
Case study

New product development at Eastern Spice & Flavorings

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Abstract

Purpose – The purpose of this article is to provide an insight into the spice industry.

Design/methodology/approach – Uses Eastern Spice & Flavorings as a case study and focuses on its international product development group.

Findings – Despite the company's origins as a family-owned small business, it competes in the global marketplace. To compete successfully, it must localize its blends. Until the company can establish new product development (NPD) centers in its major overseas markets, regional teams from Richmond that could travel to foreign markets to aid product development would be a solution to increasing sales.

Originality/value – Discusses Eastern Spice & Flavorings and its new product development.

Keywords Food industry, Product development

Paper type Case study

Introduction

The spice industry is a low technology business with very low barriers to entry. In fact, almost any small business can enter and compete. The primary requirements to get product to market are raw materials, containers and a means to fill and label them. The raw materials are agricultural products, produced by numerous small farmers around the world. As a result, raw materials prices tend to be low, usually close to the price of production. The low entry barriers have led to a multinational quality control problem. Tony Andriotti, Director of Global Product Development at Eastern Spice & Flavorings stated:

... all a new competitor needs to enter the spice business is a few barrels of product, a scale and a bunch of bags.

Competitors doing business in that manner are called the "weigh and fill guys." Their products can be found in outdoor bazaars and markets throughout the world. The situation is far different than it was in the seventeenth century.

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History of the spice industry

Today it is hard to imagine that the spice trade reshaped the modern world. Demand for spices created empires and started wars and was the pressure that helped Europe discover the new world. Its history is long and revealing.

Archeological evidence suggests that spices were popular in ancient Egypt. Around the same time, cloves were popular in Syria, despite the fact that, like nutmeg and mace, they came only from the spice islands of what is now Indonesia. Somewhat later, in the sixth century BC, Confucius advocated the use of ginger and fed the appetite for its use in Chinese cooking. Europe's taste for spices existed even before the birth of Rome.

In the twenty-first century spices are flavorings for food, but a hundred other uses have contributed to the demand through history. In ancient Egypt cassia, cinnamon, anise, marjoram and cumin were sought after because they were essential for embalming. In the west, spices were used for food from the beginning. Before the days of refrigeration, canning, salting, or other preservation methods, fresh food was the best way to sustain human life. It may be hard to visualize what modern life would be like without the global food and produce trade we now enjoy. Sophisticated transportation systems erase the limitations of the seasons and bring choices unimaginable in Medieval Europe. Then, commoner and noble both faced the grim prospect of poorly preserved food and the appetite killing smell of spoilage. Spices, then and now, preserve and they also make the poorly preserved palatable. It was said that in case of a bad harvest or in cold winters that heavily salted

meat laced with spices made life possible. Pepper was especially prized and became highly valuable. In the Middle Ages plague added to the demand for medicinal spices; and boosted their value dramatically. Spices, like peppercorns, became a medium of exchange. Modern proof of the medieval value of peppercorns was found in the 1980s. The English ship, the *Mary Rose*, sank in 1545 and was the subject of folklore and sadness. After an extensive salvage project raised her from the ocean floor in the 1980s, marine archeologists examined her contents and the remains of her crew. Notably, nearly every sailor was found with peppercorns on his person – the most portable store of value available.

The immense demand for spices worldwide fueled a large distribution channel that allowed Arabia to monopolize the industry. The Arab traders used a combination of disinformation and strategic alliances to hide the sources of the spices they handled and they reaped monopoly profits for years. Their stranglehold on the trade finally was broken when Europe discovered that Indonesia and the Moluccas, the Spice Islands, were the source of cloves, black pepper, cinnamon and most of the other spices in high demand.

Since overland routes to the sources of spices were blocked, European rulers underwrote expeditions to find any sea routes that would enable direct contact with the spice producers. Explorers like Christopher Columbus received significant support not to discover new worlds but to find a sea route to spices! Spice historians note that Columbus' voyage was really a failure. He is alleged to have called the inhabitants of the Americas, Indians to mollify his backers. He also renamed the pungent chilies of the Americas "Red Pepper" to show some measure of success. Since 1492, the Dutch, through their Dutch East India Company, the Portuguese, Spaniards, the English and other countries took turns trying to control the trade using guile and muscle.

