

9-27-2017

# Study Finds High Levels of Genetically Altered Organisms in Mexican Tortillas

Carlos Navarro

Follow this and additional works at: <https://digitalrepository.unm.edu/sourcemex>

---

## Recommended Citation

Navarro, Carlos. "Study Finds High Levels of Genetically Altered Organisms in Mexican Tortillas." (2017).  
<https://digitalrepository.unm.edu/sourcemex/6384>

This Article is brought to you for free and open access by the Latin America Digital Beat (LADB) at UNM Digital Repository. It has been accepted for inclusion in SourceMex by an authorized administrator of UNM Digital Repository. For more information, please contact [amywinter@unm.edu](mailto:amywinter@unm.edu).

## Study Finds High Levels of Genetically Altered Organisms in Mexican Tortillas

by Carlos Navarro

Category/Department: Mexico

Published: 2017-09-27

A new study by a team of scientists at Mexico's national university (Universidad Nacional Autónoma de México, UNAM) has uncovered high levels of genetically modified organisms (GMOs) in more than 90% of the tortillas tested and also in more than 80% of other products manufactured with corn meal. The results of the study, led by researcher Elena Álvarez-Buylla Rocés of UNAM's institute of ecology (Instituto de Ecología), came as a surprise to the research team.

"We had not expected to find these high-impact results, because the planting of GMO corn in open fields has not been allowed since 2013 as a result of a lawsuit," said Álvarez-Buylla Rocés, referring to two court rulings that prohibited the agriculture ministry, the Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT) from awarding any permits to multinational companies to plant GMO seeds ([SourceMex, Sept. 3, 2014](#)).

Although a federal court overturned the ban in 2015 ([SourceMex, Aug. 26, 2015](#)), another court later ruled that seed companies could continue to plant GMO corn on strictly monitored test plots but prohibited the planting of altered corn for commercial purposes ([SourceMex, March 23, 2016](#)).

A ruling by Mexico's high court in (Suprema Corte de Justicia de la Nación, SCJN) in November 2015 prohibited the government from granting multinational companies permits to plant GMO soybeans ([SourceMex, Nov. 18, 2015](#)). That ruling strengthened the hand of opponents of GMO corn.

The team of eight UNAM researchers, which published the findings in the US-based journal *Agroecology and Sustainable Food Systems*, conducted tests on tortillas purchased from traditional tortilla stores. They discovered that 90% of these tortillas contained some level of genetically modified organisms.

### *GMOs in other corn products*

The researchers also conducted tests on corn products purchased from supermarkets, including tostadas, flour, cereals, and snacks. Roughly 82% of these samples carried GMO content.

The researchers also tested handmade tortillas prepared with more artisanal processes and homegrown corn varieties. The frequency of GMO content was "significantly lower" in these tortillas than in the commercial products that were tested.

The researchers also discovered the herbicide glyphosate in nearly 30% of the samples that tested positive for transgenic corn.

"We are very concerned about the finding of glyphosate in corn products like tortillas, cereals, tostadas, and flour used to produce masa [corn meal]," Álvarez-Buylla Rocés said.

Most corn available on a commercial basis in the US has been modified genetically to tolerate glyphosate, the world's most common herbicide, and the active ingredient in Roundup, an herbicide manufactured by Monsanto.

A recent review by the World Health Organization (WHO) suggested glyphosate may have some carcinogenic potential, although the UN agency found no evidence that the herbicide is harmful to humans. "Glyphosate is unlikely to pose a carcinogenic risk to humans from exposure through the diet," a WHO review said in 2016.

The artisanal tortillas that were tested had no presence of glyphosate.

All of the samples were tested in UNAM laboratories, and the results certified by a German laboratory, which also tested the samples for glyphosate content.

Regardless of the WHO conclusions, Álvarez-Buylla Roces called on Mexican health authorities to conduct their own studies to determine what, if any, health problems Mexicans would face from the presence of glyphosates in the Mexican diet. "We also want to know how GMOS are entering our traditional foodstuffs without authorities determining whether they are harmful to our health."

The researchers did not offer any theories on how the altered organisms might have made their way into tortillas in Mexico, other than to suggest that corn imports from the US should be "used only to feed livestock or as highly processed industrial consumables."

Mexico imports about 10 million tons of yellow corn from the US each year for the livestock and poultry industries, and there is the possibility that a share of that corn was mixed with the domestic white corn used to produce food items for human consumption.

According to Álvarez-Buylla Roces, the imported corn should never be used for human consumption, "much less if it is contaminated with glyphosate."

Officials for the agriculture ministry (Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca, y Alimentación, SAGARPA) point out that Mexico produces enough white corn to ensure that none of the yellow corn enters the human food chain.

"We are self-sufficient in production of white corn," Eduardo Mansilla Gómez, a SAGARPA representative in Tamaulipas state, said in an interview with the daily newspaper *El Diario de Ciudad Victoria*. "This is the corn used in the production of tortillas and corn meal. We never use yellow corn for this purpose."

Mexico produced 25.7 million tons of corn in 2016. Half of the total, about 12.3 million tons, was used for human consumption, 4.2 million tons were grown by subsistence farmers, 4.4 million tons were produced as animal feed, and 1.5 million tons were exported.

According to Mansilla Gómez, Mexico grows yellow corn without the use of GMOs for its livestock and poultry industries, in contrast to the US, South Africa, Argentina, and Brazil, all of which use altered corn for this purpose.

### *A call for food sovereignty*

Álvarez-Buylla Roces and her team suggested that the government do more to ensure food sovereignty in Mexico by supporting small-scale corn farmers and agro-ecological farming of "highly nutritional" native and hybrid varieties of corn to cover the country's needs.

"If there is one country where agro-ecology is practiced, it is ours," said Álvarez-Buylla Roces. "We have 20 million campesinos (agrarian workers) who grow food for their own needs. It is important

for us to recover our food sovereignty. Mexican consumers are being left without options in the quest for corn products that are free of genetically modified organisms.”

She added that Mexico would have a stronger agricultural sector, with less impact on the environment, if campesino communities were allowed to produce and sell their products at a just price.

“And Mexicans would enjoy a higher level of health,” she said.

-- End --