

Marketing Apple Products

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Apple growers know that change is needed to remain competitive in today's worldwide market. The processing sector of the apple industry is particularly strained. Low apple prices and the recent closures of some Eastern apple processors have been cause for a negative outlook among many growers in the region. This article summarizes the marketing research aspects of a large project being done at Cornell to help the processing sector meet its current challenges.

Across the country, apple growers know that change is needed. Economic stress is readily apparent in today's apple industry. At most gatherings of apple growers, discussion frequently turns to marketing issues. Growers are concerned about their future in an industry characterized by low prices for apples, competition from low priced foreign apple juice concentrate, and the pressures of industry consolidation throughout the supply chain.

The processing sector of the apple industry is particularly strained. Low apple prices and the recent closures of Eastern apple processors have been cause for a negative outlook among many growers in the region. Among consumers, apple product consumption has generally been stagnant in recent years.

In the Northeast, apple processors provide an important outlet for the apple industry. In New York over half of the annual apple harvest is sold in processing markets. New York apples are processed into apple juice, cider, sauce, pie slices, hard cider, dried apples, and several other apple products by processors in the state and throughout the eastern U.S. Facing the economic pressures of a changing market, apple growers and processors need to make strategic adaptations to enhance their competitiveness. A current research project at Cornell University aims to provide direct assistance to the processing sector in meeting its current challenges.

Two years ago, Cornell University received an anonymous grant to support a project focused on the Northeastern apple processing industry entitled "Development of an Environmentally Sound, More Profitable System for Production and Marketing of Value Added Processing Apple Products in the Northeastern United States." The purpose of this project is to assist growers and processors in the industry to face the challenges of the changing market and to take advantage of opportunities offered by new information and technologies related to production, pest con-

trol, product development, and marketing.

This project is interdisciplinary in its approach. The project includes faculty and staff from six Cornell Departments: Entomology, Plant Pathology, Horticulture, Food Science, Cornell Cooperative Extension, and Agricultural, Resource, and Managerial Economics. By involving a broad range of experts, the project aims to address a number of research questions for the industry. The goals of the project are:

- To develop a more environmentally sound, cost-effective apple production and integrated pest management system,
- To stimulate growth of apple processing industry with new technologies that support commercial production of diversified, high value apple products, and
- To assess economic impacts, marketing potential, and consumer reactions to new products.

Marketing research is just one component of this research, but an important step in addressing industry concerns. This ar-

ticle summarizes the on-going marketing research component of this project. This research will be completed in 2001. Final



New apple processed products such as sparkling cider may offer value added opportunities for fruit growers.

project reports and related articles that report results will be available at that time.

Market Trends

As the global supply of apples is growing, the per capita supply is also growing. In 1998, the global apple supply was approximately 20.1 pounds per person. This level reflects 15% growth in the global supply of apples per capita over the past ten years. With expectations for continued growth in the global supply of apples, the industry faces substantial concern about future demand levels.

Figure 1 shows the average consumption levels for apples and apple products in the U.S. in 1997-98. Each year, the average American consumes 18.82 pounds of apples in juice and cider, 5.70 pounds of apples in canned apple products, 1.30 pounds in frozen apple products, 0.97 pounds of apple in dried apple products, and 0.67 pounds of apples in other apple products.

Over the past 20 years in the U.S., total apple consumption has risen by 34% to over 46 pounds per person annually (see Figure 2). Most of this increase can be attributed to a 108% increase in the consumption of apple juice and cider during this period (see Figure 3). Consumption of frozen apples increased over the same period by about 53%. Other processed apple products did not have discernable consumption trends during this time. Fresh apple consumption fluctuated, but increased overall by about 9% during the 20-year period.

At the current level of consumption, the average American consumes only about one fresh apple per person each week. In 1998, the average American consumed about 288 pounds of fruit, both fresh and processed. By weight, about 16% of that fruit were apples and apple products. For comparison, Americans consumed almost 100 pounds of oranges and processed orange products per person that year. Oranges account for about 35% of all fruit consumed in the U.S. Among fruits, apples rank 3rd in per capita consumption in the U.S., behind oranges and grapes.

Despite the increase in apple consumption over the past 20 years, U.S. consumption of apples and apple products has generally been flat for the past several years. The market for processed apple products shows signs of stagnation. Products are generally mature, and consumers have well-established patterns of purchasing and using these products. Investment in consumer advertising is low, and prod-

uct innovation is infrequent.

In a mature industry, marketing strategies should focus on expanding existing markets and developing new markets. Existing markets may be expanded by volume consumed by existing consumers. Markets may also be expanded by promoting new product uses. New markets may be developed with new products and by reaching consumers that previously did use the product. Developing new products is a particularly important strategy in a mature market. Existing products are always vulnerable to changes in the market environment, and consumers' needs, tastes, and interests change over time. New products can be used to adapt to these changing market conditions.

The marketing research in this project is focused on market expansion through the identification of new markets and the development of new products. The project has initiated a number of marketing research activities to collect information about processed apple products and markets that can be useful to the industry in developing marketing strategies. This research aims to provide a first step in advancing innovation and market expansion in the industry.