The spice industry today

When defining the boundaries of a commodity industry, it is important to clarify what products are involved. Industry terminology describes spices as seasonings for food that come from the bark, buds, fruit or flower parts, roots, seeds or stems of various aromatic plants and trees. An industry trade association, the American Spice Trade Association (ASTA), specifies that spices are "any dried plant product used primarily for seasoning purposes." This definition covers a wide range of plant and plant parts: tropical aromatics, leafy herbs, spice seeds, roots, dehydrated vegetables, and spice blends.

Just a few years ago, only tropical aromatics like pepper, cinnamon, and cloves were considered spices. In contrast, the leaves and seeds of temperate-zone plants like basil and oregano were known as herbs. Today this classification has blurred, even though it is still used in some circles. The term spice now generally includes a whole range of elements: spices, herbs, blends and dehydrated vegetables.

Today, the spice industry comprises a \$1.7 billion market. There are many small players spread around the globe and this in part has led to its erratic economic performance over the past five years. Usually numerous small sellers signify a lack of widespread market information and a distribution in the prices that individual farmers accept. The middleman, the

spice trader, assumed great importance. The trader would visit the markets and buy spices for resale to corporate customers. The situation allowed some traders to reap high profits. Information control is a key to success. Although no one company could control the overall flow of spice, information could be controlled. Traders could release it early enough – or late enough – to make a killing. Now, though, the information flows so freely that it is almost transparent. Spice traders lament that:

There just aren't so many secrets any more. The farmers in Malaysia use their mobile phones to get New York market price as soon as the traders do.

The result is that large corporate customers like Eastern Spice & Flavorings have trained their staff to visit the markets and serve as internal spice traders. Their large purchase quantities have allowed them to bypass the traders entirely. Tony Andriotti created the company's new integrated distribution strategy. In doing so he reversed the practice of procurement managers at food-processing firms purchasing spices through brokers. Most never left the comfort of their offices. In contrast, Andriotti is called a road warrior. He and his staff of six men and two women have traveled to most spice growing countries repeatedly. Eastern has set up joint ventures or wholly owned subsidiaries in numerous key spice-producing and consuming countries in recent years.

Once the reason for cutting out the middleman, the trader, was price. Now, quality is what matters. The trend was fueled by consumer recognition of the level of quality control in the industry. The prestigious *Wall Street Journal* published an article listing the allowable level of impurities, like insect parts, that the US Food and Drug Administration authorized. The article cited the problems of distinguishing between the appearance of insects and the spice they contaminated. As a result, Eastern found it had a strategic advantage: great quality control.

Governments have boosted the company's advantage. Both European Community and American regulators have taken steps to reduce impurities. The impurities can range from stones, rusty nails, insects, plastic toys and even articles of clothing. It is amazing what can find its way into a burlap bag that should contain only spice. The implications of missing just one contaminant are dire. The prospect of an insect being packed in a jar of ground pepper could result in a lawsuit and too much adverse publicity to bear.

Eastern recognized that its quality control was world class but not perfect. It tried several times to raise the quality of products it purchased without much success. When it used spice traders, the company evaluated each purchased spice batch and tracked the quality that individual traders supplied. Eastern started a program to reward higher quality. It tried avoiding some traders and shifting purchases to others but it lacked sufficient control to make a difference. The technique was not successful since none of the traders evaluated quality well enough. This is the reason Andriotti and his staff travel. Andriotti decided to have company specialists examine every batch before purchase and only purchase lots of acceptable quality. Andriotti's strategy has impressed the industry and government alike. In fact, the Indian Spices Board is helping its members improve standards and obtain seals of approval such as ISO certification. The board recognizes the margins

that come with the “value-added” processing now done in rich countries.

One lesson learned is that Eastern has the power to dictate product quality among its vendors and the intelligence to make the right choices. It has seen its purchasing and quality strategy reduce its liability, improve its retail product quality and influence governments. That lesson led to a “take charge” company philosophy and internal focus and also had unintended results.

Current industry trends

Overall, the spice industry has seen lackluster growth. New products fuel growth and recently sales have risen just 2.1 percent, driven mainly by spice blends.

