

## NOVARTIS: NEW AGRIBUSINESS STRATEGY

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Novartis was a key player in global agribusiness. Broadly, its strategy was to maintain a flexible approach in the face of changing technology and commercial environments. It aimed to combine accumulated experience and knowledge in chemicals with new biotechnology. While many large companies stated this as their aim, Novartis progressed further with this strategy than most. Novartis Agribusiness has now merged with Zeneca Agrochemicals to form the world's first dedicated agribusiness company.

*Key Words:* innovation; agrochemicals; biotechnology; strategy.

The name “Novartis” comes from the Latin, *novea artes* (new skills), denoting the use of research and development “to bring innovative products to communities we serve.” (Novartis, 1999). Novartis AG was formed in 1996 from a merger of Sandoz and Ciba Geigy (both headquartered in Basle, Switzerland) creating what was, at the time, the world's largest agrochemical company and the second largest seed company. These positions have subsequently been altered by other mergers and acquisitions (M&As) among other companies. Data from 1997-1999 reflect the very significant scale of the company's agribusiness operations.

**Table 1: Agribusiness Division Data, 1997-99.**

	1999	1998	1997
<b>Sales</b> (CHF m)	7,056	7,478	7,434
(In Millions US\$)	(4,678)	(5,040)	(5,040)
<b>Operating Income</b> (CHF m)	737	1,098	1,462
<b>Research and Development</b> (CHF m)	673	668	668
<b>Number of Employees</b>	17,361	16,722	18,029

Note. From “Novartis Operational Review,” by Novartis, 1999. Basel, Switzerland: Novartis.

Novartis described 1999 as the year in which it took further steps to focus its business portfolio, “moving from a Life Sciences company to a pure Healthcare company.” (Novartis, 1999) In December, 1999 the Boards of Novartis and AstraZeneca agreed to spin off and merge Novartis' Agribusiness Division (Crop Protection and Seeds Sectors) with Zeneca Agrochemicals to create the world's first dedicated agribusiness company (Syngenta) with pro forma combined sales of

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approximately \$US 7.9 billion (1998 figures). Because of this, the past tense is used in the description and analysis of the company presented here.

### **New Agribusiness Strategy—Project Focus**

Novartis described the operating environment for the agribusiness industry in the following terms,

The agribusiness industry is in a state of upheaval and rapid change. Low farm commodity prices and depressed farm income have impacted sales. Margins have eroded, putting pressure on financial results and the distribution channels. Restructuring in the agribusiness industry has created a more aggressive competitive environment. New technologies, including genetically modified crops and precision agriculture, are challenging traditional farming practices. Moreover, farmers and growers are increasingly influenced by other players in the food chain, from food and feed processors and food companies right down to supermarkets and consumers. (Novartis, 1999).

To deal with this changing situation, in June 1999, the Agribusiness Division initiated the New Agribusiness Strategy (Project Focus), with the objectives of growth, fitness, and sustainable leadership, to provide a framework for the future of the seed and crop protection sectors. The project was designed to strengthen leadership and cost savings by implementing new product priorities, improving the product mix, optimizing asset utilization, reducing purchasing costs, and also by eliminating approximately 1,100 jobs worldwide. The project was intended to provide flexibility in the face of new market dynamics characterized by lower agricultural subsidies and commodity prices. Research projects would be prioritized to focus on the most promising products and to reflect the growing importance of new technologies and output traits. The new course charted by the Agribusiness Strategy focused on,

- The food and feed chain and crop solutions.
- Integrating breakthrough technologies.
- Exploiting joint synergies between crop protection and seeds.

Global crop teams, operating jointly between crop protection and seeds, were formed to define overall strategies for “pillar crops” (corn, vegetables, cereals, and rice) and important crops (oilseeds, sugar beet, cotton, fruits, and grapes).

The key components of the agribusiness strategy, including the formation of global crop teams, brought together staff from agrochemical and biotechnology areas with the aim that they would rapidly become indistinguishable in their approach, despite their different backgrounds. In dealing with interactions under the agribusiness strategy the emphasis was primarily on flexibility, getting the most appropriate combination of possibilities to deliver sustainable development and at the same time maximizing the returns to the company.

Novartis agribusiness strategy was based on a structuring of the world industry players into two clusters of companies as follows,

- Those with both a strong and viable seed base and significant crop protection activities; and
- The “pure players,” mainly in crop protection, along with a small number of players who are still purely seeds based.

