

# Monsanto and Genetically-Modified Seeds

*Draft 11/7/99 by Michael Hertz, Luna Magpili and Rob Smith under the supervision of Michael E. Gorman and Patricia H. Werhane*

## **Monsanto: Where Do We Go From Here? [A]**

John Hanley, CEO of Monsanto, was faced with a tough decision. It was 1977 and times were rough for the nation's fourth largest Chemical Company<sup>1</sup>. The OPEC nations were artificially restricting the amount of oil coming into the United States, thus raising the price per barrel of crude oil. Petroleum is the base product for most of the products that Monsanto, and all other chemical companies, make and market to consumers. The increase in the cost of oil was not something that could easily be passed on to consumers because of economic issues like price elasticity.

This current situation caused Hanley a lot of problems because there was no end in sight. If the OPEC nations continued their stance then the Monsanto's Chemical business was through. Hanley had been long aware of the low margins in the Chemical business. When times were good, they were very good, but when times were bad, they were very bad.

Hanley was also cognizant that even when times were good the Chemical business was an economic and political minefield. Just a small misstep in some aspect of the company's core business could create a situation that could bankrupt Monsanto. Monsanto was already in the midst of a heated debate with the EPA for one of its chemical products. Monsanto was seeking approval for a plastic soft drink bottle made of styrene-acrylonitrile copolymer. Monsanto had hoped that its Cycle-Safe bottle would make it the leader in a market expected to reach 4 billion units by 1982; and by 1976, the company was selling the bottle in 12 states. Then the Food & Drug Administration banned the container, claiming that unpolymerized acrylonitrile remaining in the plastic might cause cancer and birth defects. In 1977, Monsanto wrote off \$20 million in losses due to this ruling and some people speculated that the total bill for this failed venture could reach \$100 million.<sup>2</sup> Hanley felt that the long term success of Monsanto should be dependant upon something other than the chemical business.

## **Monsanto**

John Francis Queeny founded the Missouri-based Monsanto Corporation in 1901 when he brought the technology of manufacturing saccharin from Germany to the United States. In addition to developing that product, Monsanto became the largest producer of aspirin in the US. By the 1920's the company had spread into manufacturing sulfuric acid and other basic industrial chemicals. In 1923, Monsanto began its first overseas

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<sup>1</sup> Business Week September 11, 1978, Industrial Edition

<sup>2</sup> Business Week January 29, 1979, Industrial Edition

ventures. Since transportation to China was difficult and sugar was heavy, the lighter artificial sweetener saccharin became such a huge export success that by 1976, one third of all earnings were coming from this overseas investment.

During the thirties and forties Monsanto continued its growth both through the success of their products and by purchasing companies already established in the particular fields that they wished to expand to. In the ten year period starting in 1930 Monsanto purchased or merged with Southern Cross chemical company in Australia, Greasser, Mallinckrodt, Swann Corporation, Thomas & Hochwalt Laboratories of Dayton, Ohio, Purchase of Fiberloid Corp. and 50 percent of Shawinigan Resins (100 percent in 1963). By the 1940's Monsanto was a leading manufacturer of plastics, synthetic fibers and synthetic rubber used by the allies in World War II. And since then, became known as one of the top ten US chemical companies in the decades that followed.

In the late 1960s, Monsanto began to diversify into various products such as synthetic fibers, plating, resins, and even mining. In the 1970's Monsanto was into textile, industrial chemicals, fibers.

Monsanto started to venture into agriculture in the mid-1950s with the production of fertilizers. It wasn't until the era of Roundup and Lasso herbicides, first introduced in 1969, that the company's agricultural division thrived. Monsanto introduced Roundup herbicide to the world markets in 1974 and it soon became the company's most bankable manufactured good. It was not known by exactly what mechanism Roundup functioned; all that was known was that it was arguably the best product on the market. (See **Appendix 3** for Roundup Sales) Aside for being a very potent herbicide, it was also known to break down quickly in the soil and not leach into the water supply. These benefits made it an extremely popular consumer product. All in all, agriculture was very profitable, and Roundup's success meant Monsanto could afford research into new technologies.

Hanley was the type of CEO that was very interested in the research of his scientists. He regularly spoke with Monsanto's PhDs researching new technologies. It was here that he met Ernest Jaworski, a Ph.D. under the Science Fellow Program. Jaworski was studying how chemicals, specifically Roundup, were non-toxic to animals, and still extremely lethal to plants. His research goal at that time was to identify the mode of action of glyphosate, the primary ingredient of Roundup. But his passion was in biotechnology. To Jaworski, the next agricultural revolution would go beyond chemical approaches. He envisioned a plant able to protect itself not through herbicides and pesticides or any external factor, but through its own genetic configuration.

As Hanley understood it, Jaworski was researching methodologies to "engineer" new crops with specific traits. These traits could be pest and herbicide resistance, longer shelf life, higher yield per acre and just about anything else. Hanley believed that Genetic Engineering could be the future for Monsanto.

Hanley also knew that the field of Genetic Engineering and Research was as much a minefield as the chemical business. During 1973, national attention had been

focused on the issue because of the actions of Paul Berg of Stanford. He had planned to put the “Simian Virus 40 (SV40), which causes tumors in Monkeys, into E. coli, a bacteria that abounds in the human gut and is widely used for research.”<sup>3</sup> This research led to some towns banning GE research within their limits. It also led to National voluntary guidelines set down by the National Institute of Health (NIH). Hanley knew that a Monsanto mistake in Genetic Research might not only bankrupt the company, it might cause widespread disease or worse, death.

Hanley did not feel that the Chemical business was the best option for the long term future success of Monsanto. He felt that Genetic Engineering was an exciting and possibly profitable venture, but he did not just want to trade one set of problems for another. He needed a solution because the annual Board of Directors meeting was only a few weeks away.

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<sup>3</sup> Normal Accidents, Charles Perrow, 1999 pg 297