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The Effects of Monsanto on Indian Farmer Suicide Rates

Rachel N. Sandri

Salve Regina University, rachel.sandri@salve.edu

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Rachel Sandri

Professor Ryan Marnane

24 March 2017

Title

The Effects of Monsanto on Indian Farmer Suicide Rates

Abstract

The following paper presents an in-depth analysis of the effects of Monsanto on Indian farmer suicide rates from an Environmental Justice perspective. This case study intends to work through the continued injustice within Indian farming communities while examining the conditions in which this issue has been allowed to develop. Through an interdisciplinary lens, this paper aims to offer context on the situation by providing background information as well as integrating claims of morality. The paper highlights a close analysis of the issue through the incorporation of a multitude of resources such as scholarly works, news sources, social media, and works of literature. It displays the vitality of looking at issues holistically and investigating all aspects of a problem. Often neglected features of the injustice such as cultural awareness and societal differences are taken into account. Through this case study, it is made apparent that the well-being of Indian farmers is being disregarded as multinational companies such as Monsanto seek the highest profits imaginable. The work highlights the connects between the two and the claims made by both parties on behalf of the issue. Lastly, the work uses the crisis in India as a framework for a larger world problem in which free market capitalism places human rights beneath the acquisition of wealth.

Introduction to the Indian Farmer Suicide Crisis and to Environmental Justice as a Frame

Since the introduction of genetically modified seeds in India by Monsanto, suicide rates amongst Indian farmers has drastically increased. Monsanto has come to control the seed market since they are the largest seed company in the world. The corporation controls more than 27 percent of the proprietary seed market. As of 2007, the corporation was responsible for 87 percent of the total world area dedicated to genetically engineered seeds. The company has gained a notorious reputation for their controversial role in agricultural policy since they are marketing for genetically modified organisms. They have created a monopoly in the market for genetically engineered organisms. Monsanto has even pushed out companies such as DuPont, another multinational company that uses genetically modified organisms. They have spent more on lobbying for genetically modified organisms than all other agribusiness combined.

Monsanto has previously been accused of various human rights and environmental violations. The company is also known for their production of DDT, polychlorinated biphenyls, and Agent Orange. In December 2011, Monsanto, along with Dow, Bayer, Syngenta, DuPont, and BASF, faced a public trial in which the Permanent Peoples' Tribunal accused them. Specifically, these violations included encouraged dependence on the sale and use of hazardous pesticides such as endosulfan, paraquat, and neocotinoids. The Tribunal was held in India and decided that all of the six companies were responsible for "gross, widespread and systematic violations of the right to health and life, economic, social and cultural rights, as well as of civil and political rights, and women's and children's rights, the violation of indigenous peoples'

human rights and other entitlements.” These violations were concluded to have resulted in calamitous perils that put biodiversity and factors for reproduction human life at risk.¹

The main genetically modified crop in India is Bt Cotton. This crop contains pesticides within the plant. It has been genetically modified by the insertion of one or more genes from a common soil bacterium known as *Bacillus thuringiensis*. These genes encode for the production of insecticidal proteins.² In result, they genetically transform the plants to produce toxins as they grow. The intention of these pesticides is to kill and prevent insects from feeding on the plants. Since the pesticides are imbedded within the plant, the farmer does not have to spray pesticides. In turn, the plants are toxic as they grow.³ Indian farmers have reported instances in which their sheep have grazed on the Bt Cotton fields after the cotton was harvested and thousands of their sheep died as a result.⁴

In the following paper, I survey a multitude of viewpoints on the connection and correlation between Monsanto and the rise in suicide rates among Indian farmers. The paper also investigates the current attempts to fight back against the giant corporation. Through the examination of this issue, it is made clear that this reflects a larger global problem with the free markets around the world. The capitalistic world in which this incident has been able to occur is at the root of the conflict. Monopolies such as Monsanto dictate the lives of the farmers and India. As a result of their control, Indian farmers are seeking control in any means they can even if it means taking their own lives.

