Evolution of the Market

It is also important for producers to keep in perspective the "organic price premium." The organic price premium can be seen from two perspectives, consumer and producer. The concept of the premium means totally different things to each. Consumers view the organic price premium as the difference between organic and conventional products, generally without having any sense of the value or cost incurred in producing organics. To producers, price premiums exist in markets where supply is short and reflect what buyers are willing to pay to acquire the grain they need. As supply expands, the increasing availability of organic grain can cause prices to fall, reducing or even eliminating the premium that producers receive, even though consumers will still perceive it to exist because the organic cost will still be higher than that of the comparable conventional product.

Conclusion: What Does the Market Look Like for Virginia?

Significant opportunity exists to produce organic grains to supply organic dairy producers and other quickly expanding organic sectors such as poultry and meat. Nevertheless, the transition to organic grain production involves costly investment, so the medium- to long-term potential of the market should be considered when making the decision to enter into production. The success of the organic grain market will depend on the continued success of these buyers, as well as organic grain producers' ability to compete with other regions that produce grain and can ship it into the region. Currently, demand is growing more quickly than supply, resulting in significant price premiums, but over the medium to long term an increase in the number of producers will cause the organic price premium to erode as supply increases and prices fall. At the same time, high transport costs enhance the competitiveness of local organic grain production.

References


Table 1. Share of Supermarket Sales*, 2000.

<table>
<thead>
<tr>
<th>Category</th>
<th>Volume Million dollars</th>
<th>Share of store sales Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelf stable juice</td>
<td>6,124</td>
<td>1.6</td>
</tr>
<tr>
<td>Refrigerated, single strength juice</td>
<td>4,099</td>
<td>1.1</td>
</tr>
<tr>
<td>Frozen juice</td>
<td>982</td>
<td>0.3</td>
</tr>
<tr>
<td>Fruit, canned</td>
<td>1,611</td>
<td>0.4</td>
</tr>
<tr>
<td>Fruit, dried &amp; snacks</td>
<td>934</td>
<td>0.2</td>
</tr>
<tr>
<td>Fresh produce</td>
<td>37,325</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Source: Harris et al. (2002).
* Supermarkets and super centers with annual sales of $2 million or more.

European markets, but can increasingly be found on U.S. shelves. Still other new products are marketed to consumers looking for a particular functionality, like increased stamina, immune system function, or other health benefits. Many single-serve beverage products are used by consumers as daily “doses” of a particular vitamin, mineral, antioxidant, or all three. From 2003 to 2004, functional drinks category in the US grew 15.1 percent in units sold, compared to the fruit juice category, which saw a 2.8-percent decrease in the same period of time (EuroMonitor 2006).

Still, the demand-side outlook for fruit juice and juice drink products remains positive, although total volume of sales has grown slowly. U.S. per-capita consumption of fruit juice averaged 7.55 gallons (single-strength equivalent) between 1980 and 1982, 7.85 gallons between 1986 and 1991, 8.73 gallons between 1992 and 1997, and 8.89 gallons between 1998 and 2001 (Table 2). While orange juice remains the leading juice flavor bought by domestic consumers, other juices show similar trends. Both apple and cranberry juice have seen slow growth since 1998. Grape juice indicates a slight downward trend in per-capita consumption, although it is too soon to say if this will continue or reverse itself. Similar data is not available in other sectors but a comparison of fruit beverage sales revenue between 1998 and 1999 by international consulting group Mintel (www.mintel.com) shows a 21.4-percent increase for apricot, an 8.1-percent increase for cider, and a 6.2-percent increase for cherry juice.

Like other beverages, fruit juice and fruit drinks continue to capitalize on the increased health-consciousness of U.S. consumers. They are normally viewed as a fresh and more natural alternative to colas (thus enjoying increased purchases among households with children). The 2000 Mintel survey of U.S. households found that almost 25 percent of households with children consumed apple juice, compared with only 12 percent of households without children. More juice drink products on the store shelves have captured some market share from 100-percent-juice products among children.

The trend among U.S. consumers to seek out more convenience in their food purchasing and dining habits is well served by the fruit juice market. In addition to the health benefits already noted, more juice products are being packaged in single-serving containers and made available through convenience outlets and/or vending machines. Juice consumption at the point of sale is increasing. Although total consumption of fruit juice has grown slowly, consumers have tended to shift their purchases toward higher-priced products: premium or enriched flavors, alternative health prevention/cure, new products, and alternative packaging.

The Role of Packaging

Although packaging is most commonly regarded as a way to protect the product, an often overlooked component of increasing perceived benefits to consumers—thus increasing value added—is to develop new and innovative packages to better convey a sense of product attributes that consumers find valuable. Value is added when packages are designed for aesthetics and ability to convey positive information to consumers and at the same time preserve the product qualities through time and from the environment. This goes beyond the issue of labeling, which has been well studied, and includes different interactions between package materials and the product, product and consumer reactions to shape and design, and packaging logistics.