Novartis was in the first category and saw itself as being in a very favorable position to gain leverage from chemical/biotechnology synergies, but felt it was not achieving this as effectively as some of its competitors, particularly Monsanto. The “pillar crop” strategies arose out of this analysis.

The main emphasis of the agribusiness strategy then was on long-term balance and on keeping the core business running while managing new developments. The overall aim for each crop and region was for a low impact, high output agriculture, considering in a broad way which mix of technologies could achieve this most effectively. Chemical and genetic modification (GM) strategies were thus looked at in parallel, in the full realization that some GM strategies would be a threat to chemical strategies and others would create opportunities. This aspect of the strategy was still causing difficulties for some staff who saw themselves as “chemists” or “biologists” and who were in the process of making a transition to a more holistic perspective.

The need to maintain a flexible approach to the direction of the agribusiness strategy in the future was partly a result of the uncertain policy and political environment for GM crops in Europe. As a result, the focus on input characteristics would be extended gradually and opportunistically to genomics, the development of marker systems, and output traits.

### **Responding To Environmental Pressures**

The agrochemicals strategy itself, apart from the obvious need for products that will have a viable global revenue stream, was driven by the need to have chemicals with low environmental impact and this was linked to the ability to register the product. Associated with this point was the need to adapt the screening process to detect novel modes of action which could be characteristic of new and more environmentally sustainable products, for example, by running tests for longer or including new tests in the battery. With novel modes of action, particularly for some of the new insecticides, there was also a need for new marketing strategies, to persuade farmers of their effectiveness and their added value for the environment and for human health, particularly in the face of competing products which are cheaper. While there are some large-scale problems for farmers, such as European corn borer and corn rootworm that can provide a big enough market to make these more selective treatments commercially viable, in general, smaller scale problems will not be addressed by multinational companies.

In the planning processes within Novartis, there was no real separation of environmental, biodiversity, and sustainability discourse from other aspects of strategic and operational planning. Such issues were seen as an integral component of the business planning process and it was assumed that incorporating them into business planning was going to be essential to the future commercial success of the company and, therefore, that Novartis had to find a way of turning these publicly demanded goods to its commercial advantage.

### **Life Sciences**

The concept of “life sciences” originally seen as the linkage between pharmaceutical and agrochemical strategies in multinational companies, through the adoption of biotechnology techniques, was no longer regarded as particularly relevant by Novartis, except in the context of the knowledge base itself where discovery strategies can operate synergistically, or further down the development trajectory where some nutraceutical products may require clinical trials testing. However, Novartis did recognize multiple levels of what could be regarded as life science strategies involving, for example, the production of pharmaceutical products in field crops and the development of strong linkages with food production and distribution companies. In a sense the whole agribusiness strategy could be seen as “life sciences” even though Novartis did not refer to it in those terms.

### **R&D Strategy**

Novartis was much more international in outlook than some other multinational companies located in Europe, but it still retained its roots in Europe. The main locus of long-term discovery strategies for Novartis, basically how to improve the environmental status of crops, was in the

United States (US), although the decision making function was still located in Basle. Managers recognized that this added to the organizational costs but also felt that there were advantages to be gained by having a dual location, partly because of the important component of their markets that was located in Europe, but also to capitalize on the perceived strengths of the two continental traditions—the “can-do” culture in the US which was particularly important for biotechnology development and the perseverance and quality which they saw as characteristic of the European tradition. The existence of clusters of small-to-medium enterprises (SMEs) was seen as important in deciding the location of activities within the US, and Europe was regarded only as “making valiant efforts to catch up” in this respect.

While there was no suggestion that Novartis would consider relocating its headquarters from Europe to another part of the world, the gradual loosening of European ties and strengthening of those in other parts of the world would certainly make this easier to accomplish if public and policy pressures were to encourage such a move. The implications of such a move for employment in Europe would be considerable, given the large numbers of SMEs, technical and non-technical, located in Switzerland and adjoining regions of France and Germany that owe their existence to Novartis.

Novartis saw itself as one of the companies that had not engaged significantly in the process of “buying down the value chain” as some other companies had done. However, they had made significant acquisitions across the value chain to which many of their current strengths in both seeds and agrochemicals could be attributed. Four internationally recognized seeds brands (NK, S&G, Hilleshög, and Rogers), originally acquired by Sandoz, have been supplemented by purchases of a number of other smaller seed companies as part of the overall focus on the seed as the core technology and, hence, on the need for strong germplasm. The 1997 acquisition of the crop protection business of Merck added a set of insecticides that was particularly important for Novartis’ focus on improved, more environmentally sustainable agrochemical strategies in the context of integrated pest management.