The overall spice industry contains four main categories: spices and seasonings; salt and salt substitutes (including seasoned salt and salt alternatives); extracts, flavorings, and colorings; as well as pepper. Worldwide, the major players include Reckitt and Coleman, McCormick & Company, Durkee-French (Specialty Brands), Morton, Eastern Spice & Flavorings, and Diamond Crystal. The industry has developed several marketing strategies, which heavily rely on careful market segmentation, product differentiation, and cross merchandising.

New product development

Within the industry, the larger players have learned the value of tested recipes in designing and selling their products. Some of that knowledge came from related industries like the alcoholic beverage industry. Makers of specialty liqueurs learned to expand their markets by using their products as ingredients in mixed drinks. One example involves Galliano, also known as Liquore Galliano. Galliano is a sweet, yellow Italian herbal liqueur. It is flavored with various herbs, flowers and spices, including anise, licorice and vanilla, giving it a unique taste. That unique taste led to a small niche market and lackluster sales. Since it is a complex mixture of ingredients, an alternative beverage cannot readily substitute it in a recipe. Galliano expanded its market by creating the Harvey Wallbanger, a popular drink that combines 1 oz Vodka, with 1/2 oz of Galliano and 4 oz of Orange juice. The drink was masterfully merchandised with t-shirts and in-tavern promotions. The result was a significant increase in Galliano sales, even though the amount used per drink was small. Galliano, or other liqueurs like Amaretto, Kahlua, or Bailey’s Irish Cream, are unique blends of ingredients and have used the recipe strategy well. In each case, the prime ingredient was a complex blend of elements that made substitution difficult.

The spice industry also observed other instances of the recipe strategy. There were attempts by conglomerates to reinforce brand preference with recipes specifying their own brands as ingredients. For example, the Baker’s Semi-Sweet Chocolate brand specified Calumet Baking Soda in its cookie recipes. However, most consumers used whatever they had on hand and ignore the specification. That approach was flawed since the ingredients had direct substitutes available. To Eastern, the solution seemed to be to create a unique blend of herbs and spices that would garner consumer loyalty. That

taught Eastern a lesson: creating a branded mix of ingredients could be helpful.

One early product possibility was linked to the great increase in backyard grilling in North America. Propane and charcoal backyard grills were often called barbecues even though they might not be used for the traditional barbecue involving a tomato based spiced sauce. In 1980, Eastern recognized too many competitors to enter the barbecue sauce business. However, it did identify meats that were consistently grilled outdoors. The four most frequently grilled products were beef, in the form of steak or hamburgers, pork or beef ribs, chicken, and sausages or hot dogs.

Eastern’s first major spice blend was aimed at those who enjoy grilled steak. It was marketed almost by accident. Often the chef is a male with limited culinary skills who first sears the meat then cooks it more slowly. Spices may be limited to black pepper and salt, or omitted altogether. The steak is often under or overcooked and lacks flavor. Andriotti, a skilled backyard chef, devised a favored spice recipe he used at home. It was a mixture of salt, black pepper, red pepper, dill seed, coriander seed, garlic and dried onion. In a flash of insight, he invited some staffers to his home for a summer barbecue and treated his steaks with the mixture. It was a taste sensation that spawned much interest within the company. Without bothering to perform consumer preference testing, Andriotti arranged to test market the product under the name, Kansas City Spicy Steak Seasoning. The product was priced well above the cost of ingredients and the promotional campaign showed beaming males receiving compliments for the wonderful tasting steaks grilled on their charcoal grill. In the ads, the males all looked like serious “professional grillers.” KC Spicy Steak Seasoning was their secret ingredient – and the secret was out. Sales results were impressive. Eastern had tapped into a need that its target audience did not know it had.

Management at Eastern felt that spice blends were the wave of the future, but feared that Kansas City Spicy Steak Seasoning might have been a fluke. The company decided to reorganize its product development center to systematize the new product development (NPD) process. Their stated goal was to “find successful products” and left the organizational details to the committee.

