

Transgenic maize is contaminating traditional varieties in Brazil

Another example of uncontrolled spread of genetically engineered organisms

11 March 2022 / Researchers at the Brazilian agricultural research agency, Embrapa, have found large-scale transgenic contamination of traditional maize varieties. According to the study that has been published in the journal *Plants*, transgenes were found in one third (34 percent) of around 1,000 samples taken in 2018/19 and 2020/21 in states in the east and northeast of the country.

Some of the samples came from farmers who only grow their own seeds, some of which are kept in families for generations. In addition, the scientists examined samples from farmers who had exchanged seeds with others or bought them at local markets.

The lowest level of contamination was found in samples from farmers who neither exchange nor buy maize seed. The highest level of contamination (up to 75 percent) was found in purchased seed. The authors detected transgenes for herbicide resistance (glyphosate and glufosinate) as well as various Bt toxins that are toxic to insects.

Numerous genetically engineered (GE) maize events have been approved for cultivation in Brazil. Despite legal requirements, regulatory oversight of genetically modified organisms appears patchy. The publication now released is the first to investigate contamination of traditional Brazilian maize varieties by GE maize, although it has been grown since 2007. It was only recently reported that large numbers of fluorescent GE ornamental fish have escaped from breeding facilities in Brazil, and are spreading into regional water systems in the south of the country. The spread of genetically engineered organisms is also already out of control in many other countries, including the United States, Canada and Mexico.

Brazil is a centre of maize biodiversity, where, according to the study, thousands of different landraces are grown. The genetic peculiarities that have evolved through breeding history could be valuable resources for breeding crop adaptations to climate change. "The importance of these maize varieties was apparently not taken into account in the risk assessment, authorisation or monitoring of genetically engineered maize in Brazil. Damage due to contamination threatens to be potentially irreversible," says Christoph Then from Testbiotech.

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Further information: [The new study from Brazil](#) [2]

[Publication on risk assessment of genetically engineered plants that can persist in the environment](#)

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[News article on transgenic ornamental fish in Brazil](#) [4]

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[1] <mailto:info@testbiotech.de>

[2] <https://www.mdpi.com/2223-7747/11/5/603/htm>

[3] <https://enveurope.springeropen.com/articles/10.1186/s12302-020-00301-0>

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