

# How Will the Monsanto-Bayer Merger Affect Our Future?

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**Abstract**—This paper will highlight the most pressing issues in food ethics that we face globally. Using the recent Bayer-Monsanto merger as a case study we will identify the tools that ethics might helpfully bring to the table. We will explore the concept of “food justice” and how it can contribute to policy discussions and how it relates to the merger. When we investigate the sources of food or the food manufacturing methods we enter the philosophical world of “food ethics” in our understanding of the various issues. We will look ahead to the time when the merger is completed and discuss the potential dilemmas that will arise.

**Index Terms**—Bayer, Monsanto, food ethics, food justice, merger.

## I. INTRODUCTION

According to numerous European media reported, Environmental group Friends of the Earth staged a protest outside the European Commission headquarters in Brussels on March 30 in 2017. The protesters were against the merging plans of German drug and crop chemical maker Bayer and U.S. seeds company Monsanto [1].

The activists called the merger a ‘marriage made in hell,’ with two people dressed up as bride and groom to symbolize the union. Others held up signs that read ‘Hands off our food’ and ‘Break them Up.’

Bayer has not yet officially started its acquisition of Monsanto but the activists said that the two companies are expected to seek formal authorization to merge from EU antitrust authorities in the near future. They warned against the deal, saying it would create an “unacceptable monopoly” and give the merged companies an “even tighter toxic grip” on the food and agriculture industry.

The activists said the merger would lead to only three companies “controlling around 70 percent of the world’s agro-chemicals and more than 60 percent of commercial seeds.”

EU regulators recently cleared the Dow Chemical-DuPont merger.

Bayer and Monsanto have started divesting their assets earlier this month, totaling to \$2.5 billion. Bayer is expected to sell off parts of its seed business to increase chances of regulatory clearance for the potential merger, worth \$66 billion [2].

The EU Commission will likely hold an in-depth investigation before it decides on the deal. Bayer said it is confident the transaction will occur at the end of the year. According American media reported, President Donald

Trump had already gotten involved in one of the world’s biggest mergers [3].

Excluding the economical action and agricultural industry affect, we will discuss the case of Bayer-Monsanto merger how to harm the food ethic in this paper.

Food ethics is a response to the way we produce and consume food products. We all regularly make ethical decisions about food and the recent merger of Bayer-Monsanto is therefore of great interest to the public at large and those invested in the cause of food safety and sustainability.

In the first part of this paper we will consider the psychology and character of the two corporate leviathans. We will tackle the critical issues of “food justice” or “food ethics” surrounding the merger with regards to GM foods, the use of herbicides and pesticides, the consequential effects of the merger on farmers and farming practices. We will relate all of these to our shared expectations for responsible ethical business practices.

In the second part, we will look at evidence of past ethical malpractices in the two companies. We will consider the implications this evidence and relate the findings to how changing societies and human interactions will impact food production and consumption. We will also consider how a lack of ethical understanding may influence our environment. Using the recent merger of the Bayer-Monsanto Corporation as a case study we will explore how the creation of a global giant in agricultural technology and food production will raise issues and challenges for the future of “food ethics”.

In the conclusion we will juxtapose our current understanding of food ethics with the potential harm that the merger of Bayer-Monsanto may produce. We will consider how a complete understanding and application of food ethics can provide the framework for future food production. We will propose a constructive balance between the legitimate right and financial motivation of industry and the counter weight of social responsibility and the health of consumers.

## II. THE CHARACTERS OF MONSANTO AND BAYER

Before introducing the case for and against Monsanto-Bayer merger, it is important to understand their psychology and character.

Monsanto is a sustainable agriculture company. They claim to deliver agricultural products that support farmers all around the world. They do this with seed brands in crops like corn, cotton, oilseeds and fruits and vegetables. Monsanto also produces technologies for farmers in order to maximize efficiency and productivity. It makes their products available to farmers throughout the world by broadly licensing their seed and advanced technologies to industries directly affecting people’s livelihoods as well as other companies. In

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addition to their seeds business, they also manufacture Roundup and other herbicides used by farmers, consumers and lawn-and-garden professionals.

