Sub-theme: Downstream linkages

HOW AGRI-FOOD COMPANIES SOLVE STRATEGIC CHALLENGES

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Abstract

The global agri-food industry is facing a number of strategic challenges, which demand that continual strategic adjustments and changes be made in companies. Driven, in particular, by globalisation, increasing international competition and technological developments, the industry must continually develop in order to maintain and improve long-term international competitiveness.

Business models, methods and approaches have been developed to identify strategic problems and solutions for the industry. The aim of this paper is to analyse how selected agri-food companies recognized and have tackled the challenges, and what lessons can be learned. Four agri-food companies or industries with international dimensions and significance are analysed. All companies have been influenced by globalisation, liberalisation and increasing international competition. The article illustrates how changing competitive conditions made some the companies choose similar solutions, while they made others choose different solutions – connected to strategic business models.

Some of the companies focused on cost competitiveness through reallocation and structural development, while others chose to optimise their competencies through vertical integration, cooperation and global strategic alliances.

Another company could, through innovation, move into a blue ocean. The creation of unique products and new markets resulted in brand new competitive parameters.

Finally, the last company could generate the necessary growth through collaboration with institutional investors as well as through investments abroad. A focus on the core business was maintained as a strategic choice, and the strategic development was anchored in the entire organisation.

Keywords: Food company, challenge, solution, strategic, solve, models

Introduction

The global agri-food industry is facing a number of strategic challenges and opportunities including globalisation, growth opportunities, vertical integration, food security, trade liberalisation, increasing international competition and technological developments. These are forcing the industry to evolve continually in order to maintain and improve the long-term international competitiveness.

A number of models and methods have been developed to map and identify strategic problems and solutions for the industry in a theoretical manner. Thus, there are some useful guidelines on how to manage business challenges strategically and methodically. However, it is useful and interesting to explore a further dimension: How did food companies recognise the challenges in the first place, how have they tackled them, and what lessons have been learnt?

This paper briefly outlines the general economic and business challenges facing the global agri-food industry and presents the theoretical and general approaches to solving the strategic challenges.

Based on this, the article presents four examples of agri-food companies that have faced such challenges, but have identified solutions through strategic choices. A number of experiences and lessons can be learnt from the analysis.

General challenges

Agro-food companies throughout the world are facing several strategic challenges, which require action. The list of challenges is extensive, but some of the most important ones that also form the basis of this article are:

- Increasing liberalisation and globalisation means both threats and opportunities to food companies. In each case, the companies have to identify and focus on their international competitiveness.
- Globally, the food industry is facing increasing competitive pressure from the retail industry. In general, retail companies have grown fast, undergone concentration, become global, and have strengthened their bargaining power through private labels, which has resulted in increased price pressure.

- Many companies are exposed to structural pressure, which demands a stronger focus on the core business. Companies need to specialise in order to exploit economies of scale and to optimise their market position.
- Innovation through R&D is increasing required in order to maintain or enhance competitiveness. The challenge is to identify the demand for innovation and, not least, to determine the optimal marketing of the new products, which often requires well-developed vertical integration.
- Price pressure due to discount waves, increasing use of private labels, etc. requires ongoing efficiency improvements and cost reductions in order to be competitive.
- Food security is becoming increasingly important, and with increasing global trade and sourcing, efficient traceability and control throughout the entire value chain is required.

Models and methods

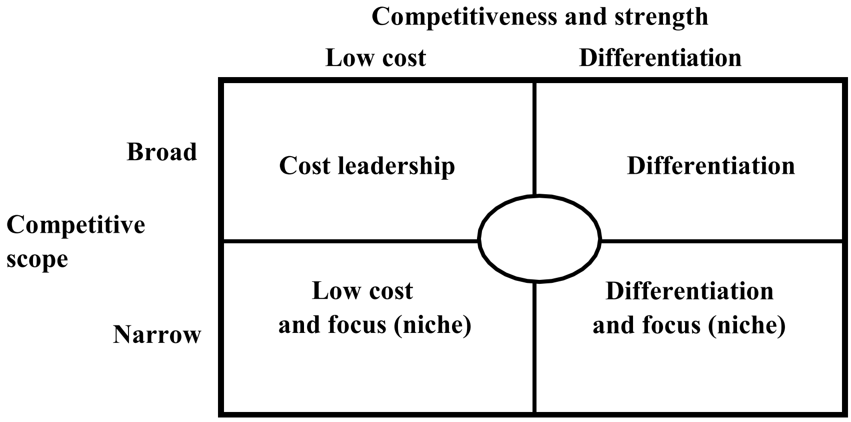
Four models, theories and practices are applied together as a cohesive theoretical framework to solve the strategic challenges faced by the agri-food companies:
* Porter's Generic Strategies
* Ansoff's growth model
* Value chain management – global strategic alliances
* The Blue Ocean strategy

