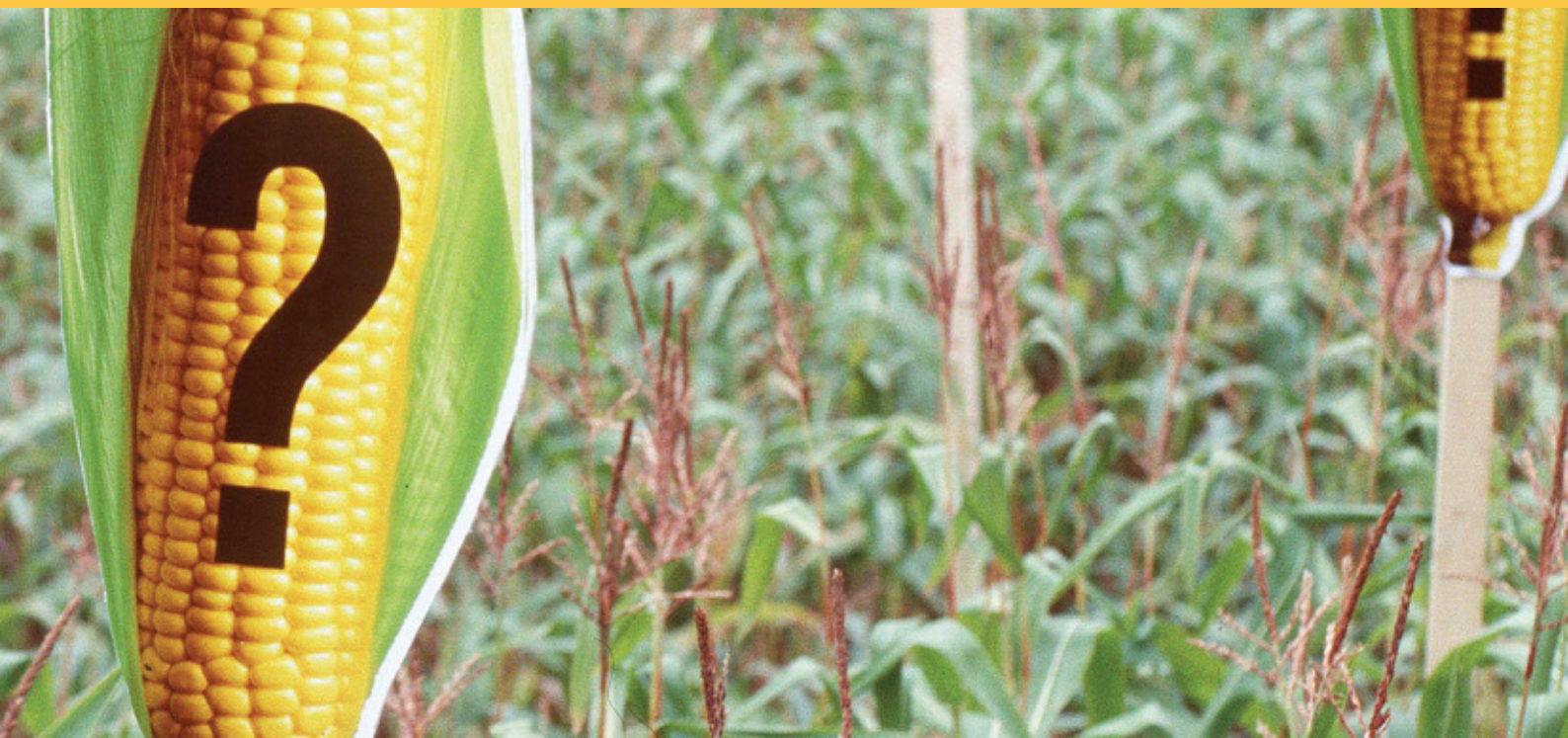


# MAIZE UNDER THREAT



© LANGER, MARTIN/GREENPEACE

OCTOBER 2006

**GREENPEACE**

# THREAT TO A CENTER OF ORIGIN AND DIVERSITY

The Mexican government is on the verge of approving field trials of GE maize for the first time since 1998, when it imposed a moratorium on the cultivation of GE maize. The government took this strong measure in 1998 because of significant scientific concern, from within and outside of Mexico, about the possible threat that GE maize posed to the center of maize diversity. Mexico is the birthplace of maize - its center of origin - and is still home to the priceless diversity of hundreds of native varieties of maize. This diversity is so valuable to humankind, in fact to everyone on the planet that consumes maize, because diversity is essential to ongoing breeding programs and the development of new varieties that can resist pests, diseases, drought, and other agronomic challenges. Without this reservoir of diversity, we can kiss the future of maize goodbye.

Scientists argue about the possible biological consequences of transgene contamination. Ultimately the impact will depend on the particular traits conferred by the transgene. The gene may create a plant that is more likely to become a weed. A gene that causes the plant to produce a pesticide could cause ecological disruption by killing non-target beneficial insects. A gene that produced a pharmaceutical could ultimately poison the population that was dependent on maize as a staple food.

The bottom line is that, given the complete unpredictability of behaviour of a novel transgene in native Mexican maizes and the environments in which they are found, and given the extreme significance of native maizes to the future of maize production around the world, the chances are too great to take. Scientists are in agreement: if GE maize is commercially grown in Mexico, Mexico's native maizes will become contaminated. We need to protect Mexican maize from any and all contamination by GE varieties and prevent the commercial growing of GE maize. The first step is to prevent the field trials that are the first step towards commercialization.

## BRIEF HISTORY OF GE MAIZE CONTAMINATION IN MEXICO

In 2001, the world was shocked by the publication of an article in *Nature* magazine by David Quist and Ignacio Chapela who demonstrated contamination of native maize varieties in the state of Oaxaca, Mexico. The Mexican government's National Institute of Ecology confirmed the findings in a report released a few months later.

