



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



*International Food and Agribusiness Management Review*  
Volume 18 Issue 2, 2015

## **Syngenta: Changing a Global Company**

Elizabeth A Yeager<sup>Ⓐ</sup>, W. Scott Downey<sup>ᵇ</sup>, and David A Widmar<sup>ᶜ</sup>

<sup>ᵃ</sup> Assistant Professor, Department of Agricultural Economics, 337A Waters Hall,  
Kansas State University, Manhattan, Kansas, 66502, USA

<sup>ᵇ</sup> Associate Professor, Department of Agricultural Economics, 403 West State Street, Purdue University,  
West Lafayette, Indiana, 47906, USA

<sup>ᶜ</sup> Research Associate, Department of Agricultural Economics, 403 West State Street, Purdue University,  
West Lafayette, Indiana, 47906, USA

---

### **Abstract**

Syngenta customers are facing increasing costs, price volatility and risk for their production. To help customers deal with these challenges, the company announced the integration of seed and crop protection in early 2011. The “One Syngenta” strategy had three objectives: Innovate, Integrate, and Outperform. In North America, the company’s second largest region, the company faced two challenges: the non-exclusive distributors Syngenta sells through would need to carry Syngenta’s message to farmers and the internal culture of Syngenta’s marketing organization in North America would have to shift from specialists to generalists. The specific objectives of this case are to understand the strategic change Syngenta made as it shifted from a product (seed and crop protection) focus to a crop-based focus, assess how a global business can “think like a grower” and move from a product leadership discipline to a customer intimacy discipline, and gain insights into the Syngenta employee, retailer and grower perceptions of the new strategy.

**Keywords:** strategy, seed, crop, innovation

<sup>Ⓐ</sup>Corresponding author: Tel: + 1.785.532.4935

Email: E. Yeager: [eyeager@ksu.edu](mailto:eyeager@ksu.edu)

W.S. Downey: [downeyws@purdue.edu](mailto:downeyws@purdue.edu)

D. Widmar: [dwidmar@purdue.edu](mailto:dwidmar@purdue.edu)

### **IFAMA Agribusiness Case 18.2**

*This case was prepared for class discussion rather than to illustrate either effective or ineffective handling of an agribusiness management situation. The author(s) may have disguised names and other identifying information presented in the case in order to protect confidentiality. IFAMA prohibits any form of reproduction, storage or transmittal without its written permission. To order copies or to request permission to reproduce, contact the IFAMA Business Office. Interested instructors at educational institutions may request the teaching note by contacting the Business Office of IFAMA.*

## Introduction

Syngenta's global lead for corn, Hendrick Ikemeyer, poured himself a cup of coffee from the carafe in his office. He loved everything about the experience of that first cup in the morning: the sound of the cup filling, the smell of the roast, the feeling of warmth in the cup. But, most of all, Hendrick liked the story of where the coffee had come from. One of Hendrick's colleagues had been involved with the development of Nu-Coffee™. The innovation had been a win for everyone. Farmers obtained higher production by using Syngenta products, which they were able to afford because of the premium contracts Syngenta arranged. He would never forget visiting that area during a trip to Brazil and seeing the feelings of pride those growers expressed at being compensated more for their best production. Hendrick smiled as he took his first sip. The reason he loved his job was because of the positive impacts he could have on farmers.

## Early Success

Hendrick's prior role had been in Asia, working with Syngenta's agricultural chemical portfolio of products for rice. Every day, almost half of the world's population eats rice, but in 2010, productivity was a critical issue with yield increases not sufficient to meet forecasted demand. Growers in Asia faced challenges such as labor shortages, increasing costs and inefficient use of water. Mitigating the risks of those production challenges moving forward would require transforming rice production, something that would be difficult to accomplish. More than 200 million smallholders grow rice in Asia and reaching these growers was going to be a challenge. Many of these growers in developing areas still resorted to planting by hand, a labor intensive and back-breaking practice (Syngenta 2013). However, Syngenta, with a strong presence in the Asian rice market, saw an opportunity to grow by taking on some of those challenges, and transforming rice production along the way.

By looking at the production system as a whole, rather than the individual components, Syngenta discovered insights that could solve some of the production challenges from 2010. During the rice crop's lifecycle, the seedling stage, or the first 60 days of the crop's production, is critical to the crop's ability to reach its maximum yield potential. The project, known as TEGRA™, created a way for small-scale farms to buy the highest yield potential seedlings available and have them sown directly into the rows of their fields (Syngenta 2011).

The process starts with high quality rice seeds that are specially coated with a seed treatment before being planted (Pisk and Lawton 2012). This seed coating helps protect the young, densely planted seedlings from early ailments. Once the seedlings are ready for transplant into the grower's fields, they are removed from the seedling fields in small patches, like that of sod grass, and placed into flat trays for transport. For sowing in the grower's fields, the seedlings are placed in rows at a much lower density than the seedling phases. The traditional transplanting process is typically done by hand as workers spend their day painstakingly bent over in the flooded fields, trekking through mud to place the seedlings into the soil. With TEGRA™, the transplanting process is mechanized by a yard tractor-sized machine outfitted with tall, narrow wheels that navigate the flooded fields. Further equipped with shelves to hold the flat trays of seedlings, the mechanized transplanter accurately meters the seedlings into precise rows.

The launch of TEGRA™ in 2010 proved to be successful. In trials, yields increased almost 30 percent, resulting in \$270 of extra profit per hectare<sup>1</sup> and a return on investment as high as 150 percent. During a 2010 visit, Hendrick had spoken with Muttineni Veeraiah, a rice grower in India's Andhra Pradesh region. Muttineni had been very positive, "From transplanting to harvesting, my crop stays in better condition than it did with the conventional methods I used before" (Syngenta 2011).

Across the globe, a similar revolution has taken place in sugar cane production (Syngenta 2015a). The new technology is called PLENE™. Syngenta raises sugarcane seedstock in growth chambers, slices the seedstock into plugs, and applies growth- and yield-improving treatments to the plugs, which are then mechanically planted. This technology increases yields and reduces the dependency on laborers, who would otherwise need to walk the fields with machetes to manually cut the long sugarcane seedstock into plugs for planting.