<u>Porter's Generic Strategies</u>

An agri-food company can basically achieve a competitive advantage either by having low costs or by differentiating and developing specialty products for a larger or smaller part of the market. Differentiating means developing new, different, and better products, where innovation and high quality are crucial. These two types of competitive advantage (low costs and differentiation) in combination with the company's size and marketing potential leads to the identification of the following four generic strategies to develop and exploit competitiveness: "low cost", "differentiation and focus", "low cost and focus" and "differentiation and focus".

This is discussed by Michael Porter in the book "*Competitive Strategy*". The basic idea behind the strategy is shown in figure 1.

Figure 1. Porter's generic strategies



Source: Based on Porter (1980)

A *low cost strategy* entails the company seeking to reduce all costs from purchasing to production and sales.

With a *differentiation strategy,* the company develops new and different products or services, which meet a demand on the market, and which differ from the other markets with regard to quality, service, functionality, etc.

A low costs and focus (niches) strategy can be useful for companies that have low costs but typically also a limited size

A *differentiation and focus strategy* is used by, in particular, enterprises that, from an international perspective, are relatively small, and can only utilise a limited part of a market.

Ansoff's product market matrix

A strategy for a company's product and market growth can be determined based on Ansoff's growth model (also called Ansoff's product market matrix). An important element in Ansoff's growth model is that a company's growth initiatives depend on whether new or existing products are introduced to new or existing markets.

The growth matrix divides the segments according to whether the markets and products are pre-existing or new, cf. figure 2.

Figure 2. Ansoff's growth model

		Products	
		Existing	New
Markets	Existing	Market penetration	Product development
	New	Market development	Diversification

Source: Own presentation based on Ansoff (1957)

In each of the four quadrants, there is a growth strategy that sets the possible framework for the company's expansion:

Market penetration is the growth strategy used when a company chooses to market an existing product on an existing market.

Market development is the growth strategy used when the company wishes to sell an existing product on a new market.

Product development means that the company introduces new products to existing markets.

Diversification is a growth strategy where a company introduces new products on new markets.

A number of company, market and product conditions determine which growth strategy is appropriate.

Value chain management – global strategic alliances

A global strategic alliance (GSA) involves cooperation between companies from different countries in order to achieve a common goal. The goal may be to gain an added advantage or strength in the cooperation, for example, in relation to a mutual competitor or customer.

A strategic alliance strengthens the strategic competitiveness of companies through the sharing of resources such as technology, knowledge, etc. Often, companies that are in a strategic alliance complement each other, and each specialises in its core competencies and collaborates on the business areas where it is not so strong.

Strategic alliances can cover many different forms of cooperation, ranging from specific and delimited contracts to joint ventures. Joint research, development, production, marketing, procurement, distribution and minority ownership are included.

A number of drivers are contributing to the spread of global strategic alliances. Access to technology and distribution channels (backward and forward vertical integration, respectively) is an important driving force behind the formation of global strategic alliances. Control of the value chain is important for the strategic development of companies. However, it is often not possible for companies that act alone to achieve adequate control. Control and vertical integration can then be achieved through cooperation between companies, and a number of advantages and disadvantages can be identified, cf. Hansen (2013, 2018).

Blue Ocean Strategy

The aim of the Blue Ocean Strategy is to make the company unique on the market. Instead of focusing on the traditional competitive parameters such as price competition, Blue Ocean companies seek to create market advantages through creativity and innovation.

The Blue ocean strategy may provide significant inspiration for many food companies as agricultural and food products often belong to a homogeneous group, where product differentiation and innovation is limited and price is an important competitive parameter. The starting point of Blue Ocean theory is that no business or industry is constantly successful. Companies must avoid traditional and familiar patterns of action, and instead continuously rethink the way they market, sell and communicate on their market. Companies must be pioneers and be innovative in order to find and develop their unique business.