In the case of Monsanto it is clear that, while being a behemoth, it does not currently have a monopoly. There are four other large biotech companies that are competing for market share in the United States. Together they control 80% of the corn and 70% of the soybean markets. They also control 50% of the world seed supply. The company's mission statement is clear in that their business model is to provide seeds to the world market. Research and development in the biotech industry carries with it massive financial costs and products can take many years of laboratory trials before being allowed onto the market.

Monsanto is clear on its policies and, as in any system; the consumer is under no obligation to purchase Monsanto products. With regards to the replanting of seeds, for example, the consumer is made fully aware of Monsanto's terms and conditions before purchasing.

With more than 150 years' experience and nearly 120,000 employees, the German giant company Bayer is the world's largest life sciences company. Monsanto focuses their effects on American and Asia, while Bayer also having presence in the booming Asian market invests over 20% of their entire global research and development budget towards European projects. Whether it is new herbicides, fungicides or insecticides to control pests, weeds and diseases, farmers are increasingly becoming dependent on the products that Bayer brings to the market. Bayer claims to ensure these new technologies balance the demands of productivity with environmental sustainability. In contrast to Monsanto, Bayer also supports the education and training of farmers, for example, Bayer is going to place even greater emphasis on "digital farming" in the future, by providing detailed, comprehensive information on growing conditions that will help farmers to optimize their use of resources [4].

### III. MONSANTO AND BAYER- EVIDENCE OF FAILURE IN THE PRACTICES OF FOOD ETHICS

During the booming growth of the bio-tech industry there have been studies written and documentaries made that have placed their activities under the spotlight. In 2008 the filmmaker Madam Marie-Monique Robin directed her epic documentary "The World According to Monsanto". The film based on her three year investigation into Monsanto's corporate practices explores the many controversies surrounding issues such as the use of bovine growth hormone, GM seeds and the use of Agent Orange.

"The World According to Monsanto" makes the case, that the for-profit corporation is demonstrably harming mankind's sustainability, safety, health, survival and development [5]. It is clear to see how the investigation and specifically the production of documentaries such as "The World According to Monsanto" and Mark Achbar's "The Corporation" popularize the issues of food ethics. In addition to Robin's work, there is a plethora of information reported from various media outlets that we can filter and select from in order to analyze and respond to issues that the merger will present.

When we discuss the issues related to the merger and food ethics the subject of genetic modification (GM) is deservedly at the forefront and questions of why we need GM foods and how they may influence health rise to the surface. Both Bayer and Monsanto, two of the biggest proponents of GM products claim that increased food production and lowered production costs can provide great benefit to the food industry and consumers. The majority of us eat GM food directly or indirectly every day. Many people feel that the critical and independent examination of GM foods and the issues that surround them is essential and that we must wield a comprehensive understanding of both scientific and ethical implications before GM products are stacked on store shelves.

Although, some independent researchers have attempted to prove causation between GM foods and negative health effects, there is currently a lack of consensus in the scientific community and food market. Until a link is demonstrated and shown in advance laboratory testing, there will be some degree of uncertainty for the consumer. It is now we must strive to ensure the safety of GM foods as they proliferate into our daily eating habits and onto our dinner table. With the Bayer-Monsanto merger it can be argued that the increase in size and power means that any opposition to issues like GM products will have to fight twice as hard against a company with double the resources and powers. Litigation brought against Bayer-Monsanto will face greater pressures and challenges than they would against a small company, from a greater number of lawyers, industry executives and political backers.

Another contentious issue is the patenting of seeds and seed technologies. In the case of Monsanto the agricultural giant has sued hundreds of small farmers in the United States in recent years in an attempt to protect its patent rights on genetically engineered seeds that it produces and sells. In a highly publicized case, 75-year-old farmer Vernon Bowman was prosecuted by Monsanto for buying soybeans from a grain elevator near his farm in Indiana and using them to plant a late-season second crop. He then used some of the resulting seeds to replant crops in subsequent years. Because he bought them from a third party which put no restrictions on their use, Bowman had argued he was legally able to plant and replant them and that Monsanto's patent on the seeds' genes did not apply. Monsanto, which won its case against Bowman in lower courts, vociferously disagreed. It argued that it needed its patents in order to protect its business interests and provide a motivation for spending millions of dollars on research and development of hardier, disease-resistant seeds that can boost food yields.

