

# Genetically modified food and monsanto

[Food & Diet](#), [Genetically Modified Food](#)



**Monsanto Case Study** Monsanto is a multinational world leader in the production of the herbicide glyphosate and in the manipulation of genetically modified (GM) seeds. They were a chemical company, which shifted into the new life science area developing numerous patents related to genetic techniques and GM seeds variety. The company entered in the agrobiochemical industry, which is in its growth life cycle based on continuous product improvements and replacement by superior traits.

The industry is focused on chemical products used in agriculture and genetically modified crops. There are rivals in the agrobiochemical industry and during the early 2000s; government regulation, public and medical concern about the safety of genetically modified (GM) foods affected its sales and profits. Analysis of the external environment: Economic segment The lack of food experienced by countries and the consequent increase of their costs given the opportunity to private and public companies to invest in appropriate researches in biotechnology to mitigate food security problems and improve food quality. Mergers and acquisitions among agrobiochemical multinationals have been developed in order to improve technologies and promote researches. Global segment The globalization of market provided opportunities for private industry to expand their sales in other countries. The major market for agrobiochemical products is USA and Europe.

Developing countries such as Brazil, and India have started to increase their production acreage and to invest in biotechnological products. Political/legal segment Intellectual properties and patents laws are important issues in the agrobiochemical industry; they consent to control all products and process. Many of the agrochemical products and genetically modified foods are

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influenced by policy environment and government regulations, as the Food and Drug Administration (FDA) and the European Union (EU). These limitations could provide a market opportunity for more advanced or higher value replacement products.

**Socio-cultural segment** Strong negative perception of consumer about safety of GM foods threatens the new technologies applied in agrochemical industries especially in Europe and USA. However there is a lack of appropriate research and tests on it. **Demographic segment** High technically specialized farmers and farming communities producing cotton, soybean and canola. **Technological segment** Private companies more than public companies developed new complex technologies in the area of genetic. These affected highly the traditional methods of farmers work.

For firms with good innovation capabilities this represents an opportunity to target different niche market. **Conclusion** New developing countries such as Brazil and India offer big opportunity for the industry. The research and development of new biotechnologies applied to the agriculture created many new lucrative possibilities to enterprises however, a negative consumer perception on GM foods, started to threat the industry profits. **Analysis of Industry Environment** In the agrobiochemical industry, research and development are the main capabilities that produce a competitive advantage.

This advantage is difficult to understand and to imitate. Patent laws and intellectual property enable also firms to maintain and extend their leadership. **Barriers to entry for new competitors** New entrants that want to

compete on the fertilizers and GM crops market must have strong financial resources to invest in order to face companies such as Monsanto. New competitors require intellectual property right and patent licenses to market their product. They can choose to obtain them through leader companies, although these are very selective and often base their decisions on economies of scale. Biotechnological products also need governmental approval to enter the market.

Generally in the agrobiochemical industry there are low switching costs among products however leaders such as Monsanto tend to “lock in” their customers with licensing fees and agreements. There are high entry barriers and this constitutes a low threat for the existing companies in the industry. Bargaining power of suppliers In the industry the supplier’s goods are critical to buyer marketplace success. There are few major suppliers. Some of them, including Monsanto, have vertically integrated companies for the production of seed and for supply raw materials. It increased their power market. The fact that there are few major suppliers permits them to have a high bargaining power.

It constitute a high threat Bargaining power of buyers Highly specialized farmers are the predominant buyers in this industry. They have a greater amount of information about the manufacturer’s products and costs through the Internet. They have a high bargaining power especially in the pesticide sector where switching costs are low. They constitute a high threat. One reason farmers decrease their power, though, is often the agreements signed with the companies that supplies their products.

Threat of substitute products Due the high costs of technology, patents and government regulations there are no competitive substitute in the market. The only substitutes are the traditional pesticides and crops, which are still on the market with a percentage of 53%. They could constitute a high threat if patent and intellectual properties are banned. Rivalry among existing competitors Government regulation and patents laws have a major role in this market. The high cost involved with research and development increased the rivalry among competitors for market share. High exit barriers also increase rivalry.

An exiting barrier experienced by the firms is the high fixed cost of technology agreements. The degree of vertical integration in which the firm is involved consists a barrier as well. Conclusion: In the agrobiological industry buyers and suppliers have high bargaining power and there are no good products substitutes. The industry is unattractive particularly because patents laws and government requirements increased the monopolies of few companies and the rivalry for market share. The industry also requires high financial resources.

Competitor analysis The main competitors in the industry are Monsanto, DuPont, Novartis and American Home Products. Monsanto is the leader in biotechnology on the marketplace. Due their intellectual properties and R&D capabilities Monsanto had the opportunity to gain market share and power. The benefit of being a first mover permitted them to gain the loyalty of the customer.

Monsanto's strategic action often undertaken to maintain competitive advantage is decrease costs of the products due their high margin profits. DuPont is a large company that produces a Monsanto's product imitation. They however depends on Monsanto's licenses to access traits. Novartis is pointed out as one of the potential rival of Monsanto and DuPont. It is a company with but has the highest capital-spending budget for research in biotechnology. Due their financial resources Novartis are more likely to launch competitive action when Monsanto's license will expire.

AHP introduced an alternative to Monsanto main product. Strongly focused on market research they posed a significant threat to Monsanto. They invested in marketing survey and developed a quality product that better satisfy the needs of the consumers. Conclusion: In the agrochemical industry the competitive rivalry among the firms is strong due the high cost involved in R&D and the slow growth of the market caused by licenses and intellectual properties. Monsanto supports its first mover position in the marked licensing patents to others firms. However companies such as AHP started to threaten them through competitive actions.