In this way, Eastern slowly moved into the consumer product development arena. A marketing committee met to design new product development facilities and development processes. While the firm’s sales were impressive, its corporate facilities were not. The ordinary business functions were well supported and its quality control laboratories were excellent. Eastern did spend considerable time with its large corporate customers developing custom spice mixes. Thus, Burger King, Pizza Hut, Hardee’s and traditional restaurant chains like Outback Steakhouse helped specify their own signature spice mixes. However, consumer and consumer product research were in their infancy and the company had little infrastructure to support them.

The infrastructure of product development

The committee recommended that the company build new test kitchens and hire chefs to test spices for the consumer market to build on its success with corporate customers. The

investment would be significant and Eastern planned to use the facility for domestic and global development. Eastern hired its first PhD food technologist for its product development laboratory. The researcher, Gina Labusa, was a graduate of Massachusetts Institute of Technology with a PhD in food technology. She had worked for General Mills developing formulations for Totino's frozen pizza. One of her stellar achievements was a crust formulation that could be frozen and baked in an oven to yield a crust very similar to pizzeria pizzas. Totino's increased General Mills' sales and profit. Labusa was also instrumental in formulating the tomato topping and chose its spices. Her credentials fit the company's needs well.

Next, Eastern organized behavioral researchers to constitute consumer taste panels to evaluate potential spice mixes and recipes that contained them. In fact, all consumer panels were served food, not just mixes of spices. The objective was to tap into customer's preferences in a normal setting. Intelligently, the company decided to constitute specific consumer panels matched to a product's target audience. Thus there were panels aimed at audiences like the mostly male blue-collar steak fans, the mostly male white-collar seafood chefs, the heavily female chicken and vegetable grilling segments.

The next logical step was to set up retailer advisory panels. Channel of distribution members are invaluable information sources and excellent judges of what types and styles of products consumers prefer. Eastern arranged several select advisory panels based on a retailer's experience and customer base.

Using the new facilities, Eastern developed a mixture of garlic, salt, onion, black pepper, parsley, orange peel, paprika, and green bell peppers as a spice for chicken. That product, Dixie Hand Rubbed Chicken Seasoning was an immediate hit. Other products followed. They included Chef Louis' Cajun Seasoning Mix, and Big Daddy's All Purpose Seasoned Salt.

The success of these blends reinforced Eastern's management's beliefs that mixtures and manufactured products held the highest potential for sales growth. They also saw the high rate of product success that the new product development facilities generated. Soon, new successful spice mixtures developed in Richmond were sold around the world.

While Eastern was justifiably proud of its homegrown product development center, it welcomed new product ideas from its overseas subsidiaries and partners. The Thai joint venture supplied useful information requesting spice mixtures for Gang Gai (Chicken Curry), which is chicken with Thai spices and coconut milk as well as Goong Tod Gratiem Prikthai (Fried Shrimp with Garlic) in which shrimp are marinated in Thai sauce, garlic, pepper, and fried. Both mixtures were formulated according to local directions and sent back to Thailand for further refinement. Eastern's limited experience with Thai cuisine caused the company to rely heavily on the joint venture's input. The process was scientific and the market results were quite positive.

After a significant history of success, Eastern management discovered an emerging home grown market. When the *Wall Street Journal* reported that the largest selling condiment in the US was not mustard or ketchup but salsa, management

requested a study of potential products for the Hispanic spice market.

One obvious product was fajita mix. Fajitas are tortillas, flat corn pancakes, filled with a selection of meat, spices and other ingredients such as chopped vegetables. Eastern had a number of Hispanic employees and they were a natural taste panel. They relished the chance to help the company create a mixture for a food item most had grown up eating. The development time was shortened a bit due to the intense interest of Eastern personnel. Happily, Alejandro's Authentic Fajita Flavoring was an instant market success that helped create substantial custom food industry business when one of the fast food chains decided to add some Hispanic food to its menu. Eastern's spices helped them formulate the items and Alejandro's Authentic Fajita Flavoring was the starting point for the corporate product.

As the Hispanic market grew, Eastern developed new offerings to complement its product line. Andriotti recognized the invaluable contribution of Eastern's Hispanic employees and directed that they be part of the specific consumer panel. In addition, he instituted a company policy to increase employee input into the NPD process. The results were on the whole, very favorable.