In 2002, affected indigenous communities in Oaxaca, along with Greenpeace Mexico and the Mexican Center for Environmental Law, filed a chapter 13 petition with the Commission for Environmental Cooperation of the North American Free Trade Agreement. The petition requested that the Commission issue a report examining the direct and indirect environmental impacts that could occur if transgenic maize escaped in the state of Oaxaca. A prestigious scientific panel was formed to study the contamination and write the report. Among the most significant findings and recommendations of the report:

- The effects of GE maize on target and non-target insects moving between maize fields in Mexico and adjacent natural communities are unknown.
- To adequately reduce risks to native maize from unintentional planting of GE maize imported from the US, the Mexican government could require:
  - that maize imported from the United States be labeled as potentially containing GE maize or else certified as GE-free.
  - that all maize imported into Mexico that is not certified as GE-free be directed without exception to mills for processing immediately on entry into the country.



© LANGER, MARTIN/GREENPEACE

In 2005, the Mexican legislature passed a law (named by civil society as the Monsanto law) that regulates GMOs. Among other things, the law requires the government to develop a special regime for the protection of maize before any GE maize can be cultivated in the country. The government has not yet developed the special regimen, yet forces within the government are still pushing for GE maize to be field trialed, with trials beginning at the end of this year. Many influential and well-respected scientists have come out against the field trials, saying that GE maize can never be grown on a commercial scale in Mexico due to the threat posed to the center of origin.

## MONSANTO'S MASTER PLAN FOR CONTAMINATING MEXICAN MAIZE

Monsanto, Dow and Pioneer are proposing to test their main varieties of GE maize in Mexico: Roundup Ready maize (NK603), Bt maize (MON810, MON88017, Herculex), and combinations of these (MON810 x NK603 and Herculex x NK603). They have submitted a grand plan - the Plan Maestro de Maíz - designed to demonstrate the agronomic benefits of GE maize in Mexico through the proposed field trials. The plan barely even pays lip service to the threats posed to the country through gene flow to native varieties. We have renamed it "Plan Monsanto de Maíz" - Monsanto's master plan for introducing GE maize into Mexico.

### Further reading:

Ellstrand, N.C. 2001. When transgenes wander, should we worry? *Plant Physiology* 125: 1543-1545.