Marketing Research

The marketing component of this project was designed to analyze processing apple markets, to develop new product concepts, and to identify new market opportunities for apple products. The agricultural economists on the project work closely with the food scientists to consider new product ideas from both a marketing and a production perspective. However, the marketing research is not limited to

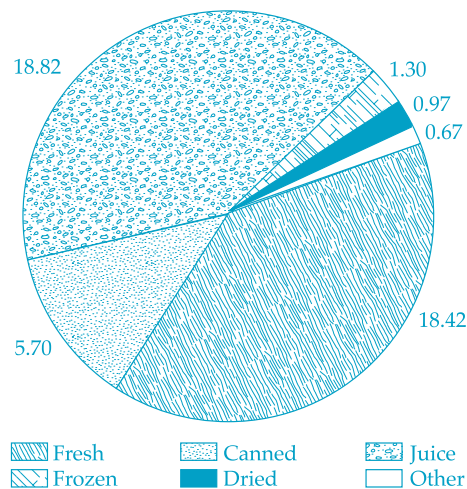


Figure 1. Average annual U.S. apple consumption, per capita (in pounds): 1997-1998

consideration of products that are available for sampling from the Food Science laboratories. Instead, market research is aimed broadly at identifying market opportunities by considering product concepts as well as product prototypes.

The first steps in the marketing research process included an industry overview, the development of a project advisory council, and an apple processor survey. These steps were taken to collect background information and to support the development of a marketing research plan.

The advisory council was created to involve a diversity of opinions in discussion about the industry and its markets and products. This group meets twice annually to provide input and guidance on research plans. It also serves as a sounding board and idea generator for the project. Members of the advisory council

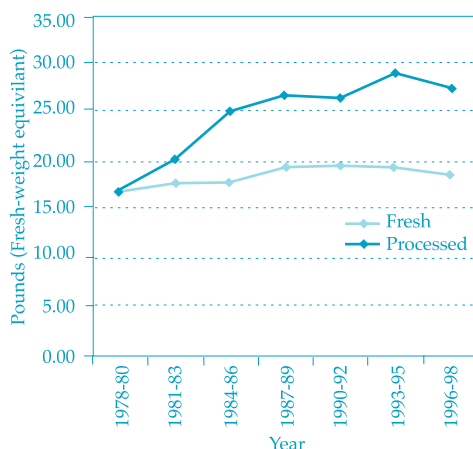


Figure 2. U.S. apple consumption of fresh and processed apples over the past 20 years.

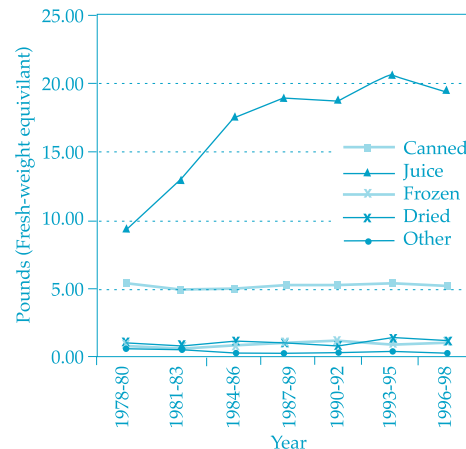


Figure 3. U.S. consumption trends of processed apple products over the last 20 years.

TABLE 2

Apple Product Concepts from New Product Development Workshop

- Applesauce in Squeeze-Tube Package for Kids
- Pre-Sliced Apples for Baking
- Snack Pack with Pre-Sliced Apples, Cheese, and Crackers
- Waldorf Salad Kit with Pre-Sliced Apples
- Ready-to-Microwave Baked Apples
- Apple Spritzer with Sparkling Cider and Mineral Water
- Stir-fry Sauce with Apple Chunks and Savory Spices
- Fresh Pressed Chilled Apple Juice
- Apple Cider Syrup for Pancakes and Desserts
- Apple Cider Salad Dressing
- Apple Cider Fortified with Vitamins or Herbs
- Pourable Chunky Apple Topping
- Apple Juice and Spring Water Beverage for Young Children
- Microwaveable Apple and Cheese Turnover
- Apple Slaw
- Apple and Green Tea Beverage
- Fresh Apple Cobbler or Apple Crisp Baking Kits
- Apple Cider Ice Cream

represent growers and processors, but also an agricultural financial institution, a retail grocery chain, and industry associations.

The survey of regional apple processors was completed in 1999. The purpose of the survey was to assess processor outlook for the industry and to identify marketing challenges and opportunities. In this survey, 21 apple processors in New York, New England, Pennsylvania, and Virginia were interviewed. The interviewees represented processors that purchase almost 35 million bushels of apples annually, including about 12.5 million bushels from New York State. The processors interviewed in the survey produce a wide range of apple products including juice, cider, applesauce, frozen apples, pie filling, dried apples, cider vinegar, hard cider, and baby food.