A request from Germany

In the fall of 2003, Gunther Mölders, the chief of Eastern's joint venture in Germany, Deutsche Pfeffernüsse, GmbH, was concerned about slow sales for Alejandro's Authentic Fajita Flavoring. After polling his managers and the retail channel he learned that a rival product, Tapultipec Fajita Mix, had just been introduced and its product launch seemed to be gaining momentum. The rival product introduction was at the early stages.

Mölders did some informal in house consumer research and feared that he might need a fajita mix formulation that seemed to be better suited to consumer tastes in Germany. The German joint venture did not have a new product development facility. Thus, Mölders made a formal request in writing to Richmond that Alejandro's Authentic Fajita Flavoring be reformulated for the German market. His managers supplied samples of Tapultipec Fajita Mix bought off the shelf in Frankfurt.

That request went directly to corporate headquarters in Richmond and was forwarded to the NPD Center to Gina Labusa. Labusa was told that:

Germany may need a fajita mix reformulation but the market data is not in yet. Still, let's honor that request and see what we can do.

The competitive sample was analyzed thoroughly. Under standard policy, the NPD Center created the requested fajita mix formulation and four other test recipes, one of which was the competitive Tapultipec Fajita Mix. Since analysis could be performed with great precision, food technologists were able to vary the spice recipes to create a scale of formulations ranging from the company's product to the competitors' with intermediate mixes that could be tested. Since the two reference mixes contained similar ingredients, it was possible to create formulations that were all in the range of acceptability without any being unpalatable.

Center chefs used each spice formulation as the only ingredient to vary in a standard fajita recipe. Each of the five formulations was submitted to consumer testing in a well-designed experiment. Eastern used its Hispanic taste panel to evaluate each recipe. The five sample names, their approximate compositions and preference scores are shown in Table I.

After testing, the results were somewhat unclear but one statistically significant sample emerged. The panel seemed to prefer the original Eastern formulation (sample 1). Comments clustered around the “authentic” or “traditional” taste of the fajita. However, samples 2 and 5 also garnered positive preference scores.

Labusa reported the results to Eastern management and recommended, given the results, that sample 1, the company’s product, tested the highest. She also reported potential limitations of the test, namely that it was by no means certain whether a German taste panel would have yielded the same results. She advised great caution in applying the results and strongly advised duplicating the panel tests in Frankfurt.

Given the tentative nature of the German situation, with few concrete market share facts, US management only used Labusa’s preference results on which to base their decision. The marketing director and his staff met to consider Deutsche Pfeffernüsse’s situation. Without definitive proof that new competitor had stolen market share from Alejandro’s, Eastern decided not to reformulate the mixture “at the current time.” They deemed it prudent to wait for additional competitive data out of Germany. The decision was to stick with the current formulation. After all, the managers reasoned, it is the more authentic tasting blend.

Instead, marketing launched a study to try to learn if there were other reasons for the slow start. Eastern dispatched two experienced market specialists to Germany to work with Deutsche Pfeffernüsse and to assess local conditions. After a month had elapsed, the team learned the latest market share figures and had organized a local taste panel. Tapultipec Fajita Mix had achieved a 58 percent market share compared with Alejandro’s 38 percent. While Tapultipec’s product launch was done professionally and with sufficient marketing support, the share results indicated factors other than product launch effects were operating.

The team brought sample fajita formulations and applied them in a less rigorous taste test than that used in Richmond. The key difference was that it used the proper market segment: Germans. The local taste panel revealed that Mölders’ concerns were valid. German taste preference results showed differences from the US results. While the preference ratings between samples 3, 4 and 5 were close,

Table I Taste preference results: Richmond Panel

Test sample	Composition	Preference
Sample 1	Alejandro’s Authentic Fajita Flavoring	4.39
Sample 2	Mostly Alejandro’s – slightly Tapultipec	4.05
Sample 3	Equally Alejandro’s – Tapultipec	3.04
Sample 4	Mostly Tapultipec – slightly Alejandro’s	3.12
Sample 5	Tapultipec Fajita Mix	3.87

Notes: 5 = highest; 1 = lowest

Eastern learned that it could field a reformulated product with superior preference ratings (Table II).

Post mortem

The company’s management met to review the situation in Germany and immediately reformulated the product and cooperated with Deutsche Pfeffernüsse to launch the “new, improved, fajita flavoring for German tastes.” The re-launch was done with sufficient support and results were on the whole encouraging. However, it would be several years before the reformulated product would regain the market share lead.