From the point of view of food ethics, the case demonstrates that even a giant multinational will go to great lengths to protect its patents and business interests even against, as in this case, an elderly farmer. Facing an army of lawyers David has an impossible fight against the Goliath of Monsanto. Here we must ask ourselves what chance David can stand against the presence of two giants in the form of the Monsanto-Bayer merger.

With regards to its agricultural practices, Monsanto's policies inevitably lead to the uniformity of natural variations

in crops and seeds [6]. It is argued that without variation Monsanto stifles the natural processes of traditional agricultural methods. As with all organisms, human and animals included, a larger gene pool creates an optimum environment for life to flourish. This example illustrates that Monsanto's objectives override the concern of small agricultural producers. We are then confronted by ethical issues for those working the land and for the future of the land itself [7].

Monsanto understood early on the best way to stave off bad publicity was to suppress independent research. Until recently, when negotiating an agreement with major universities, the company had severely restricted access to its seeds by requiring researchers to apply for a license and get approval from the company about any proposed research. The documentary "Scientists under Attack: Genetic Engineering in the Magnetic Field of Money [8]" noted that nearly 95 percent of genetic engineering research is paid for and controlled by corporations like Monsanto.

The use of herbicides and pesticides in crop production is another area we can point to, to demonstrate how a lack of ethics has had a long term negative effect on our environment and animals habitats. Studies have shown that the impact of soil and water pollution can harm both flora and fauna. As global citizens it is our duty to ensure that the environment can both sustain itself and us in the crops it provides.

It is clear that over the past decade, Monsanto works very hard to increase sustainability of seed production [9] but Monsanto has also become a pop cultural bogeyman, the face of corporate evil. Monsanto's deadly legacy includes the production of Agent Orange and DDT from which 500,000 Agent Orange Babies were physically handicapped and grown with disabilities and mental impairment came from the hurt from the production. Massive aerial spraying of Roundup in Colombia is being used by the US and the Colombian government as a counter-insurgency tactic, contaminating food crops and poisoning villagers.

We also can find clear evidence of malpractice in the annals of the Bayer Corporation. One of the earliest and more significant events to have hit the company came in January of 1993. A product designed by Bayer to encourage blood clotting in hemophiliacs was found to have been contaminated with the HIV virus. This resulted in an estimated ten thousand patients contracting the virus and while Bayer claimed limited liability paid tens of millions of dollars in reparations.

Fast forwarding to the present day, the company is now under attack for its pesticide products. German government researchers have concluded that a bestselling Bayer pesticide is responsible for the recent massive die-off of honeybees across the country's Baden-Württemberg region. In response, the government has banned an entire family of pesticides, fueling accusations that pesticides may be responsible for the current worldwide epidemic of honeybee die-offs. Bayer has stood by the claim that there is no link between the die-off and their herbicide products.

Independent scientists in Europe however have discovered that Bayer's chemical is a high risk to bees. In 2008, The German organization, Coalition against Bayer, brought legal action against Werner Wenning, chairman of Bayer, by filing a charge against him with the public prosecutor in Freiburg.

The group accuses Bayer Crop Science of "marketing dangerous pesticides and thereby accepting the mass death of bees all over the world."

#### IV. CONCLUSION: ON THE EFFECTS OF THE BAYER-MONSANTO MERGER

Finally, using the recent merger of the Bayer-Monsanto Corporation, we will explore how the creation of a global giant in agricultural technology and food production will raise issues and challenges for the future of "food ethics". As we have seen, many critiques of the global food system argue that the problems associated with it are due to its industrial and global character [10]. It is difficult to go against the trend of global system toward trusts.