Innovations had occurred in several places across the organization, but the new strategy was about more than innovation. With this new role, Hendrick had been asked to lead a team that was charged with helping the organization shift its focus to be more grower centric. "We've made good progress," Hendrick thought, "but there's so much more to do."

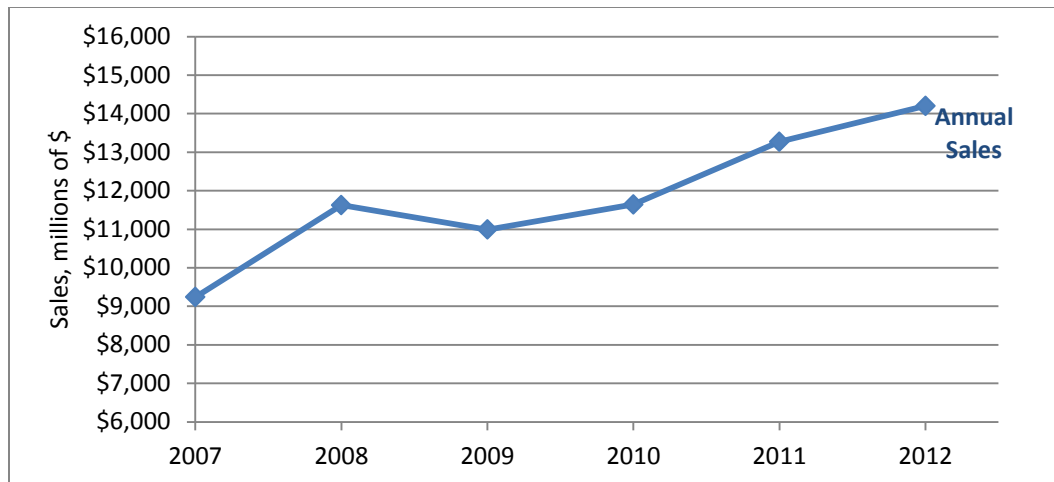
## Background of Syngenta

Syngenta, with \$14.2 billion in sales for 2012, is relatively young in its present form (Syngenta 2015a). Established in November 2000, Syngenta is the result of the merger of agribusinesses Novartis and AstraZeneca. Syngenta's inherited strengths from the two companies date back to 1758. Syngenta's name actually means "bringing people together." With a collection of people, products, and expertise, it developed a corporate structure surrounding its key products, primarily crop protection and seeds. Crop protection included the manufacturing, distribution, and sales of herbicides, insecticides, and fungicides for all customers. The seeds unit was responsible for the sales of agricultural seeds. Syngenta's entire operating structure, from financial reporting to management reporting and its sales force, evolved around this product-based structure.

Figure 1 shows the strong growth Syngenta has seen in sales. Since 2007, Syngenta's sales have grown from \$9.4 billion to more than \$14.2 billion in 2012, an average annual growth of 10.2 percent. Sales in 2012 were primarily comprised of \$10.3 billion in sales from crop protection products, or 72.5 percent of total sales, and \$3.2 billion in seeds sales, or 22.5 percent of total sales (Figure 2).