The traditional areas of input traits, discovery of crop protection chemicals, and conventional plant breeding will remain very significant. However, projects will increasingly focus on areas such as crop output traits, chemical trait regulation, marker assisted breeding, and genetics/genomics.

### **The Policy Environment And Its Impacts**

Many of the innovation and product development strategies described by Novartis were strongly influenced by the policy environment, particularly, the Common Agricultural Policy (CAP) of the European Union (EU) which was seen as a cause of market uncertainty, and the regulatory uncertainty surrounding the development of GM crops. The regulatory environment for pesticides, on the other hand, was seen as much more stable and predictable and, hence, as less difficult to manage. The differences in mode of operation of various regulatory instruments and the resulting differences in impact on industry decision-making were noted. For example, the EU Water Quality Directive was regarded as too crude an instrument, which could be improved by a more scientific basis for decisions. On the other hand, the US Food Quality Protection Act was more positive in its impact, encouraging the development of pesticides with an improved environmental profile. Novartis was well able to accommodate both types of regulation in its research and development (R&D) decision-making—indeed it saw regulation as one of the main drivers of innovation. Managers were also slightly concerned about the extent to which the criteria of the Food Quality Protection Act were scientifically based, but saw the current approach as acceptable.

From Novartis’ perspective there is a limit to the extent to which a company can work towards improving the environmental profile of its products, in advance of what is demanded by the regulatory system. For example Novartis’ new suite of insecticides is more acceptable from

environmental and public health points of view than the currently widely used and much cheaper organophosphate (OP) insecticides, but farmers will probably need an incentive to adopt them. Some thought needs to be given to achieving such changes in farm practices without creating what could be seen as restrictions of trade.

The European Commission response to innovation for agriculture was also seen to be problematic for industry that would prefer to see a stronger recognition of the need for innovation, to protect food supplies, to generate profitable exports and to improve the environmental performance of the industry.

Novartis had developed a range of pragmatic responses to the turbulent policy environment and the evolving EU societal position on intensive farming systems,

- Anticipate change.
- Influence it where possible.
- Adapt internally to change and have flexible strategies.
- Involve regulatory affairs people in the R&D planning process at a much earlier stage than before.
- Forge new alliances with the food and retail sectors.

The aim of maintaining flexibility in strategies was particularly important, allowing future developments to focus on a mix of chemical and biotechnology solutions to agricultural problems, tailored to the social, regulatory, and agronomic requirements of different regions and crops.

There was strong concern in the company for the needs of developing countries, some of whom were seen as being well on the way to having successful biotechnology industry sectors, and some of whom were unlikely to be able to adopt this technology in the short-term. The former were seen as sources of opportunity for collaboration with multinational companies; the latter were seen as being in need of assistance from them; but the point was made that neither should be encouraged to throw away their future for short-term gain. The issue of intellectual property rights was addressed mainly in this context. It was seen as a strong focus of public attention in the developed world, but of relatively minor importance compared to other moral and ethical issues raised by the new life science trajectories.

Addressing the environmental risks of GM crops was seen as problematic, mainly in the context of demands for zero risk by the European public. Biological containment was seen as the most effective way to deal with questions of the spread of genes in the environment rather than conducting numerous series of crop trials. Where crop trials are undertaken, the UK SCIMAC (the Supply Chain Initiative on Modified Crops) approach, based on consideration of whether GM crop technology can deliver improvements over current farming systems, rather than delivering zero risk, were seen as a useful way forward. Novartis managers also saw the development of life long monitoring of the new technology in use as another useful safeguard. Overall, however, in the context of policy and regulatory developments, there is an overwhelming need for relative stability and consistency and for clear signals to be given to industry.

## **Conclusion**

Novartis tried to respond to what it saw as a turbulent policy and commercial environment with a flexible approach to the future direction of agribusiness. Despite long-term recognition by many companies of the need to link agrochemical and biotechnology strategies in their decision-making, in general they are only now beginning to implement this approach. Through its agribusiness strategy, Novartis was one of the furthest advanced in this process. The strategy aimed to combine knowledge accumulated in different areas of technology through a revised and limited life science strategy. Although our work did not cover the post-merger period, this is a strategy that may also be reflected in Syngenta's approach.

## **References**

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