Surveying Literature Surrounding Monsanto and Indian Farmer Suicide Rates

The world has become increasingly reliant on multinational companies such as Monsanto that have taken over the commercial food industry. Today, most pre-packaged foods are produced by brands that are owned by the giant corporation.⁵ Propriety seeds and genetically modified organisms are their main focuses. The powerful company is establishing a monopoly over the food industry. In recent years, Monsanto has even assumed a political role. A senator from Missouri, Roy Blunt, finagled The Farmer Assurance Provision Act onto a bill. The act, which is more commonly known as the “Monsanto Protection Act” essentially allowed the company to continue to produce and sell genetically engineered crops despite the fact that the Department of Agriculture had not finished conducting a safety investigation. Monsanto’s well-being is dependent upon genetically modified organisms or GMOs for short. As the world’s largest seed company, they patent more than ninety percent of soybeans that are grown in the United States as well as eighty percent of corn that is U.S.-grown. Not only does Monsanto sell its own patented seeds, but they also use licensing agreements with various other companies and distributors. The corporation intends to expand the use of its seed traits throughout the seed

¹ Ethical Consumer. "Monsanto: Guardian of Seeds or Profits?" Monsanto. April 2015. Accessed May 04, 2017. <http://www.ethicalconsumer.org/ethicalreports/gardening/masantoprofile>.

² Scott W. Stewart. "Bt Cotton." *Extension*, 2007. Accessed May 4, 2017. http://www.utcrops.com/cotton/cotton_insects/pubs/W129-BtCotton.pdf. p. 1.

³ Ibid. p. 2.

⁴ GMWatch. "Mortality in Sheep Flocks after Grazing on Bt Cotton Fields Warangal District, Andhra Pradesh." GM Watch. April 29, 2006. Accessed May 04, 2017. <http://gmwatch.org/en/latest-listing/1-news-items/6416-mortality-in-sheep-flocks-after-grazing-on-bt-cotton-fields-warangal-district-andhra-pradesh-2942006>.

⁵ Monsanto Company. "Products." Monsanto. 2002-2017. Accessed March 20, 2017. <http://www.monsanto.com/products/pages/monsanto-product-brands.aspx>.

supply. According to data collected in 2009, Monsanto's products make up around forty percent of all crop acreage in the United States.

Monsanto is also the company that is notorious for producing toxic chemicals such as polychlorinated biphenyls (PCBs), Agent Orange, and dioxin. Their seeds even include what is known as Roundup Ready. Multiple agricultural products manufactured by Monsanto such as soybeans, corn, and others are genetically engineered. The products are engineered to be resistant to Roundup herbicide which is also produced by Monsanto. Seed companies are unable to stay in business unless they have the genetically engineered seeds.⁶ In essence, Monsanto controls all of seed production by establishing precedents that have to be followed by all other producers if they want to stay in business.

The behemoth company and its control of the seed industry has been linked with an increase in Indian farmer suicides. In the past twenty years, Monsanto has been accused of contributing to more than 290,000 suicides. Interviews conducted with the relatives of those who have committed suicide display that there is a correlation between the rising suicide rate and the use of genetically modified seeds. Small farmers are at an increased risk. Large companies have funds to help them escape debt. On the other hand, small, local farmers bear the weight of debt on their own. Growing enough crops to earn a living is a difficult task for many. Farmers receive loans based on how much the seeds are expected to produce. If a farmer wants a loan, he has to be using GMO seeds. Genetically modified seeds become their only options. However, the genetically engineered crops have not been known to flourish in all regions of India and the investment becomes risky. A harvest that does not yield much can send a farmer into debt. This debt then weighs on the farmer and often times, farmers become depressed and turn to suicide as their only out. Ironically, it is even common for the farmers to commit suicide by drinking pesticides that are also produced by Monsanto.

The company itself refutes such claims. Monsanto published an official statement to their website entitled "Is Bt or GMO Cotton the Reason for Indian Farmer Suicides."⁷ In the article, they recognize that farming in rural India has its difficulties that can lead to "hopelessness among farmers and an unacceptably frequent occurrence of farmer suicides." To start their defense, Monsanto states that tremendous, in-depth research has been conducted that disproves that GMO crops are a cause of the issue. Instead of taking the blame, the corporation found studies that state that there are a multitude of factors such as government policies, lack of proper irrigation, and faulty cropping patterns among other things that cause Indian farmers to fall into debt. Monsanto uses the article to focus on the successes of their GMO seeds in Indian farming societies. The GMO seeds supposedly have allowed for increased yields and has improved the lives of many Indian farming families.⁸

Despite the statement made by Monsanto, the suicide rate among Indian farmers continues to increase. The issue is even becoming more prevalent in the media. The issue has reached social media platforms such as Twitter. People around the world are reporting the staggering statistic that "Every 30 minutes an Indian farmer commits suicide as a result of

⁶ Pete Dolack. "Monsanto Seeks to Control World's Food." Counterpunch. June 29, 2015. Accessed March 20, 2017. <http://www.counterpunch.org/2013/07/26/monsanto-seeks-to-control-worlds-food/>.