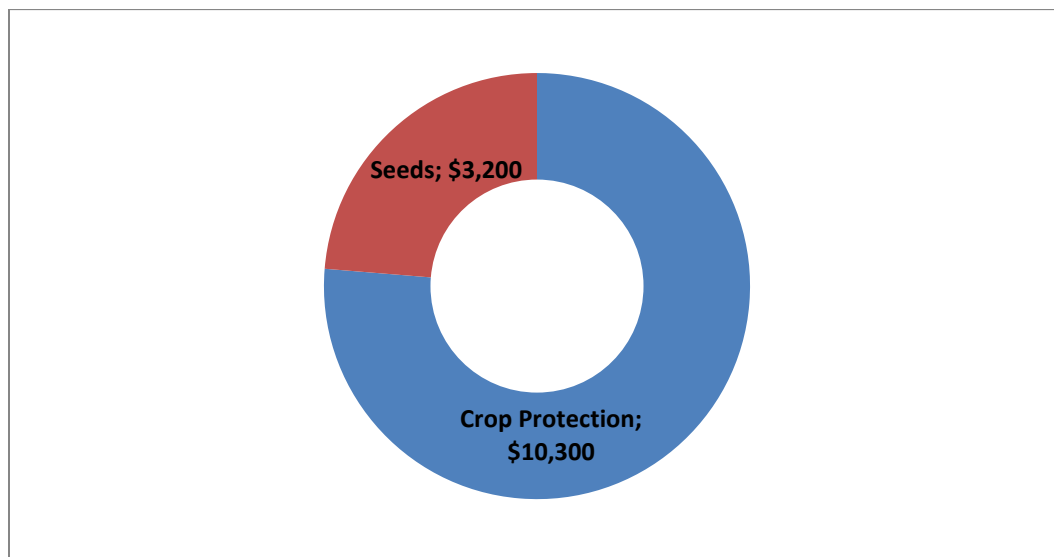
---

<sup>1</sup> 1 hectare = 2.47 acres



**Figure 1.** Syngenta sales growth, 2007-2012

**Source.** Syngenta Annual Reports (Syngenta 2015a)



**Figure 2.** 2012 Syngenta sales by Seeds and Crop Protection (millions of \$)

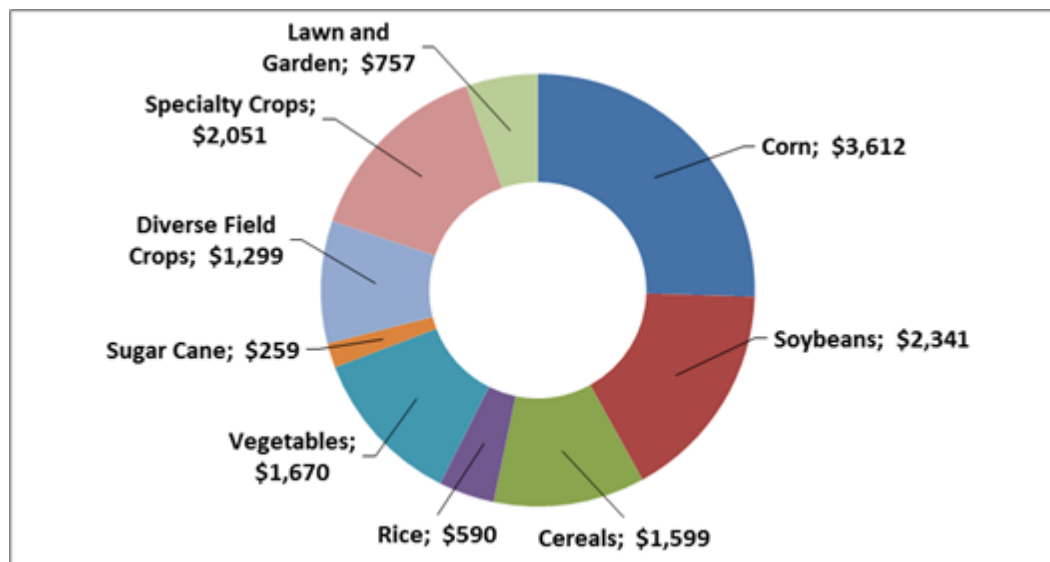
**Source.** Syngenta Annual Reports (Syngenta 2015a)

Syngenta was formed as an organization of specialists. With a heavy focus on product development through strong investments in research and development (R&D), the company created experts in a specific area of research. For instance, one research team would work on corn rootworm resistant seed traits while another worked on corn rootworm insecticides. These experts worked on the same problem, corn rootworm, from respective technologies, seeds genetics versus insecticides, and had little, if any, interaction with each other. Innovative technologies like TEGRA™ and PLENE™, required input from all technologies and required a partnership of Syngenta representatives, Syngenta supply chain partners and growers working together in the fields. It would have been difficult to create these innovative technologies under Syngenta's product-based structure. To achieve this, Syngenta would have to shift its strategy in how they were "bringing people together."

## A Strategic Change

In February 2011, during a release of the 2010 annual financial results, Syngenta globally announced it was undertaking a shift in its strategy (Growing 2011). For reasons mentioned in the previous section, including bringing people together, Syngenta would be rolling its seed and crop protection divisions together to think more like the grower. The new business model created global platforms and centered its focus on crops instead of products (Winters 2013). While Syngenta was widely regarded as a product leader, overall, their 2010 sales of \$11.641 billion still lagged in comparison to many of the other technology companies in the agriculture sector. Monsanto, BASF, DuPont, Dow and Bayer all sought to take advantage of opportunities in agriculture and had sales of \$10.5 billion, \$84.96 billion, \$31.51 billion, \$53.67 billion and \$41.46 billion, respectively (BASF 2010; Bayer 2013; Market 2014a; Market 2014b; Monsanto 2010). However, of these, only Syngenta was focused solely on agriculture.

The announcement was breaking news to nearly everyone. The opportunities surrounding the TEGRA™ and PLENE™ projects, which were cited as motivation for this strategic shift, were known across the organization, but shifting the way everyone worked was completely unforeseen. These new opportunities would require Syngenta to think about projects differently and to define new strategies to best capitalize on the opportunities and add value to customers. This new strategy did not change what Syngenta fundamentally did as a company. The change was in the thought process in which they approached the creation of new offerings and the sales of these offerings. While misperception could occur, Syngenta's strategy was not merely an attempt at bundling. Instead, the integrated offerings could provide a greater value than the previously separate product offerings. Figure 2 showed Syngenta's previous way of thinking about the business: seeds and crop protection. Figure 3 illustrates how the company looks at its business today – from nine cropping units.



**Figure 3.** 2012 Syngenta sales by crop (millions of \$)

**Source.** Syngenta Annual Reports (Syngenta 2015a)

The new strategy was known by a host of names including “Integration,” “One Syngenta,” or “Integrated Crop Solutions.”

By pulling the efforts of multiple teams together, “crop-based pipelines” were created where all the seed and crop protection technologies and products for a given crop would be evaluated and considered together. Building on the early successes of TEGRA™ and PLENE™, innovations that came from seed and crop protection technologies working together, the company developed a platform where efforts were combined by crops. From the corn rootworm example earlier, the next innovation in corn rootworm technologies would come from the efforts of everyone working on corn rootworm technologies.



**Figure 4.** Future Farmer

**Source.** Strategy (Syngenta 2015b)

One component of the new strategy was to pull the seed and crop protection units into a single entity that centralized around the crop. This was done, in part, to create unique solutions to meet grower needs, with an integrated offering that drew upon Syngenta’s deep knowledge and understanding of agriculture.

Pulling the seed and crop protection units together changed the way Syngenta functioned as a company. The financial report, management structures, and the sales force calling on retailers and growers saw changes. The company created high-level platforms that decided the efforts for improvement to corn, for example, at a global level.

A major advantage of the strategy was the savings from integration. Total annualized savings by 2015 are expected to be \$150 million from integration alone. Additional savings of \$500 million from procurement and supply chain efficiency are also expected.

Finally, the new strategy stated that outperforming the competitors should start in the grower's fields, where, from that success, market share would advance, profitable growth could take place and ultimately, the shareholder could receive stronger dividends.

These components of the new strategy gelled into three strategic efforts: Innovate, Integrate, and Outperform.

## Innovate

Since its beginnings in 2000, Syngenta has positioned itself in the market as a leader in product development. Leveraging their strong investments in R&D, Syngenta constantly found ways to develop the best new products on the market.

Strategic planning research has shown that market leaders master and focus on one of three value propositions: product leadership (the best product), operational efficiency (the lowest total cost) or customer intimacy (the best total solution) (Treacy and Wiersema 1995). Figure 5 illustrates this concept, the market leader discipline. That discipline states that a company will lead, innovate, and revolutionize a market in one of the three areas, and then only benchmark with competitors for the other two areas to ensure they cross the threshold of performance. The new strategy is a shift in Syngenta's focus from product leadership to a customer intimacy discipline. At the heart of Syngenta's shift in strategy was the desire to innovate. Projects like TEGRA™ and PLENE™ created new opportunities for the company. Innovation that usually only took place in the research and development labs could now happen in the fields by individuals – growers, Syngenta representatives and Syngenta supply chain partners – who worked together.