The Red Ocean market is characterised by intense competition, which is a situation many food companies are familiar with. In contrast, the Blue Ocean is a unique market position where competition is minimal.

Examples of agri-food companies facing and solving strategic challenges

Novozymes – Monsanto

Novozymes, the Danish biotechnology company, and Monsanto, the major American agrochemical company, have formed a global strategic alliance. The companies are quite different, but they had a common challenge:

Novozymes is engaged in research, development, production and trade in primarily bio-industrial products, processes and services, especially enzymes and microorganisms for industrial use. Novozymes has approximately 50 per cent of the world market for enzymes. The enzymes and microorganisms they produce can be used in many industrial sectors including agriculture.

Monsanto is a multinational agrochemical and agro-biological company, which defines itself as an agricultural company. Monsanto is divided into two business units: Seeds and traits, and crop protection and is the world's largest producer of seed. Furthermore, the company has competences in testing, distribution and marketing and has an international sales network.

Novozymes and Monsanto are the world's largest companies within their specific areas of competence.

Therefore, Novozymes is located upstream with a focus on R&D with no major forward integration into the agricultural market. Monsanto, on the other hand, has a strong position on the agricultural market, but it does not have the same specific R&D skills as Novozymes. Both companies, therefore, lack influence in important parts of the value chain.

By creating an alliance and establishing a joint company, the two parts of the value chain can be linked and synergies, economies of scale and specialisation benefits can be gained. The establishment of the alliance, BioAg Alliance, appears to have been based on rational thinking in that the founding companies complement each other, and each partner contributes their unique skills: Novozymes contributes unique biological plant protection based on microorganisms for agriculture, and Monsanto contributes with market access.

The Alliance was announced in late 2013, so it is still too early to assess how successful it has been. The Alliance's sales figures have not met expectations, but this has been explained primarily by farmers' poor earnings (Novozymes, 2017a). Both partners considered (2017) the alliance to be a successful partnership as its technological advances confirm that the solutions are effective (Novozymes, 2017a).

The companies complement each other perfectly in the value chain. There is mutual dependency and equality, and neither of the companies could – or would be interested in – replacing the other and its competencies in the short or long term. Both companies now have the opportunity to focus even more on their core activities, which increases the likelihood of acheiving further biotechnological progress. Therefore, drivers, advantages and disadvantages based on the theory of global strategic alliances can explain the formation of the alliance and its development.

The European sugar industry

For several decades, the European sugar industry has been relatively protected from international competition. The reforms to the EU's agricultural policy resulted in the sugar industry becoming the last major sector to be liberalised, which has led to significant strategic initiatives and changes – both among sugar beet growers and in the sugar industry.

The changes to the EU's agricultural policy as well as the specific sugar reform in 2006 and the abolition of sugar quotas in 2017 led to significant restructuring and a reduction in subsidies. In the sugar sector, the area decreased from 2.2 million hectares to approximately 1.5 million hectares during the years of reform. This decline in area was also the result of acquisitions, a reduction in quotas and the cessation of sugar beet production in several countries.

The aim of the reform of sugar market policy in the EU was to, among other things, make the sugar industry more competitive. The EU Commission introduced a restructuring scheme which, through direct economic support, facilitated the industry to change to more liberal market conditions. By facilitating structural adjustment and consolidation, more efficient companies could be established that could utilise economies of scale and produce at lower costs.

The results confirm that the EU's sugar industry did experience enhanced structural development and productivity during the EU reform, and that the intention of the reform to strengthen the competitiveness of the industry has been achieved to a considerable extent.

Countries with very poor conditions for growing sugar beets have, thus, stopped production. However, there has also been a reallocation among the countries, and concentration has risen in terms of distribution of sugar beet areas, cf. figure 3.