⁷ RT International. "Rising Suicide Rate for Indian Farmers Blamed on GMO Seeds." RT International. November 22, 2014. Accessed March 20, 2017. <https://www.rt.com/news/206787-monsanto-india-farmers-suicides/>.

⁸ Monsanto Company. "Is Bt or GMO Cotton the Reason for Indian Farmer Suicides." Monsanto. 2002-2017. Accessed March 20, 2017. <http://www.monsanto.com/newsviews/pages/india-farmer-suicides.aspx>.

Monsanto's GMO crops."⁹ Documentaries and short videos are being published on YouTube about the issue. Networks such as Seeker Network discuss how the male farmers fall into debt and commit suicide and leave their wives and children without support. To make matters worse, the debt doesn't disappear when the farmer takes his own life. Rather, it is then placed on the wife and the rest of the family to deal with while they are coping with the loss of a loved one.¹⁰ Magazines such as Vanity Fair have even gotten involved in the discussion of Monsanto's injustices. The magazine talked to Gary Rinehart, a member of a small farming community in Eagleville, Missouri. Rinehart was harassed by a Monsanto employee who claimed that he had proof that Rinehart has planted Monsanto seeds in violation of the company. The Missouri resident called Monsanto the "seed police" and even described their actions as those of the "Mafia."¹¹ Not only is there scholarly research to display the horrifying effects of Monsanto especially on Indian farmer suicide rates, but the media is obtaining a voice in the conversation about the injustice.

Critically Thinking and Investigating All Aspects of the Interdisciplinary Issue

Thinking critically about world issues such as the rise of suicide rates among Indian farmers is vital to environmental justice since problems such as these can be tremendously complex to solve. It would be simple to advise these farmers to stop purchasing seeds from Monsanto. However, this solution neglects the intricate reasoning behind the acquisition and the conditions of the exchange. Similarly, individuals prefer to focus on how an event directly affects them. It is human tendency to ignore the greater impacts of their actions. Humans rarely visualize the bigger picture. When it comes to environmental justice, people, especially those of highly industrialized nations, often ignore the environmental impacts of their decisions as long as what they desire remains cheap and readily available. Thinking ecologically requires "Thinking Big" according to eco-critic Timothy Morton. He notes, "The more risk we know about, the more risk spreads."¹² This knowledge then changes how we coexist. Harari acknowledges that if we want to change complex systems, we must persuade strangers to buy into "some shared myths." To change the way things are, it is necessary to believe in an alternative way.¹³

Critical thinking allows us to realize how interrelated humans and the environment truly are. It is imperative that we realize that the environment and people are not independent of one another, but rather an intricately woven together system. Morton touches on this when he makes the analogy, "Space isn't something that happens beyond the ionosphere. We are in space right now."¹⁴ This interconnectedness is vital in moving forward. It allows people to cooperate and work toward solutions for environmental issues. Interdisciplinary approaches to researching the effects of Monsanto on Indian farmer suicide rates brings about critical thought. Specifically, evaluating the situation from economic, psychological, environmental, as well as political lenses allows for a better understanding of the issue's multiplicity. "Farmers, in general, have higher

⁹ ElleMadeWell. "Every 30 Min." Twitter. February 09, 2017. Accessed March 20, 2017. <https://twitter.com/ElleMadeWell/status/829709112380424193>.

¹⁰ SeekerNetwork. "Why Thousands Of Indian Farmers Are Killing Themselves." YouTube. April 30, 2015. Accessed March 20, 2017. <https://www.youtube.com/watch?v=5iacxFmezHM>.

¹¹ Donald L. Barlett and James B. Steele. "Monsanto's Cruel, and Dangerous, Monopolization on American Farming." The Hive. January 31, 2015. Accessed March 20, 2017. <http://www.vanityfair.com/news/2008/05/monsanto200805>.

¹² Timothy Morton. *The Ecological Thought*. Cambridge, MA: Harvard University Press, 2010. 25.

¹³ Yuval N. Harari *Sapiens: A Brief History of Humankind*. New York, NY: HarperCollins, 2015. 118.