**Figure 5.** Three value propositions

**Source.** Adapted from *The Discipline of Market Leaders: Choose Your Customer, Narrow Your Focus, Dominate Your Market* (Treacy and Wiersema 1995)



Traditional R&D projects are extremely costly, have uncertain outcomes and take years of investment. New innovations, such as TEGRA™, took existing products and offerings (the rice genetics and seedling crop protection technologies) and packaged them into a single offering (high-yield-potential seedlings sown into the grower's fields). These offerings, often referred to as "Solutions," create value because they can be sold at a price greater than the sum of the product components, increase growers' yields and create sales to new customers.

## **Integrate**

On the surface, the motivation for pulling the seeds and crop protection units together is straightforward. Rather than selling a product for a grower's problem, the integrated strategy will now position Syngenta and its representatives to work with the grower to find the right products across all Syngenta offerings. Previously, if a grower was having problems with corn rootworm, for example, a conversation with a seed representative would have focused on seed products, while the same conversation with a crop protection representative would have focused around crop protection products. Now, with the integrated strategy, the grower's conversation with a Syngenta representative will include all the possible products Syngenta has to help with the problem, from both the seed and crop protection portfolios, thus changing the "employee" from a seed or crop protection specialist to a production specialist. This represents a challenge for the internal marketing of the company and a shift in company culture.

In North America, Syngenta's second-largest region (only narrowly trailing the "Europe, Africa and Middle East" region in sales), integration is somewhat more complex, because of the important role of the supply chain. In a system where a grower's and agricultural retailer's seed and crop protection representatives were historically two different subject-matter experts, they are now one person who is supported by the Syngenta network of agronomists. This change was critical as Syngenta wanted to turn the tide and move questions from "What product should I use?" to "How can I grow more bushels, and how can I do it better?" In a market where Syngenta focused on providing the best products (a product-leadership position), the focus is now shifting to a strategy closer to the farmer: the company is trying to think more like the grower.

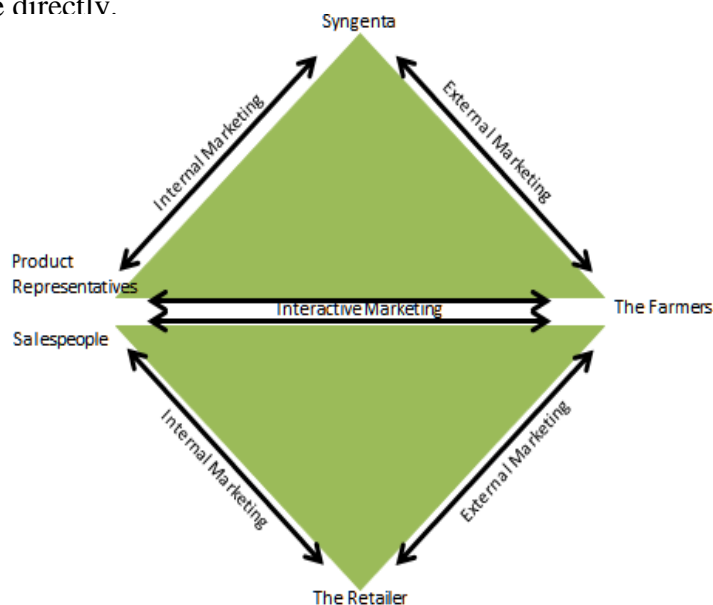
Traditionally, the focus has been on external marketing to the grower; however, in order to change the company's culture, internal marketing became a primary focus following the 2011 announcement. How do you get more than 27,000 employees to develop new expertise while still using their existing knowledge of the company and its product lines? Syngenta realized they needed more generalists, a better understanding of customer needs and innovative approaches in harnessing and compiling this information to a customer-value-added solution. There was also the realization that the company needed to be more proactive in envisioning the customer 20 years from now. How will the world change, and will there be demand for commodity-driven products that can be offered at low costs or specialized high-value products?

One of the first challenges was motivating the employees who come in direct contact with customers and getting everyone to work as a team. Many of the seed and crop protection representatives had to learn about all the product offerings and become a general sales representative or transition into a role as a specialist supporting the representatives. Changing the

view of the customer, who had previously worked with multiple representatives under the traditional external marketing approach, can be a challenge. The interactive marketing component becomes crucial. The quality of service and the adaptability of the customer working with the production specialist heavily depends on the quality of the customer-employee interactions during the sales calls. Not only must the customer believe they are receiving exceptional service from the specialist, but also, the quality and success of the product recommendations must be at least as high as in the earlier system as well as those from competitors.

In reality, the opportunity for conversation between the Syngenta salesperson and the end user (grower) can be difficult. In some cases, retailers would limit the actual interaction between the Syngenta salesperson and the grower, in order to maintain ownership of the relationship with the grower or because they preferred a brand other than Syngenta. In many cases, farmers desired a personal relationship with the seed supplier more than the crop protection supplier, because of the heightened complexity and risk associated with seed selection and placement. Therefore, in the past, a farmer may have preferred a Syngenta crop protection product but had limited or no seed relationship with Syngenta. Syngenta desired to sell its broad portfolio of crop protection and seed, but this may have conflicted with the farmers' or resellers' objectives of supporting Syngenta Crop Protection but some other brand of seed (i.e. Monsanto, or an in-house brand like Cropland or DynaGro).

The service marketing triangles (Figure 6) illustrate the traditional path of external marketing, internal marketing between the company and employees, and the crucial interactive marketing between the employees and distributors or retailers (Kotler and Armstrong 2012). The top triangle represents Syngenta's efforts while the lower triangle represents the local retailer's efforts. This illustrates not only how Syngenta's new strategy changes the efforts of Syngenta's marketing, but it also affects the relationship Syngenta has with its supply chain retailers and how those retailers position Syngenta products to their grower customers in markets around the world where Syngenta does not distribute directly.