Internal analysis of Monsanto Resources: Tangible Intangible Financial resources: Monsanto has the ability to generate internal funds: ·They generate high profits especially from Roundup's sales and GM crops. Investment and acquisitions ·Compliance activities Human Resources: ·Managerial capacity especially in developing consolidation strategies·Long term vision·Communication skill across all level of the organisation in order to retain talent and maximize human synergies. Physical resources:

·Monsanto create extensive backward integration to access easily to raw materials ·Plant and equipments for bioengineering researches  
 Innovation Resources:·High scientific capabilities ·Ability to innovate Technological resources: ·They signed license patent agreements with competitors and customers. Patents and trademarks·Training system Reputational Resources:·Good national and international reputation with customers·Brand name linked to R&D·Marketing ·Long-term relation with suppliers. ·Good relation with governmental entities such as FDA·Goodwill Organisational resources:·Distribution channels To create a sustainable competitive advantage Monsanto must focus on their capability and explore those which are rare, valuable, costly to imitate and non substitutable.

Valuable capabilities·Capability to strengthen long-term relation with suppliers and customers·Capability to develop new technologies in bio-engineering and plant genetic ·Ability to protect their intellectual property·Distribution channel and service activities Rare to imitate·Capacity to create human synergies especially after acquisition and merger strategies·Capability to develop new technologies·Ability to protect their intellectual property Costly to imitate ·Capability to strengthen long-term relation with suppliers and customers·Capability to develop new technologies·Ability to protect their intellectual property·Distribution channel and service activities No substitutable·Capability to strengthen long-term relation with suppliers and customers·Capability to develop new technologies·Ability to protect their intellectual property·Distribution channel and service activities Conclusion: The ability of Monsanto to innovate due their strong research and development program and the ability to protect

their intellectual property gave them a competitive advantage on the market. Research and Development (R&D) and intellectual properties are core competencies that are impossible to imitate in short and medium term. They are rare, because Monsanto possess them, and valuable. Based on an analysis of the value chain however it is possible to underline that Monsanto has effective marketing and service activities, which permit to maintain a strong connection with the customers.

These capabilities, if better explored could become a core competence in the future.

SWOT Analysis

Strength

- Capability to produce high competitive products
- Strong Research and Development base and quality Human Resources
- Good customer services
- Agreements
- Economies of scale due to acquisitions
- Intellectual Proprieties
- Patents
- Strong presence in international market and recognition as market leader
- Good network with universities and laboratories
- Alliance and join ventures

Weakness

- Missing links between communication and research
- Lack of market research
- Lack of flexibility due at vertical integration
- Dependence on government regulation and patents laws

Opportunity

- Expanding to new geographic areas such as India and Brazil
- Vertical integrations
- Merge or Acquisition of rivals
- Opening to explore new technologies due on their well developed R&D
- Patents expiration
- New products on the markets

Threat

- Adverse public opinion on GM foods
- Shifts in buyer needs for products
- Costly new governmental regulations
- Difficulty in achieving synergies

Strategies

Business Level strategy: present and future

In order to gain competitive advantage and above average return Monsanto focused on differentiation strategy targeting a group of highly skilled and technologically well-developed farmers.



Monsanto offers to their customers, quality, training and a trusted system of distribution. This strong marketing ability, the service and the high quality of the product are the key for differentiation. However, Monsanto's focus on R&D caused them to miss out on market research narrowing the customer perception of product's value. It created an opportunity for competitors.

They should reorganize their firm infrastructure activities and create value developing an information system to better understand customer's purchasing preferences. They could outsource agencies to implement marketing surveys and focus more closely on customer's needs. In the future Monsanto could apply their research to breed animals and explore new industry segments. Corporate level strategy: present and future In order to gain market power and develop economies of scope, Monsanto, used a related constrained diversification strategy.

They create value and synergies through operational relatedness, sharing both primary and support activities of the value chain. It is underlined by backwards and forwards vertical integration that they use. Due patent expiration, vertical integration, however in the future, can constitute a threat because decrease their flexibility especially in reducing prices. In the future in order to support the expensive costs of R&D and explore new industry segments, Monsanto could merge with Novartis. They could create value through corporate relatedness using a related linked diversification strategy. It can produce private synergies by sharing resources and capabilities.

Based on high financial resources of Novartis and Monsanto R&D they could bring improved products to market faster. New researches on GM food could

be developed also to improve the negative perception of the customers.

International strategy and Cooperative strategy: present and future Based on their strong basis in biotechnologies Monsanto strengthen relations with governments of new developing countries such as Brazil and India, where there are basic resources but lack biotechnological research. Monsanto's scope is to extend their leadership and the product life cycle in order to recoup heavy investments in R&D. Monsanto also to consolidate costs and rationalize industry capacity engaged in mergers and acquisition with other companies such as Cargill Seeds Business, which reduced their costs and their time to entry in international market. Based on the slow cycle of the market, due the high costs involved, Monsanto could engage in strategic alliance or franchises in new developing countries markets in order to hold down labor costs and compete more effectively in the global market.

It permit them to share costs, resources, and risk and overcome problem of integration. Conclusion The biotechnological products developed by Monsanto have future until they can produce an above-average return and gain economies of scale. Based on their ability to innovate Monsanto have the capacity to explore new markets and new geographical areas however, high R&D costs, negative consumer perception and patents expiration are stated to threaten their leadership position on the market. To recover investments, they should focus more on consumer products demand and engage in strategic alliance that permits to increase the product life cycle and absorb the high costs of R&D.

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