¹⁴ Morton. *The Ecological Thought*. 24.

psychological morbidity than general population.”¹⁵ These men deal with the effects of changes in the environment, rigorous physical labor, personal stresses, and inconsistent farming economics all of which can compromise their mental state. As a result, debt is extremely common among Indian farmers. Crop loans are the most common source of debt. Farmers are provided money from banks in hopes that the crops will have great yields and they can pay back the banks.

Unfortunately, under Monsanto’s control, the seeds are sold at a high price, and Monsanto produced fertilizers and pesticides are needed as well. The increased cost of production and decreased market price of cotton have created unimaginable debt for farmers. Cotton farmers do not even have a choice between the Bt and non-Bt seed varieties since the non-Bt seeds are no longer available. The farmers that fall into debt are often humiliated and sadly turn to suicide as an out.¹⁶ Despite evidence connecting Monsanto to the increased suicide rates among farmers in India, the company and other journalists deny that there is any link. They fail to acknowledge the intricacy of the matter. Instead journalist Keith Kloor cites the increase in Indian cotton production and blames the suicides on social and personal issues among the farmers.¹⁷ Only through critical, ecological thought will the connection between Monsanto and increased Indian farmer suicides be grasped.

Understanding the Issue Through an Indian Cultural Context

In order to grasp an understanding of the alarming issue, it is vital to explore the history and circumstances surrounding the introduction of Monsanto’s products in India. Transgenic crops were first introduced in India in 1996. Monsanto developed its genetically modified cotton strain commonly known as Bt cotton which stands for *Bacillus thuringiensis* Cotton. This specific breed is cultivated extensively. It is grown in various locations including India.¹⁸ The nation has the largest cotton acreage in the world with approximately nine million hectares.¹⁹ Since the introduction of genetically modified cotton, the costs of cultivation, pesticides, and other necessities has greatly increased. Crop failures are quite frequent.²⁰ Farmers are unhappy with the insufficient yields that the crops bring. Bt cotton has failed many times. Despite the advertisement by Monsanto, the seeds did not improve yields nor did they decrease the need for pesticides. The modified seeds were smaller, they cost more to purchase, and the lint and staple length of the cotton were less.²¹

In a study commissioned by WWF, the realities of Bt cotton were discovered. The study focused on an area outside the influence of any NGOs in order to prevent bias from affecting the research. Lobbyists from Monsanto claim that Bt cotton is grown on such a wide scale across

¹⁵ Manjk Changoji Bhise, and Prakash Balkrushna Behere. “Risk Factors for Farmer’s Suicides in Central Rural India: Matched Case-control Psychological Autopsy Study.” *Indian Journal Of Psychological Medicine* 38, no. 6. November 2016. *Academic Search Complete*, EBSCOhost. Accessed March 24, 2017. 564.

¹⁶ Mira Shiva. “Rooted Resistance: Indian Farmers Stand Against Monsanto.” *Genewatch* 24, no. 5. August 2011. *Academic Search Complete*, EBSCOhost. Accessed March 24, 2017. 37.

¹⁷ PR. Newswire. “The GMO-Suicide Myth.” *PR Newswire US*, January 17, 2014., *Regional Business News*, EBSCOhost. Accessed March 24, 2017.

¹⁸ Vasant P. Gandhi "The Adoption and Economics of Bt Cotton in India: Preliminary Results from a Study." *Indian Institute of Management*, September 4, 2006, Accessed April 1, 2017. http://www.iimahd.ernet.in/publications/data/2006-09_04_vgandhi.pdf. 3.

¹⁹ Ibid. 4.

²⁰ Ibid. 5.

²¹ Ibid. 7.

India since it brings about reliable benefits such as reduced pesticide usage and an increase in income. The company has released survey findings that display that farmers that grow Bt cotton have net profit increases of sixty percent in comparison to those who grow the non-Bt strain. In contrast, Indian NGOs have published information that shows that farmers who grow Bt cotton invest more, had less yield, and earned less income.²² The information is clearly contradicting.