**Figure 6.** Service Marketing Triangles

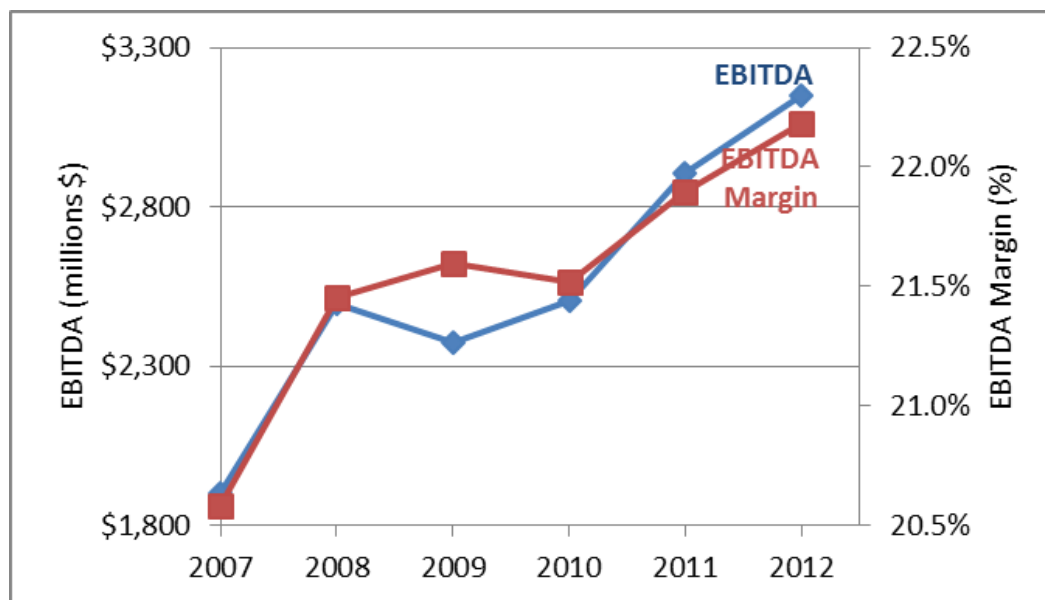
**Source.** Adapted from Kotler and Armstrong-2012, Three Types of Service Marketing

## Outperform

The third and arguably most fundamental component of Syngenta's strategy is their commitment to beating their competitor's performance. Figure 4 outlines three points of performance Syngenta is focused on to outperform: the grower's fields, Syngenta's market share, and creating profitable growth.

By increasing the value of a grower's production in the field, Syngenta has outlined goals to gain an average of 0.5 percent market share, targeting an EBITDA margin in the range of 22-24 percent by 2015, have a cash flow return on investments in excess of 12 percent, and a continuous increase in dividends (Syngenta 2015b).

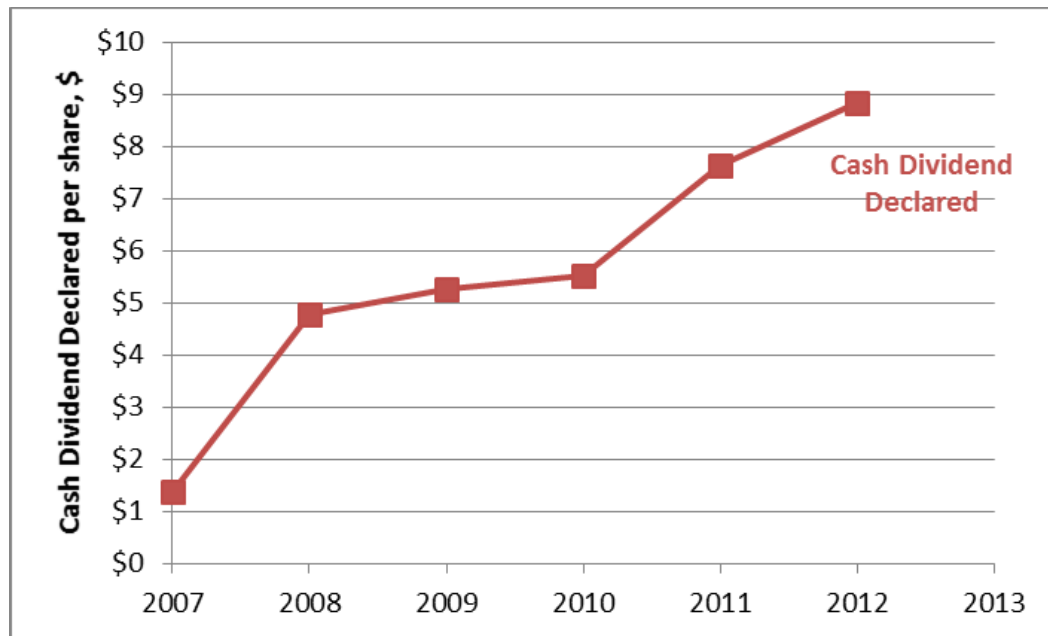
Figure 7 shows Syngenta's EBITDA and EBITDA margin (measured as EBITDA/SALES) since 2007 (Syngenta 2015a). Strong growth in both EBITDA and the EBITDA margin has been reported. EBITDA increased from \$1.9 billion in 2007 to \$3.2 billion in 2012; meanwhile, EBITDA margin increased from 20.6 percent to 22.2 percent over the same time period. In 2012, the EBITDA margin crossed into the lower range of their 2015 goal, two years into the strategy.



**Figure 7.** Syngenta's EBITDA and EBITDA margin, 2007-2012.

**Source.** Syngenta Annual Reports (Syngenta 2015a)

For Syngenta's goal of increasing dividends, Figure 8 shows the annual dividend per share declared since 2007 (Syngenta 2015a). Overall, the dividends have increased from \$1.36 per share in 2007 to \$8.82 per share in 2012, or an average growth of 110 percent annually.



**Figure 8.** Syngenta's cash dividend declared, 2007-2012

**Source.** Syngenta Annual Reports (Syngenta 2015a)

Another measure of performance at the stockholder level is stock prices. Exhibit 1 (see Appendix) shows Syngenta's stock prices since 2007 (Syngenta 2015a). After a sharp decline in 2008, Syngenta's stock price has risen over the past five years (6/2/2008-5/29/2013). Syngenta's stock price (ADR) hit its high of more than \$87 per share (ADR) in February of 2013. For comparison, Exhibits 2-6 illustrate the stock prices during the same time period for Syngenta's major competitors.