We identified five vital linkages that the package must fulfill to be successful. First, the package must be compatible with the physical facilities and equipment of the processing plant (e.g., machine different technologies like aseptic packaging, UHT, Tetra pak®, hot fill, retort, and materials like bottles, stand up packages, cappers). Second, the package must be compatible with the physical properties of the product itself (e.g., choosing the correct materials for each different application including gas and moisture barriers, integrity and stability, and recyclable capacity). A primary role is to contain and protect the product from the external and internal environment, maintaining physical product quality and attributes (Lockamy 1995). Third, the package must be compatible with consumer preferences for physical properties (e.g., weight, materials, size or portion control, recyclability, reusability, conveniences, and transportability). Fourth, the package must be compatible with consumer preferences for cognitive properties (e.g., perceptions of quality like the value for the price, identification of alternative sources of preventive health, general well-being, environmental conscience, status). The primary package is considered part of the product and brand for marketing purposes. It becomes a product property or characteristic and thus must be correlated to the expectations the consumer has for that brand and product (Nacarow, Wright, and Brace 1998; Silayoi and Speece 2004; Ampuero and Vila 2005). Packaging materials can influence quality perception (HDPE jug – milk – commodity; Glass bottle = quality = alcohol, spirits, wine) (Ampuero and Vila 2006). Consumers generally associate big packages and concentrate with bulk foods, good deals, and no price premium (Silayoi and Speece 2004). Finally, the package must be compatible with the educational preferences of the firm and the buyer (i.e., the methods to convey the general and specific information about the product through labeling and brochures that support the sales and to comply with legal requirements). This is critical, as 73 percent of purchasing decisions are made at the point of sale (Nacarow, Wright, and Brace 1998).

Packaging creates an association of ideas that will remain with consumers regarding quality and value (Nacarow, Wright, and Brace 1998; Silayoi and Speece 2004). Therefore, packaging flaws will adversely impact supply-chain efficiency, logistics, and product marketing. The package may be the only communication between a product and the final consumer in the store. It must be attractive enough to generate consumer attention, communicate product identity clearly, highlight positive attributes, and demonstrate that the value is worth the price. At the same time, the package needs to be efficient in the supply chain, energy consumption, and disposal. Managing the firm-product-package-consumer interactions becomes even more critical in development of a new product, as both the independent components and the linkage between components must be considered (Figure 1).
communicating value: two examples

we use two specific examples to illustrate how a firm or an industry can use packaging as a “value-added” tool in the juice category to better communicate product attributes to consumers and to minimize risks of product failure. in addition to identifying firm-level strategies, results highlight important trade-offs that must occur between functionality, ease-of-use, aesthetics, and supply-chain efficiency.

pom wonderful

pom wonderful is a california company owned by stewar and lynda rescnick. they began pomegranate production in 1987 when they purchased additional land to expand their existing business. the purchased land included 100 acres of the wonderful pomegranate variety, which originally sold as a fresh product. in november 2003, the rescnick’s launched pom wonderful, a 100 percent pomegranate juice in a curvy and trendy glass bottle. the single-serve bottle looks like two pomegranates stacked together. they started the line with three flavors (100 percent pomegranate juice and 2 pomegranate blends: cherry and blueberry) and have grown into five flavors in 2005 (two new blends: mango and tangerine). the newest addition to the line is iced tea with fruit juices, which also come in a recyclable glass tumbler. the small business grew from us$12 million in 2003 to us$91 million in 2006 (murr 2006). pom wonderful is backed up with history and research on the health properties of the product. in 2003 only 2 percent of the public knew what a pomegranate was; by 2006, tropicana was developing a pomegranate-blueberry blend and other companies were trying to capture a share in the pomegranate market.

tart cherry juice

tart cherry juice is not a new product—it has traditionally been marketed as a commodity (ie: large-volume drums) to industrial users. lack of consumer focus in the existing mix of tart cherry products (including juice concentrate) has hindered industry growth and could possibly limit long-run sustainability if adjustments are not made. in an industry that has been primarily oriented toward bulk-commodity sales, the packaging, supply-chain, and logistical requirements will likely change substantially with a focus on end-user purchasers (hobbs 2001). in an industry composed of many small firms (in contrast to the one large firm controlling pomwonderful) the challenge is to tie the general message to a specific consumer-ready product has been undertaken by a few individual firms with very limited results to-date.

there have been several attempts to provide new single-strength products. currently, tart cherry juice can be found on the retail shelf in packages as diverse as the hdpe jug to the recently launched aluminum bottles. thus there is a discrepancy in the positioning of the product, often creating confusion among consumers. positioning of the product refers to shape, size, and price compared to the direct and indirect competition. it focuses on “product decision,” converting the package into the “silent-salesman,” which can lead to a reduction in advertisement budgets and branding expenses, and the creation of differentiation and identification.