The Indian government itself is against the use of the genetically altered seeds and is heavily promoting the use of indigenous seeds. Monsanto has lost nearly seventy-five million US dollars in royalties in result of changing seed choice. Sales in India have decreased by fifteen percent which in turn has impacted Monsanto's bottom line. The trend towards indigenous seeds is threatening to the company's power in India.²³

Ethics Involved with Monsanto and Indian Policies

When investigating environmental justice cases, it is common to discover that people who find themselves in poor economic conditions are the individuals suffering from unjust circumstances. Thus, the rise in Indian Farmer suicide rates as a result of Monsanto policies is quite illustrative of a larger world issue. Unfortunately, it is not unusual for large companies to take advantage of developing communities in their pursuit of controlling the market. In the case of Monsanto, the company is willing to violate the human rights of farming families in India in order to monopolize the seed and food industries. The source of the problem in India is the imagined order that is associated with money.²⁴ The desire for wealth and prosperity surpasses the protection of humanity and the environment. All other factors are disregarded in order to make the highest profits imaginable.

Originally, India was against the implementation of genetically modified seeds in their nation. As of recently, there were only a select few GM crops that were legal to produce in India. The history of genetically engineered crops dates back to the 1960s and 1970s when new crop varieties that allowed for greater yields and that were responsive to nutrients were introduced to the area. At first, the new crops aided in relieving some of the food shortages and widespread famine across India and other parts of Asia. Despite the rapidly changing crop genetics, Indian policy making was not nearly as quick. The country struggled to put proper regulations in place to deal with the introduction of GM crops. New crops such as GM mustard and Bt Cotton were authorized to be grown in the nation. Although the production of GM mustard ended rather quickly, Bt Cotton has continued to be grown legally since 2002.²⁵

In India, there are approximately twelve multinational firms and a few private domestic companies that have a vested interest and have invested in agricultural biotechnology in India. Under the Indian government there is the Department of Biotechnology which developed from The National Biotechnology Board in 1986. Even though a number of companies employ traditional biotechnology, there are only a couple that are exploring transgenic crops. The Indian Environment Protection Act of 1986 controls the regulations of GM crops. However, other agencies such as the Ministry of Environment and Forests and the Department of Biotechnology

²² GMWatch. "New Study Exposes Monsanto's Bt Cotton Hype." GM Watch. June 2, 2006. Accessed April 03, 2017. <http://gmwatch.org/index.php/news/archive/2006/5321-new-study-exposes-monsantos-bt-cotton-hype-262006>.

²³ Spasique. "Monsanto Has Lost \$11 Million As Indian Cotton Farmers Begin To Use Indigenous Seed." Spasique. March 22, 2017. Accessed April 03, 2017. <http://spasique.com/monsanto-has-lost-11-million-as-indian-cotton-farmers-begin/>.

²⁴ Yuval N. Harari *Sapiens: A Brief History of Humankind*. 187.

²⁵ Bhagirath Choudhary. et al. "Regulatory options for genetically modified crops in India." *Plant Biotechnology Journal* 12, no. 2. February 2014. 135-146. *MEDLINE*, EBSCOhost. Accessed April 10, 2017.

are also involved in the approval of genetically modified crops for commercialization.²⁶ Although Bt Cotton was introduced by Monsanto and an Indian sector called MAHYCO²⁷, it was not until 2002 that the crop was approved for legal commercial sale as a result of the elaborate authorization by multiple agencies that must take place.²⁸

India's stance on genetically modified crops has changed over the years. The country originally opposed GMO crops, but has recently changed its views despite the growing issues associated with the biotechnology. India's government has allowed for Monsanto to work within their borders in spite of the evident suffering and increased suicide rates among Indian farmers that are pressured into buying the giant company's products. With the election of the new Prime Minister Narendra Modi, the country has changed its GM policies as well. The testing of transgenic crops such as rice, cotton, maize, and others is now being allowed. Although the government and big business argue that India must resort to GM seeds to improve its productivity and increase its yields to feed its rapidly growing population, local farmers are concerned that the GM takeover will ruin their livelihoods. There are over 100 million farmers in India. They are extremely alarmed that the reliance on expensive, constantly changing seed technologies owned by seed giants such as Monsanto will cause major issues.²⁹ Clearly, their concerns are rooted in the already increased debt and suicide rates among their farming community.