The proposed merger between Bayer and Monsanto will result in one company controlling around 30 percent of the global commercial seed market and almost 20 percent of the global pesticide and herbicide market [11]. The merger will create the world's largest seed and farming chemical company with a strong presence spread across the world. According to Bayer, combining research and development as well as product lines will make the two companies worth more together than separately. They will combine different regional strengths: Monsanto is big in the US, while Bayer has a larger presence in Europe and Asia. Both companies claim that the world needs more productive agriculture to meet the food needs of a growing world population. They mutually strive to fill the void in supply while at the same time creating high quality crops that survive from seed to fruition on the dining table.

After looking at the evidence of the failure in food ethics in the last section, it is reasonable to question the ability of the Bayer-Monsanto merger to fulfill its ethical responsibilities in the future. The consolidation of two big industry players into one of the world's largest agrochemical firms may have unethical implications. The amalgamation of two competitors will inevitably limit a farmer's choice and bargaining power. Furthermore, we can predict that the merger will make it much harder for smaller companies to thrive in agriculture with their new innovations or products. Smaller competitors will see themselves locked out as Bayer-Monsanto integrates products that require farmers to purchase whole packages.

Currently, the U.S. Federal Trade Commission is investigating under antitrust regulation. Supported by Farmers in Iowa, senators have called a hearing to scrutinize the consolidation as the worry grows that seed and chemical costs are rising as farm incomes have plunged. It is not only the producers that are anxious but also the consumers who may encounter higher prices on the grocery aisles because of the passing on higher seed costs.

Once a GM organism is released into the environment it can never be recalled and once the Bayer-Monsanto merger is signed there will be no turning back. As Aladdin naively tried to return the Genie to his lamp, it may be just as foolhardy to expect that the situation can ever be reversed.

It is therefore imperative that we shoulder the responsibility and put into practice our own ethical principles while at same time holding the corporations to account. Our future depends

on it!

#### REFERENCES

- [1] NTD. TV. (2017). Environmental activists protest against Bayer-Monsanto merge in Brussels. [Online]. Available: <http://mb.ntd.tv/2017/03/30/environmental-activists-protest-against-bayer-monsanto-merge-in-brussels/>
- [2] AGPRO. (2017). Bayer, Monsanto Start \$2.5 Billion Asset Sale to get Merger Clearance. [Online]. Available: <http://mb.ntd.tv/2017/03/30/environmental-activists-protest-against-bayer-monsanto-merge-in-brussels/>
- [3] Trump could approve a giant merger that's scaring American farmers. [Online]. Available: <http://www.businessinsider.com/bayer-monsanto-merger-trump-farmers-worried-2017-2>
- [4] Bayer. (2016). Bayer an international leader in its sector in climate protection. [Online]. Available: <http://www.news.bayer.de/baynews/baynews.nsf/ID/Bayer-an-international-leader-in-its-sector-in-climate-protection>
- [5] M.-M. Robin, *The world according to Monsanto, pollution, corruption, and the control of the world's food supply*. 2010, New York: New Press. ch. 4.
- [6] Monsanto. n.d. [2] Water Efficient Maize for Africa (WEMA). [Online]. Available: <http://www.monsanto.com/improvingagriculture/pages/default.aspx>
- [7] A. Satariano and L. Bjerga. (2016). The weather-predicting tool behind \$62 billion Monsanto bid. [Online].

- Available:<https://www.bloomberg.com/news/articles/2016-06-09/big-data-technology-is-boosting-farmers-productivity>
- [8] Scientists Under Attack - Genetic Engineering in the Magnetic Field of Money. [Online]. Available: <https://vimeo.com/136415800>
  - [9] Seedworld. (2016). Hydrobio and Monsanto work to increase sustainability of seed production. [Online]. Available: <http://seedworld.com/hydrobio-and-monsanto-work-to-increase-sustainability-of-seed-production/>
  - [10] R. L. Sandler. *Food Ethics: The Basics*. New York: Routledge, 2015, p. 41.
  - [11] ACbio. *The BAYER-MONSANTO merger: Implications for South Africa's agricultural future and its smallholder farmers*. South Africa, Green Revolution/ Agribusiness in Africa, Seed Sovereignty, 2017, pp. 24.



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