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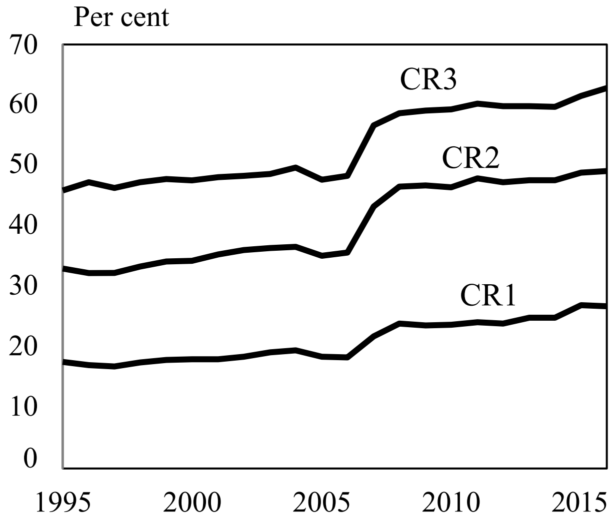
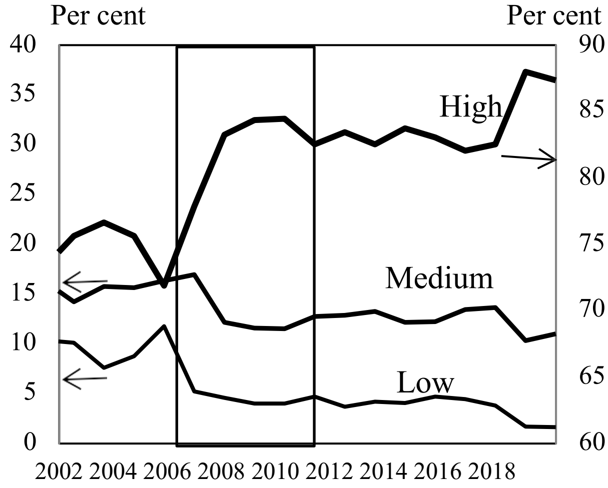
Figure 3. Concentration in the sugar beet areas



Source: Own calculations based on CEFS (several issues) and FAO (2018)

Figure 4. The distribution of sugar production in low, medium and high profitability countries



Note: Based on grouping shown by ECA (2010).

Source: Own presentation based on CEFS (several issues), ECA (2010) and the European Commission (2018)

Figure 3 shows the share of total area of sugar beets for countries with the largest area (CR1), the two largest countries (CR2) and the three largest countries (CR3). The figure shows a clear increase in concentration during the reform period, which reflects international specialisation in that production moves to areas where it is most advantageous. Figure 4 confirms the redistribution among countries relative to profitability.

Overall, there are indications that industry solved the strategic challenge through structural adjustments, exploitation of economies of scale and increasing efficiency. With reference to the theoretical foundation, it can be said that the sugar industry generally chose a strategy based on low costs and focus (niche) seeking to reduce all costs from purchasing to production and sales.

<u>DLF Seeds</u>

DLF Seeds is a global seed company that markets seed for fodder grass, forage seed other crops. Today, the company has a strong national and international position in its business area, and in some areas it is the world leader. During recent decades, the company has faced a number of crucial strategic choices, and it has undergone extensive structural development.

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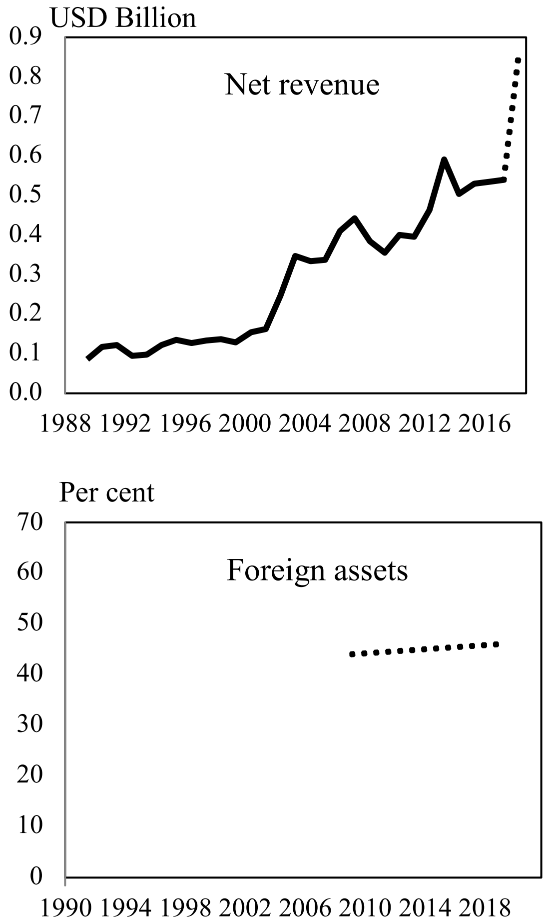
- In the 1980s, the Danish grass seed industry was struggling. Lack of consolidation, backward integration into R&D, and economies of scale combined with internal rivalry had weakened competitiveness and the industry was close to collapse. The industry was rescued in 1988 when DLF was established through a merger between three former competitors. The company was primarily owned by the cooperative DLF AmbA and secondarily by institutional investors. However, such an owner composition often causes problems.
- For DLF, growth is an important goal in order to utilise economies of scale and maintain an attractive market position. DLF already has very large market shares, and it is the leader in many markets. DLF has 40 per cent of the European and 25 per cent of the world grass seed market. DLF has decided to focus on its core business, so the challenge is how to grow further.
- DLF has grown significantly through direct investment abroad. In many cases, there is potential conflict of interest between cooperatives and investment abroad.