Effectively Communicating the Issue and Looking for a Solution

India has recently pushed back against the unjust monopoly of Monsanto. Farmers have decided to turn away from Monsanto after they escape contractual binds. The farmers are taking back control of what they are growing and how they go about growing these crops. The Indian government is actively encouraging farmers to use local seeds rather than the GM seeds produced by Monsanto. In India, the crop yields have proven to be just as high as the GM products, yet the local seeds only cost half as much. Although Monsanto has promised high yields based upon lab studies, the implementation of the seeds in India have not proven to be as successful. As a result of the push back against the ineffective GM seeds, Monsanto has been losing its control of the market in India.³⁰ According to Kalyan Goswami, the executive director of the National Seed Association of India, the company's Bt Cotton sales have decreased by fifteen percent within the first eight months of 2016.

The Indian government has even established price caps and royalties to curb the power of the seed giant that is Monsanto. Not only have the corporation's seed sales decreased, but their control over the cotton acreage has also declined. Monsanto lost approximately ten percent of its cotton acreage as farmers have decided to switch crops to return the nutrients to the land. Unlike the Bt Cotton seeds, the indigenous seeds can be stored and replants the next year which also saves local farmers money. If the local seeds can produce the same yields as the GM seeds, it will greatly change the seed market in India.

²⁶ Dr. Anitha Ramanna. "India's Policy on Genetically Modified Crops." *Asia Research Centre Working Paper 15*, 2006. Accessed April 10, 2017. <http://eprints.lse.ac.uk/25194/1/ARCWorkingPapers15AnithaRAMANNA2006.pdf>. 3.

²⁷ Ibid. 4.

²⁸ Ibid. 5.

²⁹ Sanjay Kumar. "India Eases Stance on GM Crop Trials." *Nature News*. May 12, 2015. Accessed April 10, 2017. <http://www.nature.com/news/india-eases-stance-on-gm-crop-trials-1.17529>.

³⁰ Heidi Chow. "The Story behind Monsanto's Malicious Monopolies in India." *Global Justice Now*. September 29, 2016. Accessed May 03, 2017. <http://www.globaljustice.org.uk/blog/2016/sep/29/story-behind-monsantos-malicious-monopolies-india>.

Despite the pushback from the Indian government and local farmers, Monsanto still controls ninety percent of the seed market as of May of 2016. The threats of bollworm and whitefly infestations have positively affected the progress of the movement away from GM seeds. Cotton farmers were able to choose between planting indigenous seeds and pay for insecticides and fertilizers or yet again planting GM seeds that were not suited to defend against these insects. The switch to local seeds allowed farmers to continue to grow crops and gain profits from the harvest³¹. If they continued to use the Bt Cotton, it is quite plausible that the farmers would fall into debt as a result of failed seeds.

Conclusion and Moving Forward

Within this case study, I have investigated the issue of rising Indian farmer suicide rates as a result of Monsanto's GM seed control from an interdisciplinary perspective. All of which point towards the conclusion that the neoliberal capitalistic monopoly created by Monsanto has had a tremendous effect on Indian farming communities. As viewed from economic, psychological, environmental, political, and historical viewpoints, Indian farmers are clearly being marginalized and dehumanized in the competitive seed industry. Through scholarly articles, news articles, social media posts, and documentaries, it is evident that the livelihood of Indian farmers is being neglected as Monsanto prioritizes profits over humanity. The nation is just being to comprehend the injustice its peoples are facing regarding the seed industry. India has only just begun its fight against the powerful company that is Monsanto. The Indian government is finally addressing how the agricultural industry ought to work rather than allowing the injustice to continue.

Issues that fall within the category of environmental justice typically display a group of people that are disregarded in order to gain the highest profits imaginable for a larger company. The case in India is exactly that. The rise in Indian farmer suicides as a result of Monsanto's seed monopoly displays the problems associated with globalized monopolies as a result of a free market economy. Monsanto's willingness to overtake the already low income farming communities of India illustrates the corporation's disregard for human rights when seeking new markets for their products. The issue itself yields a critical view of the system of capitalism. Monsanto would not be able to obtain such global control of the seed industry if the market was more regulated. A free market may benefit large companies such as Monsanto, yet it neglects the well-being of the individuals they are taking advantage of in order to succeed. Indian governmental policies must regulate big business more effectively if the nation wants to ensure the welfare of its farmers. As the Polish proverb says, "If the farmer is poor then so is the whole country."

³¹ Mayank Bhardwaj. and Rajendra Jadhav. "Indian Farmers Cotton on to New Seed, in Blow to Monsanto." Reuters. August 02, 2016. Accessed May 03, 2017. <http://www.reuters.com/article/us-india-monsanto-idUSKCN10E05C>.

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