

March 27, 2005

Science vs. Culture in Mexico's Corn Staple

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CAPULÁLPAM DE MÉNDEZ, Mexico - This ancient Zapotec Indian town of whitewashed adobe houses and tiled roofs perched on a verdant slope of the western Sierra Madre could not be farther from the American laboratories where white-coated scientists create strains of genetically altered corn.

This is the birthplace of maize, where people took thousands of years to domesticate its wild ancestor, where pre-Hispanic myths describe it as a gift from the gods, and where cooks prepare it in dozens of ways to be served at every meal. So the discovery of genetically modified corn in the tiny plots here set off a national furor over what many here see as an assault by American agribusiness on the crop that is at the core of Mexico's identity.

"For us, maize is in everything: tamales, tacos, tortillas, pozole," said Miguel Ramírez, a local teacher who is active in community affairs. "For us it's sacred."

Then, radiating distrust of government assurances after a decade of free trade that has all but depopulated the Mexican countryside, he asked a familiar question here: "What is the government doing to make us self-sufficient?"

The response was a controversial biosecurity law passed by the Mexican Congress in February, a step that has divided Mexico's scientists. The issue has also put Washington on alert, making it wary of any threat to the 5.5 million tons of corn that American farmers export to Mexico each year, more than to any other country except Japan.

After several years of study, a panel of international experts found that the risks to health, the environment and biodiversity from genetically modified corn were so far very limited. But after a public forum here in Oaxaca State, the panel gave special weight to social and cultural arguments about protecting corn. It recommended that Mexico reduce corn imports, clearly label transgenic corn and mill genetically modified corn as soon as it enters the country, to prevent farmers from planting it.

In the end, the Mexican government set aside the milling recommendation as too expensive, but the new law requires still unspecified labeling. Over all, imports of American corn, mostly for animal feed, have stayed steady.

The United States' response to the report was immediate and blistering. It called the report "fundamentally flawed" and argued that the recommendations did not flow from the panel's scientific conclusions and undercut provisions of the North American Free Trade Agreement. "If implemented, these recommendations would unnecessarily limit Nafta farmers' access to high-quality U.S. corn exports, as well as the environmental benefits that biotech corn provides," a statement read.

The argument has exposed deeper chords that have been resonating here for two decades. At its center is a dispute over whether Mexico's embrace of free trade can coexist with age-old farming practices that form the fabric of rural life.

Like everyone here, Mr. Ramírez farms a small plot to put corn on his table. Following tradition, each household plants grain selected and saved from the previous year's crop. The practice has created a diversity of corn varieties, reflected in a palette of kernels from nearly white to wine red to blue-black, making Mexico a corn seed bank for the world.

One argument against the introduction of genetically altered corn here is the fear that cross-pollination with native varieties could alter the purity of those crops.

To many in Oaxaca, the transgenic corn that seeped in from the United States was the final insult from successive governments that have dismantled supports for uncompetitive peasant farming and embraced free trade. The impact has been enormous over the past generation, driving hundreds of thousands of Mexicans from rural areas, many of them to the United States for work. "There is a systematic strategy to finish off the countryside," said Aldo González, an advocate on farm issues from the town of Guelatao.

Scientists have echoed those concerns, saying the threat to the crop and to the rural population cannot be separated. "The most important cause of the loss of genetic diversity to the maize varieties is the loss of people, their departure from the countryside for California, New York and Texas," said José Sarukhán, a respected professor of ecology at the National Autonomous University of Mexico who led the panel.

As Congress debated the biosecurity law, opposing sides marshaled their own evidence to support contradictory conclusions. The potential danger to corn - and its special place in Mexican society - remain a centerpiece of opposition to the law.

The law's supporters say genetically modified strains could increase yields for Mexico's flagging corn production. They argue that the law sets up safeguards to introduce genetically modified crops cautiously and monitor their effects.

But such promises carry little weight in Oaxaca.

After scientists found transgenic corn in the fields of these mountains in 2001, despite a 1998 ban on commercial planting, Mr. Ramírez, the local activist, and others here asked for a study of the issue. That led to formation of the study panel, which was set up by the Commission for Environmental Cooperation, a government-financed group that monitors

the environmental effects of Nafta, and was made up of experts from Mexico, the United States, Canada and Britain.

The study concluded that the alien corn found here probably came from American food imports distributed in government stores for the poor and planted by local farmers.

One such farmer, Olga Toro Maldonado, said the new corn produced well the first year. But the grain she saved and planted the following year produced "tiny, ugly little things." That is because she planted corn developed for the Great Plains. In the end, she said, "we realized that it is better to have our own maize."

The new law promises special rules to protect corn, gives the environmental ministry new power over whether to approve any transgenic crops and allows communities to set up zones that are free of transgenics. The ban on commercial planting is still in effect.

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