

GM Children: Film Unveils 'Monstrous' Child Deformities

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STORY AT-A-GLANCE

- Genetically Modified Children" film exposes how Philip Morris and Monsanto have exploited impoverished farmers since 1966, when the Argentinian government authorized the use of GMO crops to withstand Monsanto's Roundup weedkiller
- > Tobacco farmers in Argentina are forced to use a multitude of dangerous agrochemicals in order to grow a crop that's certifiable by U.S. tobacco company Philip Morris
- > An increasing number of children are being born with severe birth defects and deformities in Argentina
- > The film interviews Dr. Hugo Gomez Demaio and Dr. Mario Barrera, who are dedicated to highlighting and treating the link between agrochemicals and birth defects
- > The film features anti-agrochemical activist Sofia Gatica, who is renowned for her work in tracking abnormal rates of cancer, kidney disease and other ailments linked to aerial spraying of glyphosate on GMO soy crops

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The shocking film "Genetically Modified Children" unveils the horrors of decades of chemical-intensive agricultural practices in Argentina, where the majority of crops are genetically modified (GM) and routinely doused in dangerous agrochemicals, and the chokehold big tobacco companies such as Philip Morris and chemical and seed giants have on poverty-stricken farmers desperate to earn a living.

The film, produced by Juliette Igier and Stephanie Lebrun, shows the devastating health effects the region's agricultural sector is having on children,¹ an increasing number of whom are being born with monstrous physical deformities. Some of the children's cases are so severe that, without a medical intervention, will result in death before the age of 5.

The film begins with the crew traveling from North Argentina in the Province of Misiones to the Brazilian frontier, an agricultural region that was one of the nation's first to begin growing genetically modified organisms (GMOs) in the mid-'90s.

Featured in the film is Ricardo Rivero, regional head of the local electricity company. He learned that the reason families cannot pay their bills is because often they are taking care of a sick or handicapped child, and receiving no assistance from the Argentinian government.

The film shows them visiting the humble home of a tobacco farmer where they meet Lucas Texeira, a 5-year-old boy with an incurable genetic skin disease. The family believes it was caused by the mother's exposure to Monsanto's Roundup weedkiller early on in her pregnancy. No one told her it was toxic, she says.

The genetic mutation that caused her son's condition left him with no pores in his skin, which means he doesn't perspire. The heat from his body stays inside, causing him severe and painful itching that leads to frequent crying spells. Mr. Texeira expresses his sadness over Lucas' condition, as well as his fears that he could have another child in the future with a similar deformity.

Agrochemicals Lead to Rise in Birth Defects, Deformities

Like many families in rural Argentina, the Texeiras have grown GM tobacco on their land for years, using a number of various agrochemicals required to produce a crop that's certifiable by Philip Morris, an American multinational cigarette and tobacco manufacturing company (a division of Altria Company since 2003). Philip Morris provides farmers GM burley tobacco seeds for the manufacturer of light tobacco cigarettes. Each year, Argentinian farmers are forced to use more than 100 different chemicals in order to grow the perfect-looking tobacco crop — that is, if they hope to make any money.

The Texeira family is no exception. For more than a decade, they have treated their tobacco plants with glyphosate and other agrochemicals — and without any protection. However, after seeing a rise in birth defects among the community's children, including in their own child, they began to fear for their safety and moved off their farmland, away from the toxic chemicals.

"It's not easy, but you have to live the life you have," said Mr. Texeira. "Thank God, Lucas' problem is just his skin. He's healthy and can eat. He eats almost anything." Lucas is a miracle, says the film's narrator. In this region, there's a disproportionate number of children born with deformities.

300 Million Liters of Glyphosate Are Applied Each Year

GM crops first entered the country through the Misiones Province of Argentina after the government authorized their use from 1996 onward, a decision based solely on studies conducted by Monsanto, and with no contradicting research.

For more than two decades the land was sprayed with glyphosate and other agrochemicals, contaminating the region's soil and water. By 2013, more than 24 million hectares² (59.3 million acres) of GM crops were grown in Argentina, including soy, maize, cotton and tobacco.

Mounting scientific evidence connecting the rise in miscarriages, birth defects and cancer to GMOs and agrochemicals did not dissuade the Argentinian government from subsidizing GM crops. Perhaps, that decision is due in part to the 35% in taxes Argentina receives from GMO soy exports.