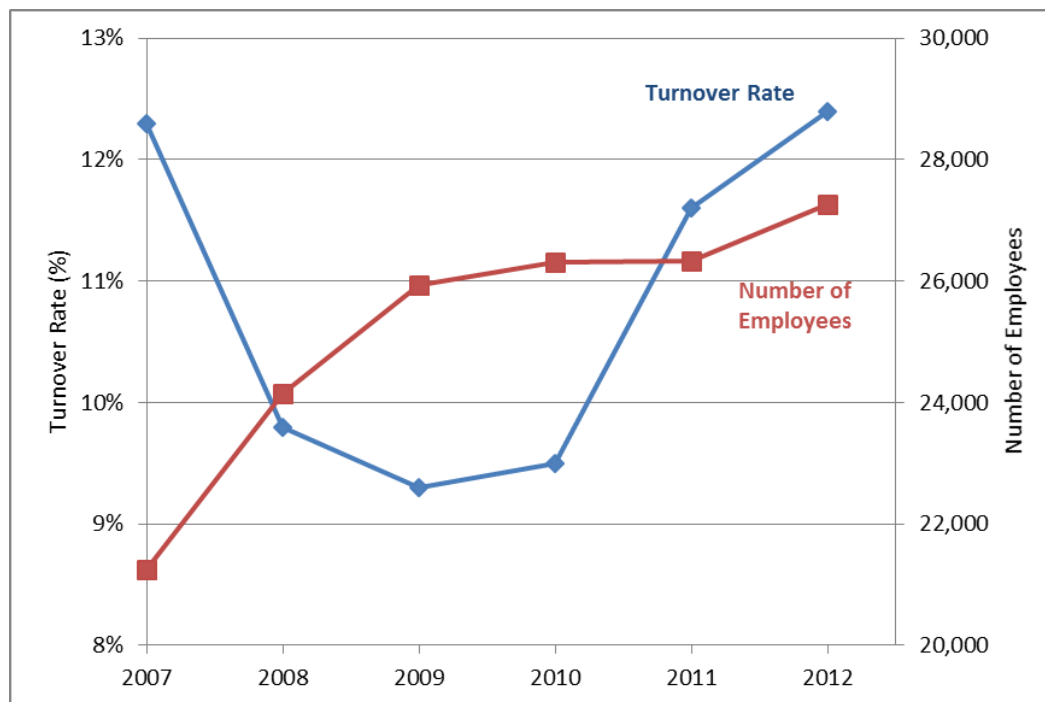
From published financial reports, it is evident the cost of integration was not minimal. As shown in Table 1, the total cost of integration through 2012 is reported at \$265 million (Syngenta 2015a). In relative terms, total cost of the integration is 13.6% of the \$1.875 billion in net income reported in 2012 alone.

**Table 1.** Annual cost of the integration strategy

2010	\$14 million
2011	\$149 million
2012	\$102 million
Total	\$265 million

**Source.** Syngenta Annual Reports (Syngenta 2015a)

A majority of the integration costs (\$91 million) were associated with severance and pension payments (Syngenta 2015a). Impacts from the integration are also reflected in Syngenta's reported employee turnover rate, shown in Figure 9. In 2012, the reported employee turnover rate reached a five-year high at 12.4 percent. At the same time, the global work force of Syngenta has continued to grow. In 2012, the number of employees grew to 27,262, 3.5 percent more than in 2011.



**Figure 9.** Employee turnover rate and number of employees

Source. Syngenta Annual Reports (Syngenta 2015a)

## Conclusion

Hendrick felt like Syngenta was in a good place. By the end of 2012, the majority of the strategic shift had been completed with growth in sales and profitability. The stock price had continued to increase, which made investors happy, but also had a positive impact on his own retirement. In the first quarter of 2013, Syngenta's stock price reached the highest level in the company's history (Barchart.com 2013). Hendrick was excited about the innovative technologies that were being developed for irrigated corn – including a partnership with an irrigation system provider – that showed early signs of success in farmer test plots.

But he had a few concerns, too. There were growing reports of challenges relating to the scalability of some of the innovations like TEGRA™ and PLENE™ that had been generated in the field. He felt confident that the company had strong operating procedures to commercialize products but wasn't sure if a different process would be required in order to commercialize "solutions."

The "One Syngenta" system is in place and fully deployed. Until the changes became more obvious and more evident across the global organization, the full impact of the strategy will be unknown. Nonetheless, the recent reports Hendrick sees on EBITDA margin, dividends, and stock prices are impressive. Reaching to refill his coffee cup, he smiles to himself again, thinking, "Syngenta appears to be headed in the right direction."

## Critical Thinking Points

1. Do you think the Solutions Syngenta is putting together, such as PLENE™ and TEGRA™, will be successful in the marketplace?
  - a. In general, how could Syngenta make Solutions more attractive to the customer?
  - b. What competitive responses would you anticipate?
2. How can Syngenta increase acceptance and build customer trust to ensure their strategy is sustainable in the long run? If Syngenta does this correctly, does this make them a market leader?
3. Given the large differences in agronomic practices, crops and regulations around the world, can a global company be grower-centric?
4. By changing the “employee” from a seed or crop protection specialist to a production generalist, Syngenta is trying to change the interactive marketing component. What risks does Syngenta face here?
5. How do financial markets and stockholder opinions influence the implementation of this strategy? What contingencies should Syngenta’s leadership plan for?