Overall the situation was not too damaging to Eastern. The market potential of fajita mix in Germany was much lower than in the US. However, the mistake signified problems with the company’s global product development efforts. It was clear that Eastern did not have sufficient resources to duplicate its new product development facilities worldwide. It would have to analyze the cause of the problem and find ways to avoid them.

Ralph Schweiker, a marketing professor from the University of Richmond, held the Eastern Spice & Flavorings Chair of Marketing Management. The company asked him to review its global new product development activities and suggest ways to improve practices. Schweiker agreed to help and investigated the company’s management, processes, history and the personalities involved. After several months, he came to the following conclusions.

The company had a history of success that was based on internal management taking control of a situation in order to succeed. From the first demonstration Andriotti held highlighting the value and appeal of his own spice blend, management realized that the company had good ideas internally and that it did not need to “over depend” on outside resources. The basic idea is that the spice business is simple and management could navigate the industry well.

Schweiker also cited the efforts to centralization purchasing as leading to unanticipated marketing myopia. Centralization of purchasing and avoiding spice traders led to higher raw material quality but helped institutionalize an internal focus of decision-making. Even the NPD Center’s operation had unintended consequences. The center was focused on finding new products and in some respects management was not concerned about the integrity of the NPD process. For example, Gina Labusa’s cautions about the US panel results applicability were not considered seriously enough. Despite her experience and her credentials, she was viewed as a technician, not a business decision maker.

Table II Taste preference results: Frankfurt panel

Test sample	Composition	Preference
Sample 3	Equally Alejandro’s – Tapultipec	4.24
Sample 4	Mostly Tapultipec – slightly Alejandro’s	4.02
Sample 5	Tapultipec Fajita Mix	3.96
Sample 2	Mostly Alejandro’s – slightly Tapultipec	3.45
Sample 1	Alejandro’s Authentic Fajita Flavoring	3.09

Notes: 5 = highest; 1 = lowest

It might be fair to say that parochialism crept into the NPD process with managers over ruling “science.” Despite Labusa’s scientific concerns, Eastern marketing’s “we know better” attitudes formed their decision. Schweiker offered the following lessons that management might consider changing.

Lessons learned

Organization and process are both important. Eastern had a successful history of management decision-making. However, its focus was on pure spices. Spices are commodities and consumer preference is limited to acceptance or rejection. For example, one might like cinnamon or not; the choice is based on a rather simple decision. However, accepting spice blends requires more complex consumer consideration and formulating them requires more thought. When the company embarked on the sale of blends, its marketing problem became much more complex than selling something as simple as garlic. Its management processes should have been more sophisticated.

The situation shows that it is never appropriate to ignore the voice of the customer, even if that voice mumbled. Schweiker suggested that the company extend the NPD team to include specialists for each active region within the global market. Those experts might be based in Richmond, but could liaise with joint venture partners to increase success.

Another lesson was that minority opinions must be heard and the input evaluated. Labusa knew what she was talking about and should have been heeded. Her concerns were an

example of the dictum, “Think globally; act locally!!” It was surprising that management did not listen more carefully.

One issue seems to revolve around the company’s different foci between production and marketing. Production is by its nature global. Spices do not grow in Montana or Virginia. Production and purchase demand global involvement. However, Eastern’s traditional market was the US. It honed its skills and built its business satisfying US consumers. Since most of the managers were North Americans, their views, preferences and frame of reference was North America. Schweiker recommended a rather obvious step: hiring more global managers from outside the US. For some global companies like Coca-Cola, a non-US CEO, caused the company problems when Coke was reformulated. The “New Coke” disaster in the US cost the company money and embarrassment. That is a good example of how a non-local manager can make mistakes.

The final suggestion was to extend the NPD effort globally in a physical way. Despite the company’s origins as a family owned small business, it competes in the global marketplace. To compete successfully, it must localize its blends. Until the company can establish NPD centers in its major overseas markets, regional teams from Richmond that could travel to foreign markets to aid product development would be a solution to increasing sales. They must also involve the local channel of distribution that Eastern failed to do in the earliest stages in Frankfurt.