Despite the dangers, no one warned tobacco farmers of the risks. In fact, the opposite was true. Farmers in the Misiones province were inundated with various forms of

marketing, including commercials from chemical companies insisting agrochemicals were the key to prosperity.

Television advertisements touted the benefits of Monsanto's Roundup weedkiller, including its ability to kill everything except for GMOs. The marketing worked. Today, more than 300 million liters (79.2 million gallons) of glyphosate are dumped each year onto more than 28 million hectares (69.1 million acres) of land in Argentina.³

Total Desertion

The film shows the crew visiting the home of another sick child. Lucas Krauss was born with congenital microcephaly. He suffers from epilepsy, delayed motor and mental development, multiple muscular atrophy and numerous other related pathologies.

The first doctor the family consulted said their son's condition was due to a lack of oxygen; however, the neurologist had a different opinion. At first, he agreed and said it was due to a lack of oxygen; however, when they pressed him further he admitted that a lack of oxygen was not the only cause, but he refused to say what he believed the true cause was of Lucas' condition. They wouldn't even run medical tests, said the boy's mother.

The family understands that Lucas' condition, as well as many others in the community, is likely tied to the agrochemicals used to farm tobacco. But the family can't quit the trade because it's the main source of income in their area, and most importantly, it's the only sector that provides social security for its workers. Without the financial aid of the tobacco industry, the father fears he will be unable to care for his special needs son.

"The whole family feels discriminated against because it seems that society doesn't want to see their reality," said Rivero. "His parents don't ask anything for themselves. They're not asking for anything out of the ordinary. It's just that the responsible parties — the state is the responsible one for these children's problems — and it's not taking responsibility and there's total desertion."

In 2010, things started to move. Lawyers from the U.S. traveled to Misiones to visit the families of severely handicapped children. One of their stops included the home of 17-year-old William Nuñez, who was born severely handicapped.

He can't walk or talk, and has to be fed through a feeding tube in his stomach. The family has received no aid from the government for the medical treatment William needs. Instead, they have learned on their own how to care for their disabled child.

Ignorance and Exploitation

The Nuñez family says they were visited by American lawyers four or five times in a sixth-month period, as well as a handful of doctors from the U.S. and Mexico. The Nuñez family were told that they were not at fault for using agrochemicals, and that they could be awarded up to \$3 million for William's case.

The attorneys asked the family to sign a contract with a commitment not to discuss their case with anyone. Up until now, they have respected the contract. But they haven't heard from the lawyers in over four years and don't want to keep quiet any longer.

Next the film introduces a man named Emilio, the son of a tobacco farmer who has created an independent labor union to contend with the two tobacco companies in the region, which often take the side of Big Tobacco.

Tobacco farming is a tough job, says Emilio, adding that people suffer a lot because they work all year long, and the financial incentive is not great. Emilio describes the tobacco industry in San Jacinto, Argentina as a slavery system, one encapsulated by ignorance and exploitation.

The film crew visits a warehouse where all of the region's tobacco farmers come to sell their product. The farmers' tobacco crop is transported here at the end of the growing cycle, which includes the sowing, treating, harvesting, drying and sorting. This is the only place they can sell their crop, says Emilio. The film crew is there on the day the farmers learn the value of their year's work. "It's when you get happy or get angry, because if it went well, you know that you'll be able to buy what you need or what you dreamed about when you were working for it. So, you'll find out here," says Emilio.

The crop must meet strict standards set by the cooperative, which inspects each bale in the blink of an eye. They examine the texture, breadth and the color of the leaves. Tobacco in its natural state would never pass the test — only the use of agrochemicals can ensure a good result.

Big Tobacco Dominates the Industry

The film interviews one of the farmers about his feelings on his earnings. He says he received 11,575 Mexican pesos (or about \$610 U.S. dollars) for 975 kilos of tobacco. That's about \$3.50 per pound of tobacco. It's a low price, he says. "To me, it seems like a total rip-off. It's unfair."

The farmers say their income was especially low this year as result of the expensive chemical inputs they are forced to use. The chemical companies charge them in U.S. dollars, but they pay in pesos, says one frustrated farmer, adding that he has no way out of the business because he can't risk losing his social security.

Big Tobacco dominates the industry in San Jacinto, Argentina. It dominates to such an extent that companies like Philip Morris have completely changed tobacco farming. Today, farmers are enslaved by the companies that produce and sell the agrochemicals required to grow a crop that can be certified by Philip Morris.