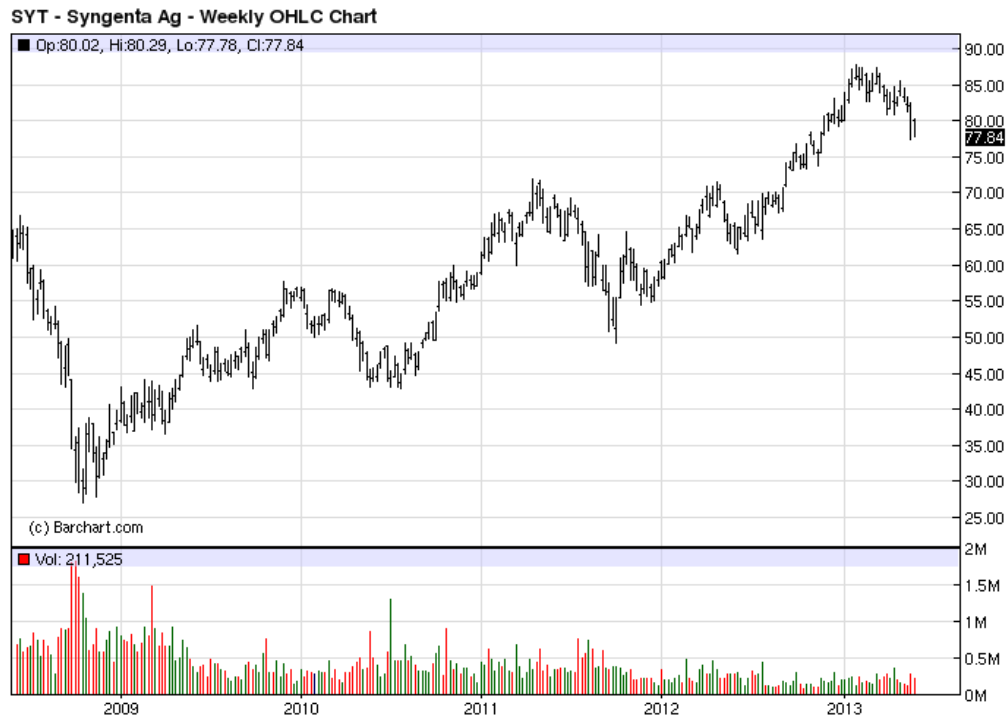
## References

- BASF. 2010. Sales and Earnings. <http://report.basf.com/2010/en/managementsanalysis/businessreview/salesandearnings.html?cat=m> [accessed April 10, 2015].
- Barchart.com. 2013. Five Year Weekly OHLC Charts. [http://www.barchart.com/interactive\\_charts/stocks/](http://www.barchart.com/interactive_charts/stocks/) [accessed April 10, 2015].
- Bayer AG. 2013. Bayer Annual Report 2010. <http://www.annualreport2010.bayer.com/en/bayer-annual-report-2010.pdf> [accessed April 9, 2015].
- Growing Produce. 2011. Syngenta to Merge Seeds, Crop Protection. <http://www.growingproduce.com/article/7127/syngenta-to-merge-seeds-crop-protection> [accessed April 10, 2015].
- Kotler, Phillip, and Gary Armstrong. 2012. *Principles of Marketing, 14<sup>th</sup> Edition*. Upper Saddle River, NJ: Prentice Hall.
- Market Watch. 2014a. Annual Financials for Dow Chemical Co. <http://www.marketwatch.com/investing/stock/DOW/financials> [accessed April 8, 2015].

- Market Watch. 2014b. Annual Financials for E.I. DuPont de Nemours & Co.  
<http://www.marketwatch.com/investing/stock/DD/financials> [accessed April 9, 2015].
- Monsanto Company. 2010. Faces of Farming: 2010 Annual Report. Faces of Farming.  
[http://www.monsanto.com/investors/Documents/Pubs/2010/annual\\_report.pdf](http://www.monsanto.com/investors/Documents/Pubs/2010/annual_report.pdf) [accessed April 8, 2015].
- Pisk, Davor, and Tina Lawton. 2012. Rice. Syngenta Investor Presentation.  
<http://www.syngenta.com/global/corporate/SiteCollectionDocuments/pdf/presentations/investor/rice-crop-update-250912.pdf> [accessed April 10, 2015].
- Syngenta. 2011. TEGRA™, Integrated Solution for Rice Growers.  
<http://www.youtube.com/watch?v=yLmFM12tH3I> [accessed April 10, 2015].
- Syngenta. 2013. Our Industry 2013.  
[http://europe.nxtbook.com/nxteu/Syngenta/ourindustry\\_2013/](http://europe.nxtbook.com/nxteu/Syngenta/ourindustry_2013/) [accessed April 10, 2015].
- Syngenta. 2015a. Annual Reports. <http://www.syngenta.com/global/corporate/en/investor-relations/financial-information-and-presentations/Pages/annual-reports.aspx> [accessed April 9, 2015].
- Syngenta. 2015b. Strategy. <http://www.syngenta.com/global/corporate/en/about-syngenta/pages/strategy.aspx> [accessed April 10, 2015].
- Treacy, Michael, and Frederik D. Wiersema. 1995. *The Discipline of Market Leaders: Choose Your Customers, Narrow Your Focus, Dominate Your Market*. Reading, MA: Addison-Wesley Pub. Co.
- Winters, Patrick. 2013. Syngenta Bets on Automated Rice as M&A Options Dwindle.  
<http://www.bloomberg.com/news/2013-04-16/syngenta-bets-on-automated-rice-as-m-a-options-dwindle.html> [accessed April 10, 2015].