Using the information collected from the industry overview, the advisory council, and the processor survey, a market-

TABLE 1

Consumer Motivators in Today's Market

- **Convenience:** Consumers' need for more time drives the purchase of on-the-go foods, meal solutions, and functional packaging.
- **Wellness:** Fears about aging, declining health, and medical costs drive consumers to prevent and self-treat health problems with food and beverage products that offer health benefits.
- **Food quality and safety:** Consumers are drawn to products that offer quality assurance and reliable food safety.
- **Gratification:** Disposable income levels have been rising in the current strong economy, and consumers are seeking indulgence for themselves and their kids. They are drawn to buy gratifying products that taste good and offer the feeling, "I'm worth it."

ing plan was developed. The objectives of the plan are to:

- **Conduct forward-looking research:** Focus on opportunity identification rather than assessment of current market conditions and trends.
- **Explore how to make apple products relevant in today's market:** Identify the motivators that are driving consumers and how to make apple products relevant in that context.
- **Identify new product and new marketing opportunities:** Use the research to assess consumer reactions to new product ideas and to identify new demographic markets that are possible areas for market expansion.
- **Identify foodservice opportunities:** Explore how to adapt apple products for greater use in foodservice markets, which are experiencing rapid growth as American consumers increase their consumption of meals away from home.

The research plan includes several major activities. The purpose and status of each activity is presented below.

1. New Product Development Workshop

New York processing apple industry leaders attended a workshop in June 2000 focused on new product development. The workshop was facilitated by marketing consultants with extensive experience in new product development, and the meeting was held at a facility that serves as a new products showcase. The facility houses a library of 65,000 consumer products collected over the past 30 years. The products in the collection offered many stories of market successes and failures, and these surroundings provided a rich environment for stimulating creative thoughts about apple products.

The workshop emphasized the importance of innovation as a key to success. New products must stimulate a consumer to take the risk of purchasing them. To do so, new products must appeal to basic

consumer motivators (see Table 1). The workshop discussion was focused developing concepts for products that are relevant to today's consumer motivators. The final product of the meeting was a list of apple product ideas for further consideration. A sampling of these ideas is listed in Table 2.

2. National Consumer Survey

A national survey of apple product consumers was conducted in September 2000. The survey had two main objectives. First, the survey sought to identify demographic trends in apple and apple product consumption. This information was collected in order to identify potential opportunities for market expansion to new demographic targets. Second, the survey was used to assess several of the new product concepts discussed at the workshop and presented in Table 2. Results from the survey are currently being tabulated and analyzed.

3. Consumer Focus Groups

Following the survey, six focus group meetings were held with consumers in the New York City metropolitan area in October 2000. All of the groups were held with women that shop for their households. Two groups were held with each of three demographic targets: women with children under 6, women between 50 and 69 years old, and women between 25 and 49 that consume wine. The last group was used in part to evaluate markets for hard cider and apple wine. Overall, the purpose of the focus groups was to explore how these consumer groups use and view apples and apple products. The participants discussed what qualities they like and dislike in apples and apple products, how they would change apples and apple products, if they could. Participants also sampled and evaluated some prototype apple products. The discussions were facilitated by a professional

moderator who is currently preparing a summary of the discussions. Preliminary findings indicate broad support for fresh apple slices as a retail food product and interest in baked apple chips as a snack product.

4. School Foodservice Survey

The New York State School Foodservice Association has a task force committed to increasing the use of New York State agricultural products in the state's school foodservice programs. This committee has estimated that New York schools buy the equivalent of six million bushels worth of apples in the form of apple juice each year. This estimate reflects the importance of this market to the apple industry.

School foodservice has traditionally been an important market for apple products, including apple juice, applesauce, and canned apple products. Like other markets for apple products, this market is changing. A survey of school foodservice directors has been developed with the assistance of members of the task force mentioned above. The purpose of the survey is to explore the use of apple products in

New York school foodservice programs, to examine the important factors in purchasing decisions, and to assess the relevance of apple products in today's school foodservice market. The survey will be distributed in early November.

5. Foodservice Managers Focus Groups

Recently, much attention has been given to the growing role of foodservice in food and beverage distribution in the U.S. With U.S. consumers currently spending almost half of their income on meals away from home, the foodservice sector is an important market. In November, four focus groups will be held with foodservice managers from family restaurants and institutional foodservice operations. These groups will examine the use of apples and apple products in foodservice and explore opportunities to develop and improve apple products for the foodservice sector. Participants will also sample and evaluate some apple product prototypes.

In addition to these major research activities, the project will include several other related initiatives, including:

- Marketing research assistance to com-

mercial partners in the research project

- Case studies of successful marketing strategies from other food and beverage industries
- Review of eco-labeling literature and programs
- Publication of short "how-to" marketing articles

Final project reports are expected to be available in 2001, and interim project reports are available now.

While this marketing research can help, it alone will not improve markets for processing apples and apple products. This information gathering effort is only a preliminary step that can provide support and resources for future innovation and strategy development. Stepping beyond this information requires risk-taking and investment on which the future of industry hinges.

Kristin Rowles is a Research Associate in the Dept. of Applied Economics and Management who is heading the marketing research project on processed apple products.