The film crew manages to capture footage inside a warehouse where farmers go to buy pesticides. Tall stacks of herbicides, fungicides and insecticides line the walls – all of it handled with bare hands.

Among the insecticides is a chemical manufactured by Bayer called Confidor, which contains the insecticides clothianidin, imidacloprid, thiamethoxam and methiocarb,⁴ all of which, except for methiocarb, belong to a class of bee-killing pesticides known as neonicotinoids, which were banned on all crops grown outdoors in Europe.⁵

Poison Is a Recurrent Word in Argentina

Before leaving the region, the film crew makes one last stop to visit 50-year-old Raul Gomez, who has created a list of all the chemicals he has had to handle over the past two decades, most of which are now banned due to their toxicity. Gomez is concerned about having to keep the chemicals on his property, most of which are too dangerous for him to dispose of.

He says he was told someone would come and take them, but no one has, so he built shacks to store them. Gomez says he believes he was definitely a guinea pig in that he was forced to work with such dangerous poisons without any knowledge of the implication to his or his family's health.

He and other farmers say the question isn't if they will become ill, but when. Everyone in this region has poison running through their bodies, he says, and while he doesn't feel it now, in a few years he may. "That's how it is. The consequences come later."

Next the film crew travels to Posadas, the capital of the Province of Misiones, where doctors are considering a terrifying hypothesis: Exposure to agrochemicals may actually modify the human genome.

They meet 73-year-old Dr. Hugo Gomez Demaio, head of the neurosurgery service at the Pediatric Hospital of Posadas, and Dr. Mario Barrera, neurosurgeon at the Medical School of Nordeste. (Both institutions are in Buenos Aries). The doctors are dedicated to highlighting and treating the link between glyphosate exposure and other agrochemicals and birth defects caused by DNA damage.

Over the years, Demaio has witnessed an increasing number of children suffering from malformations. "These are no more empirical observations, but an inescapable statistic that he has drawn up with his successor, Dr. Barrera," says the film's narrator. One hundred percent of these children with severe deformities will die before the age of 5 if they do not have a medical intervention, says Demaio.

The film shows two little girls suffering from hydrocephalus, a condition linked to an abnormality affecting the X chromosome. Hydrocephalus is the buildup of fluids deep within the brain. The excess fluids put pressure on the brain causing damage to brain tissue. Symptoms of hydrocephalus include an unusually large head, a rapid increase in the size of the head and a bulging spot on top.⁶

'They Have the Money and We Have the Illness'

The mothers of the two little girls with hydrocephalus say they were exposed to agrochemicals, but indirectly. While agrochemicals were not stored in their home, they say they were exposed to them through the contaminated clothing of their male family members who farm tobacco. The women would wash the men's clothing in a nearby creek, which also served as their source of drinking water.

Demaio says exposure to agrochemicals may cause genetic damage that's transmitted to an individual's offspring, causing a modification of genetic heritage. Barrera explains:

"Even if the entire local environment is contaminated, it does not mean that all children will become sick. But when the father is exposed to herbicides, they are absorbed into the body and alter his DNA. He then passes that genetic mutation on to his children."

In the beginning, Demaio and Barrera worked alone, but soon other doctors who had made similar observations joined them in their work. In 2009, they published results showing miscarriages and congenital defects among newborns were six times higher than normal, and cancers in small children were five times more common than elsewhere.⁷

The doctors say the agrochemicals pass from mother to child and cause damage within the first 28 days of pregnancy, resulting in monstrous deformities that are difficult to repair. The most common expression is myelomeningocele,⁸ a birth defect of the backbone and spinal cord. It's the most severe lesion of the central nervous system that one can still live with. Demaio says the Argentinian government refuses to listen to him, so he has dedicated his time to educating young people at universities, many of whom have grown up in tobacco farming families and around pesticides, but know very little about them.

They were told agrochemicals are safe, and necessary, to feed people. "They have the money and we have the illness," says Demaio, referring to the chemical companies and the profits they've earned on unsuspecting farmers forced in a chemical-reliant trade.

A David Versus Goliath Battle

The film crew visits the lawyers in their office in Bueno Aires, the ones who never followed up after visiting the families four years ago. They were not very knowledgeable about the case, so the film crew visits the New York office for which the attorneys had worked on the file years ago.