recent research into the nutraceutical value of fruits, including tart cherries, has identified a number of health-promoting properties. industry-wide grower organizations put much of their resources into accumulating evidence of and promoting a general health-benefits message tied to all tart cherry products, including juice concentrate. without a consumer-focused product, including the necessary packaging, the nutraceutical value that has been identified will not be transformed into sales and value-added for the industry. the industry is in the process of repositioning cherry concentrate from the beverage commodity market to the consumer market for nutraceuticals. this is a strategy that the tart cherry industry has begun to explore based on findings that cherries can provide health benefits (wang et al. 1999). several studies at michigan state university and other institutes have found that tart cherries have a high concentration of antioxidants and other components that can benefit those suffering from arthritis, chronic pain and cancer (chaovasaalilkit and wrolstad 2004).

there is a need to develop a consistently packaged tart cherry juice product that is shelf-stable, to preserve the health benefits, the juice needs to be protected from oxidation, which is exacerbated by uv light and from sorption of the pigments and anthocyanins by the packaging material. the packaging material should not interact with the juice, and should preserve its health benefits, flavor, and perceived quality.

conclusions

it is imperative to conduct many different kinds of research while developing a new product, not only regarding the stability and flavor of the product per se, but in the product environment too—more specifically into packaging and the five main linkages. in this way the product will reach the final consumers with less risk of failure.

the beverage industry has been changing as consumer lifestyles have changed in a more healthy direction. education levels of consumers are higher and they are more involved in food purchases, putting more importance on health value (and how it is communicated), the environmental consequences of the product, and style or status. firm and industry survival and success will depend on correct product positioning correlated with image for the consumers.

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Empirical Investigation of Wholesalers' Market Power with Organic Fresh Produce

Tatiana Gubanova, Timothy Park, and Luanne Lohr

We look into the dynamics of farmgate-to-wholesale price markup and dependence between farmgate and retail prices of several highly perishable organic produce items over the period 1995–2003. To assess wholesalers’ market power, seasonal average markup and a measure of concordance between discrete categories of farmgate and wholesale price are used. Trends in the dynamics of these two factors are studied using the multivariate Mann-Kendall nonparametric test for trend. We find evidence of growing market power of the wholesale sector: an increasing price markup across the commodity and decreasing association between the two prices.

The last two decades have seen significantly increased interest in organic food, or food grown using the principles and techniques that predate the introduction of agro chemicals and modern intensive farming techniques. By 2003, fresh produce had become the most popular category among organic consumers, accounting for about 42 percent of organic food sales (OTA 2004).

One of the most common ways to deliver organic fresh produce to consumers is through wholesale market channels. According to the Fourth National Organic Farmer’s Survey, 70 percent of respondents producing vegetables sold them through wholesale market channels, as did 50 percent of fruit producers (Wulz 2004). Emerging organic markets are characterized by high price premia; organic food distributors enjoy a significantly higher price margin than do their conventional counterparts (Dimmity and Richman 2000). Yet, as is common with agriculture, the number of wholesalers (the buyers) has always been lower than the number of farms (the sellers). In addition, organic farmers tend to specialize in supply of particular commodities through extensive investments in sunk assets, including organic certification costs. These assets represent barriers for prompt switching to the production of another commodity and cause organic product supply to be inelastic. High buyer concentration coupled with inelastic supply of organic fresh produce give rise to concerns about organic wholesalers exercising considerable market power (Rogers and Sexton 1994).

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We investigate empirically the dynamics of wholesalers’ market power for a case of highly perishable organic fresh produce. Organic farmers may be defending a rather venerable position to an increased market power of the distribution sector with this kind of product because of the pressing need to sell it as soon as possible once the harvesting is over. As agricultural products are transformed through packaging, distribution, and related services, the evidence of direct relationships among prices at different distribution levels becomes difficult to evaluate (Ward 1982). These agricultural products that require considerable transformation before final consumption should show weak farmgate-to-wholesale price relationships. In contrast, the price linkage should be stronger for perishable goods requiring minimal transformation.

A tendency toward price rigidity is often mentioned to be characteristic of concentrated industries. With this conjecture in mind, we look into the dynamics of farmgate-to-wholesale price markup and the growing season-wide dependence between farmgate and retail prices of several highly perishable commodities—broccoli, cauliflower, cilantro, lettuce, spinach, and tomatoes—over the period 1995–2003. To assess wholesalers’ market power, seasonal average markup and a measure of association—Kendall’s concordance—between discrete categories of farmgate and wholesale price are used. Trends in the dynamics of these two factors are studied using the multivariate Mann-Kendall nonparametric test for trend (Hirsch and Slack 1984; Hensel and Hirsch 1992).

The approach taken in this study has two strong points. While not being highly precise or conclusive, it allows analysis with the minimal amount of information available to the analyst (only two price