DLF has, thus, faced major structural and market challenges in recent decades. Despite this, since the 1980s, the company has performed well with strong growth, while earnings have been positive and increasing, market shares have risen and the company has been able to globalise through foreign investment. Figure 5 illustrates some of these positive trends.

Figure 5. Economic key figures for DLF Seeds



Note: 2018: Estimate. No data for foreign assets from 2008
Source: DLF Seeds (several issues) and own calculations

There are a number of explanations as to why and how DLF was able to cope with the strategic challenges.

The first challenge was to create and manage a "hybrid" company with cooperative and institutional investors as owners. There are several basic pros and cons, but the "experiment" succeeded unlike other examples in the industry.
Several explanations can be identified including transparency, mutual understanding of the owners' motivations, professional management and, not least, good financial results for both shareholders and grass seed farmers.
The company has also had to deal with the second challenge; to achieve "growth, market leadership and focus at the same time". DLF has managed to grow significantly from year to year, despite already large market shares and its clear focus on core areas. This has been achieved through a clear strategy regarding growth segments and growth forms,

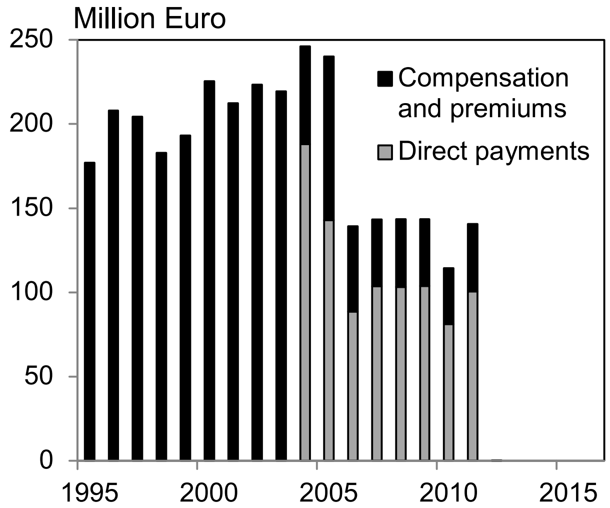
and a focus on internationalisation. DLF Seeds implicitly and explicitly follows the principles of Ansoff's growth model – and more sophisticated and detailed versions of the model.

The third challenge "internationalisation through foreign direct investments" has succeeded despite potential barriers owing to, *inter alia*, the cooperate ownership. Explanations for the success include good and visible experiences of previous investments abroad, and limited conflicts of interest between foreign investments and Danish production.

KMC

KMC a.m.b.a. (Kartoffelmelcentralen a.m.b.a.) is the largest starch production company in Denmark and one of the largest in Europe. KMC came under considerable pressure when the EU decided to abolish support for starch production in 2012. Figure 6 shows the development in the EU's total support for the production of starch potatoes and the composition of the support.

Figure 6. Total EU support for the potato starch industry 1995-2016



Source: Own production based on OECD (2018)

The figure shows that the level and composition of the support has changed significantly. For KMC, it was estimated that liberalisation would result in an annual loss of DKK 88 million (USD 13 million). For this reason, KMC prepared and implemented a two-sided strategy based on both efficiency and high-value production. Overall, the plan consisted of two parts: Focus on costs including streamlining and cost savings, and differentiation, including an ingredient/processing strategy with a focus on development, innovation and high-value production. The strategic plan was implemented in the organisation and led to the employment of 15 additional staff to conduct innovation and development. The strategy was supported by significant investments and extra resources as well as strong support from the owners.