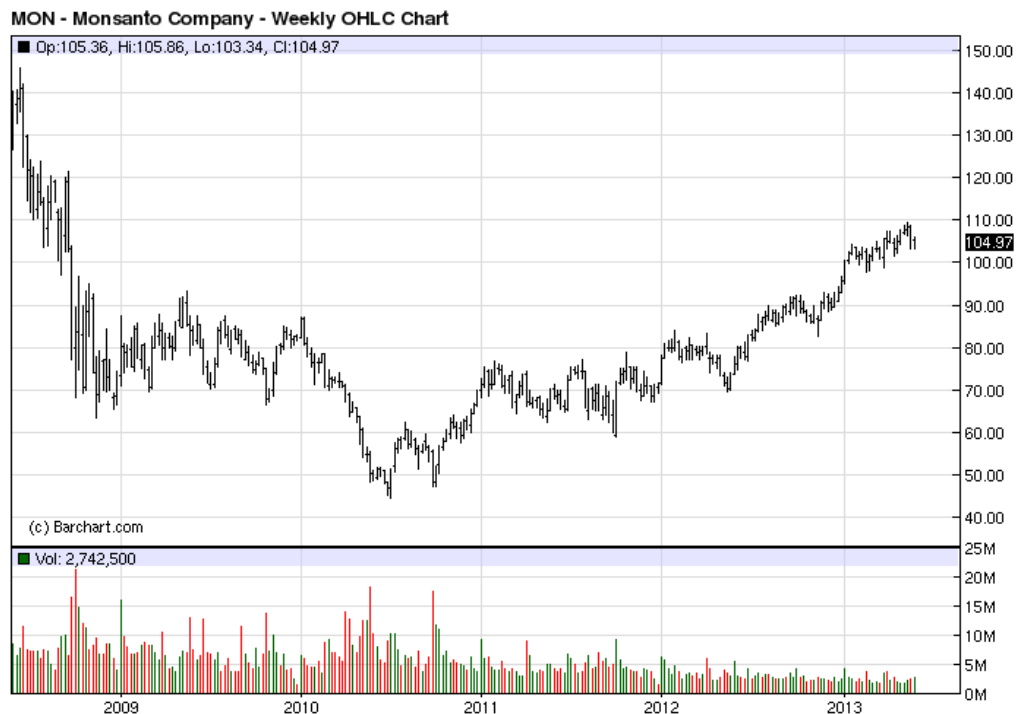
## Appendix

### Exhibit 1. Syngenta's Stock Prices since 2007



Source. Barchart.com

### Exhibit 2. Monsanto Stock Prices for 6/2/2008 – 5/29/2013



Source. Barchart.com

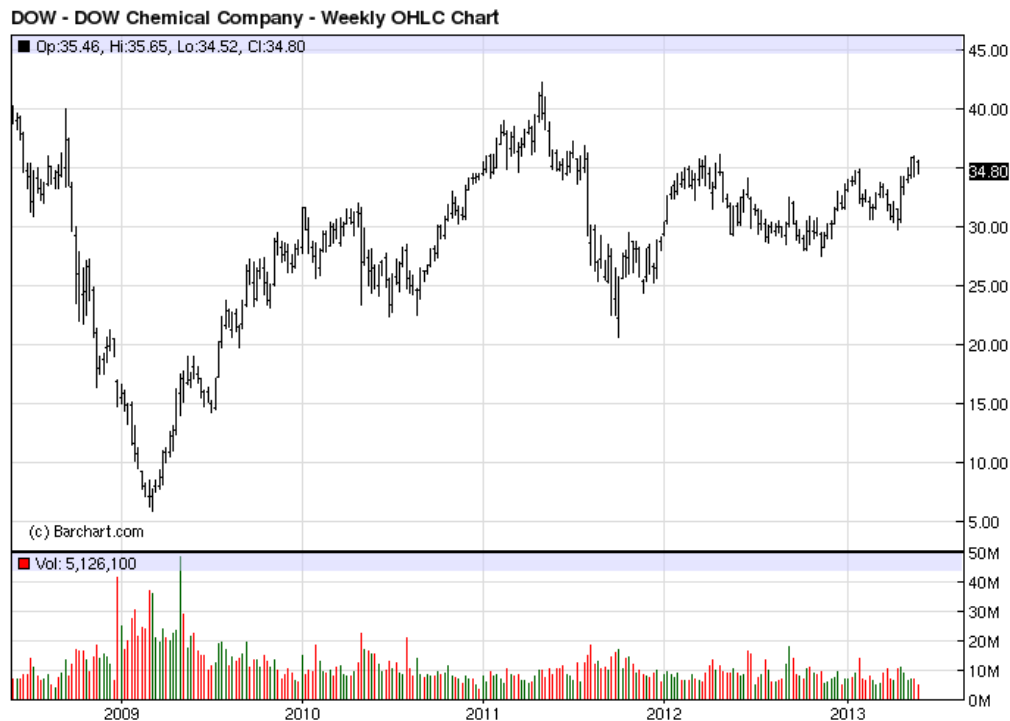


**Exhibit 3. BASF Stock Prices for 6/2/2008 – 5/29/2013**

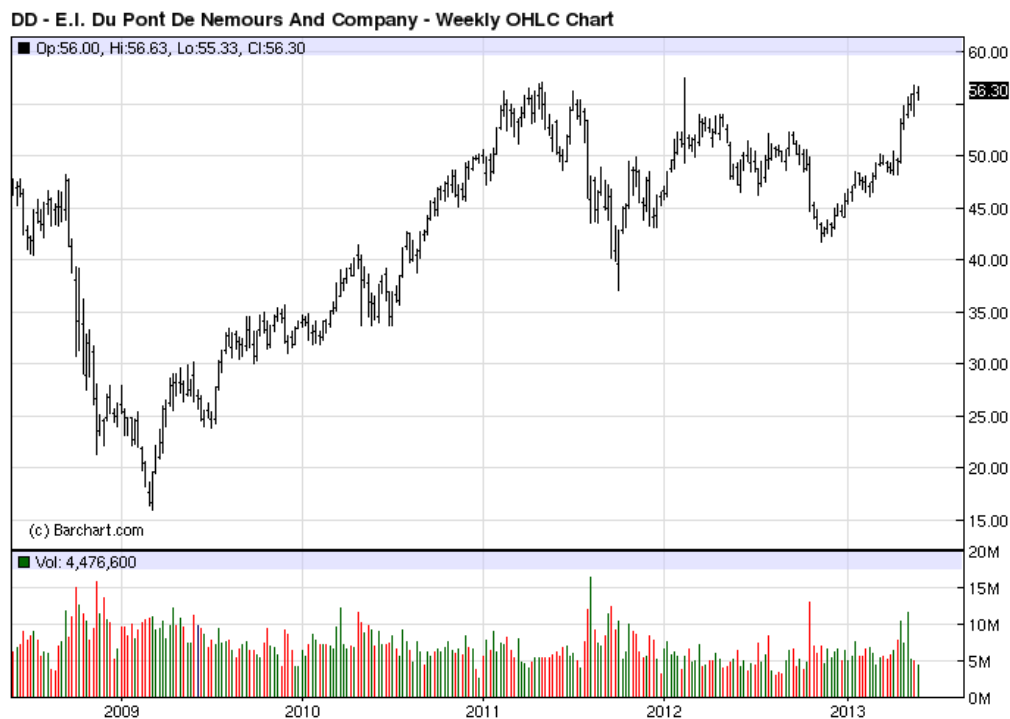
Source. Barchart.com

**Exhibit 4. Bayer Ag Stock Prices for 6/2/2008 – 5/29/2013**

Source. Barchart.com

**Exhibit 5.** Dow Chemical Company Stock Prices for 6/2/2008 – 5/29/2013

Source. Barchart.com

**Exhibit 6.** DuPont Stock Prices for 6/2/2008 – 5/29/2013

Source. Barchart.com