic maize will cause damage to biodiversity and the environment: Mexico is a mega-diverse country, therefore studies realised under other conditions are not valid, since.

Also transgenic maize is not the solution for the Mexican farmers due to the fact that the yields are not the main problem, but the market situation consisting of dumping low import prices of US maize. There are only three types of commercial genetically modified maize. *Bt* maize is insect resistant, attacking specifically the European corn borer, which is the most important pest in the US, but does not exist in Mexico. Now a-days companies presume this type of GM maize may be useful to resist some pests commonly found in Mexico, such as the root-worm. The herbicide tolerant maize would put an end to the traditional Mesoamerican milpa, eradicating from it those crops that grow associated with maize such as beans, chilli, squash and quelite. For the industrial farmers, the costs for the seeds, the license, and the herbicide are higher than other weeding methods with cheap labour. The third type of genetically modified maize has the combination of both events.

GMO maize crops are much more expensive, they do not increase the yields but on the contrary, they diminish them. The transgenic seeds use more pesticides because

⁵ A. Piñeyro-Nelson,* J. Van Heerwaarden,† H. R. Perales,‡ J. A. Serratoshernández,§ A. Rangel,¶ M. B. Hufford,** P. Gepts,** A. Garay-Arroyo,* R. Riverabustamante¶ And E. R. Álvarez-Buylla*, “Transgenes in Mexican maize: molecular evidence and methodological considerations for GMO detection in landrace populations”, in: *Molecular Ecology*, 2008 doi: 10.1111/j.1365-294X.2008.03993.x

they constantly produce the *Bt* toxin, creating secondary plagues and resistance, which must be controlled by other pesticides.

All transgenic seeds are patented and controlled by six multi-national companies. GMOs cause an absolute dependence of peasants and farmers on these companies, which besides criminalize the victims of the contamination.

Maize is the staple food for mexican population. The effects on human health of daily consumption of large quantities of GMO maize have not been yet evaluated.

The Commission for Environmental Cooperation, an institution emanated from the North America Free Trade Agreement (NAFTA), was asked by indigenous and peasant organisations, and by the civil society, to carry out a multi-disciplinary research on the effects of the genetically modified maize in Mexico. Among its major recommendations were:

- That the Mexican government should strengthen the moratorium prohibiting planting GMO maize, avoiding viable maize imports.
- To ensure an explicit and clear labelling.
- Research and independent risk assessments on the effects on human health from consumption of GMO maize in large quantities

In 2005, Monsanto threatened to leave Mexico forever if the moratorium was not revoked claiming: “without GMO Mexico would be reduced to a maize museum”.

The corporations tried to remove the *moratorium* for seeding transgenic maize in Mexico during the past ten years, meanwhile the civil society hold it avoiding the authorization for planting it.

Last March, Mexican Government gave free way to Monsanto *et. al.* which submitted their proposals to plant experimentally six different GMO maize varieties in two northern Mexican states with large scale maize production Sonora and Sinaloa.

Indigenous and peasant organizations, social concerned scientist, political activists, ecologist, popular urban movements, are resisting and opposing the liberation of GMO maize. Agrarian communities and *ejidos* have taken the decision of keeping their own native maize varieties transgenic free by not allowing the entry of unknown seeds, and avoiding pollination of those plants that look weird or bad formed. They do not accept government programs that swap native seeds by hybrid or improved seeds. Also by communal or *ejidal* assemblies they have banned the GM crops in their territories. As in Europe, civil society in Mexico and other countries in the South fight against the imposition of transgenic crops.

We now believe that the legal via in Mexico has been exhausted, leaving only the political one that we will strength through national and international awareness and pressure, and by direct action —like the *Fieldliberation Movements* do in Europe. That is why we need more international pressure and your support for instance:

- to publish declarations from this Congress condemning the lift of the moratorium.

- Exercise pressure by letters to the Mexican government, by example sign in letter campaign at web page: www.endefensadelmaiz.org
- Urging the Mexican government to preserve the centre of origin of one the most important crops in the world.
- Stablishing contacts between communities and initiatives in Europe and Mexico to exchange information, helping each other to defend their own seeds, the familiar and indigenous agriculture and values, against the threat of big companies to control what are we going to produce and eat.

Coming from the South and with these bad news I am very lucky to share with the European movements the celebration of your important battles that achieved the recent prohibition of MON 810 in France and Germany.

Peoples of Latin America also reject to be Monsanto's wastebasket. GMO crops shall not pass!!