KMC's shift in strategy towards less bulk and more modified and customer oriented starch products had already begun before the EU reform, and before liberalisation became relevant. The gradual reduction and change in the support provided by the EU's agricultural policy had already started in the beginning of the 1990s, so this trend was predictable. In addition, with increasing international competition and trade, it would be difficult for the company to focus solely on low-value products and price competition.

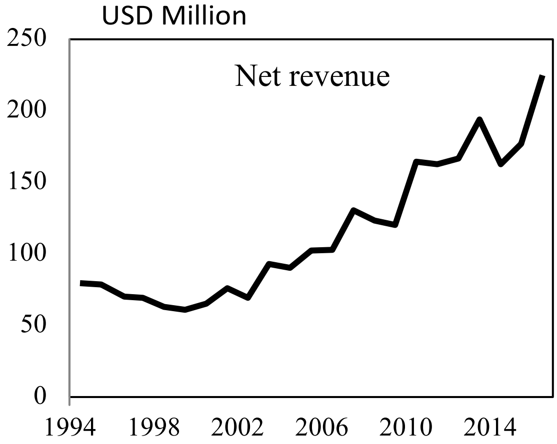
Therefore, as early as the 1990s, KMC started working on increasing refinement. The idea of modified starch was based on the idea that customers should be more closely linked to the company (Bonde, 2017). Customers are more dependent on the company if they buy processed and customised products instead of bulk products. Originally, KMC did not intend to make large, sophisticated strategic plans, but they focused more on efficient management and good business skills.

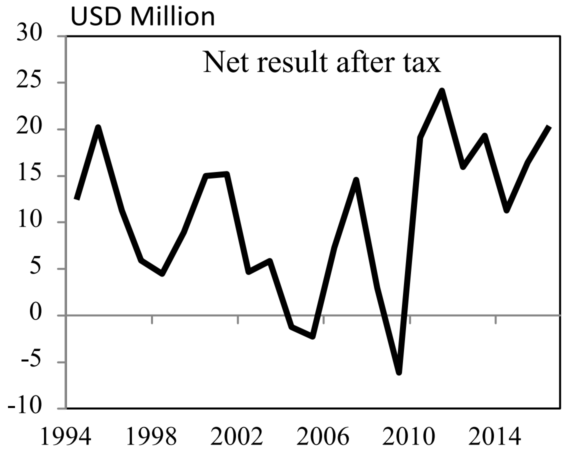
Once the plans for the EU reforms of the starch industry had become more concrete, it naturally led to more formalised strategic plans, which became more anchored in the organisation.

KMC's strategy can be explained on the basis of the following three models: Porter's generic strategies, Ansoff's growth model and the Blue Ocean strategy. Differentiation, high-value products with less competition (Blue Ocean), new customer groups (new markets), but still core business with regard to the supply of commodities.

KMC's strategy plan has largely succeeded: The growth target for 2020 has already been achieved, and there has been significant development in new products, applications, customer-oriented products, etc. Figure 7 illustrates some positive trends regarding the economic performance in recent decades.

Figure 7. Economic performance of KMC 1994/95-2016/17





Source: Own presentation based on KMC (several issues)

Conclusion

The article shows how changing competitive conditions made the 4 case study companies choose both similar and different solutions – connected to strategic business models: Novozymes and Monsanto were located at each end of the value chain, so they created a strategic alliance in order to connect and optimise their value chains. Vertical integration, focus and global collaboration were key drivers according to the theory of global strategic alliances.

The European sugar industry faced major market deregulation and liberalisation. The overall solution was structural development, increased efficiency and reallocation within Europe. In general, the industry chose a strategy based on low costs and focus (niche).

KMC also faced significant liberalisation and reduction in support. The solution was a two-sided strategy based on efficiency and innovation. The development of new products and segments was crucial, but also the creation of a balanced product portfolio was important. The company's strategy can be explained on the basis of three business models.

DLF has faced a number of crucial strategic choices. Success criteria included a focus on the core business, growth through foreign acquisitions, transparency and broad support for a clear and long-term strategy. The strategy is closely connected to the principles of Ansoff's growth model and detailed versions of the model.

Lessons that can be learnt from the above are that business models can support strategic choices in the agri-food industry, and that there are many different challenges and solutions, but optimal strategic choices depend on both the challenges, the markets and the companies.

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