They speak with Steven J. Phillips of the Phillips & Paolicelli LLP office, which specializes in defending children from toxic products. Phillips says he believes he has a strong case against Monsanto and Philip Morris. Monsanto designed and sold glyphosate to people in South America under conditions in which it knew there would be pregnant women mixing the chemicals.

Monsanto knew it was extremely dangerous but sold the stuff anyway and made a ton of money, said Phillips. Philip Morris insisted the farmers grow the tobacco in a specific way that included the use of glyphosate, and if they didn't, Philip Morris wouldn't buy the tobacco. So, the farmers had no choice.

"If you force someone to behave in a way that's dangerous, mislead them about it, and then their children get hurt, then that's a reason to bring them to court," said Phillips. While the attorneys recognize the battle as being a David versus Goliath type, they also know that the truth is on their side.

The truth often prevails, as is the case in the guilty verdict in the landmark Monsanto trial. A jury in San Francisco, California, awarded plaintiff Dewayne Johnson \$289

million in damages after determining his cancer was caused by exposure Monsanto's Roundup weedkiller.⁹ Organic Consumers Association (OCA) reports:

"The jury's decision was unanimous: Monsanto was guilty of manufacturing and selling a product that caused Johnson's cancer. What's more, the company knew its product could cause cancer — and yet it intentionally hid that fact from Johnson and the public."

The case is eerily similar to that of the farmers and their families who are suffering from exposure to agrochemicals, including glyphosate, in Argentina. And the tobacco farmers aren't alone in their battle. There's another region in Argentina that has become the symbol in the fight against agrochemicals.

Cordoba, the Realm of the Transgenic Soybean

The film crew travels to Cordoba, Argentina's second most important city, and the last stop in their investigation. Cordoba is characterized for its planting of transgenic soy and where glyphosate is applied from above through aerial spraying.

The town is littered with anti-Monsanto graffiti. In 2012, a historical verdict¹⁰ was delivered in Cordoba when a farmer and the owner of a crop-dusting plane were sentenced to three years in prison for illegal aerial spraying. They had been spraying glyphosate within 2,500 meters of a densely, populated area.

The film introduces anti-agrochemical activist Sofia Gatica, who cofounded Mothers of Ituzaingo,¹¹ a group of moms working to stop the indiscriminate agrochemical use that has poisoned the region's children. Gatica lost her own infant daughter to kidney malformation, and her son lost his ability to walk following exposure to a local agrochemical fumigation.

Gatica is recognized for her work in tracking the abnormal rates of cancer, kidney disease and other conditions in areas close to where glyphosate was applied to GMO soy crops. The Mothers of Ituzaingo had blood tests done on their kids and found that 3

in 4 children living in their community had agrochemicals in their blood, including pesticides, chromium, lead and arsenic.

Hoping to get help from the government, the group presented the results to Argentinian officials, who told them they would only improve the water if the families signed away their right to sue for the water contamination.

Gatica has repeatedly been threatened and physically assaulted for her efforts in fighting the chemical companies. On one occasion in 2014, she was threatened with a gun and told by a man that if she didn't stop protesting against Monsanto, he would "blow her brains out."

Making Progress

Despite the uphill battle, Mothers of Ituzaingo and other activists have made good progress. As the OCA reports:¹²

"In 2008, Argentina's president ordered the minister of health to investigate the impact of pesticide use in Ituzaingó. A study was conducted by the Department of Medicine at Buenos Aires University and the results corroborated with the research the mothers had done linking pesticide exposure to the many health issues experienced by people in the community.

Gatica also succeeded in getting a municipal ordinance passed that prohibited aerial spraying in Ituzaingó at distances of less than 2,500 meters from residences.

And, in a huge victory, a 2010 Supreme Court ruling banned agrochemical spraying near populated areas and reversed the burden of proof — now the government and soy producers have to prove the chemicals they are using are safe, instead of residents having to prove that the spraying is making them sick."

Despite the victories, people living in Argentina and other regions saturated with GMOs and agrochemicals have a long, hard road ahead. In 2021, according to a systematic review of the scientific literature published between 2006 and 2018, it was estimated that 385 million cases of unintentional, acute pesticide poisoning (UAPP) occur annually worldwide.¹³ But agrochemicals are worth \$40 billion per year, and are projected to reach \$308 billion in value by the year 2025.¹⁴

Will the world's multinational chemical companies ever sacrifice profits to protect public health? Only time will tell; however, the solution likely lies in the legal system, which is making strides around the world to protect the public from harmful agrochemicals.

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