

National Grape Cooperative Association

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Arthur Capper Cooperative Center
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Jack Kaplan, an entrepreneur, purchased a small grape processing facility in 1933 from some investment bankers in Brocton, N.Y., and called his new company National Grape Corporation. To control inflation during World War II, the United States government instituted price control policies for most industries but exempted farmer cooperatives, allowing them to pass through their prices to the market. Kaplan decided to take advantage of this legislation by selling his company to the growers supplying grapes to his plant on the condition they formed a cooperative. The growers accepted and National Grape was born in 1945. Its membership has grown to encompass the majority of the Concord and Niagara grape growers in Michigan, New York, Ohio, Pennsylvania, Washington, and Ontario, Canada.

Welch Foods (“Welch’s”) came up for sale in 1945 and Kaplan purchased it and became its president. Kaplan set in motion for National Grape to purchase Welch’s during the early 1950s with the objective of giving growers “complete control of their destiny, from raw fruit to finished product.” However, the growers did not have the money to pay outright, so Kaplan offered them a “mortgage” that allowed him to specify how the processing company was governed. In 1956, the directors of National Grape Cooperative (“National Grape”) voted to purchase Welch’s stock and paid off the mortgage on the company in three years.

National Grape and Welch Foods are separate companies. National Grape is the grower-controlled cooperative association representing grower interests. Welch’s is the grape processor company and a wholly-owned subsidiary of National Grape. Consolidated financial results are identical for both companies. Each has a separate board of directors. National Grape’s board of directors focuses on grower interests and linking strongly to grower-members. Welch’s board of directors focuses on directing the grape processor company and developing the retail products of interests to consumers. This two-board structure is described further in an accompanying case by the authors called Welch Foods, Inc.

National Grape Cooperative Association’s vision is “to be the best choice of present and future members to market their grape production.” Its mission is “dedicated to providing the most profitable long-term market for all of its members’ quality Concord and Niagara grapes.” This mission was clearly defined in terms of the focus of the company — its customers, their products and its objectives. Thus, National Grape is vigilant about its responsibility to market the grapes its members produce. It also employed professional viticulturists who administered its policies, managed the annual harvest, and worked with members to help them improve the efficiency of grape production. National Grape believed that such attention to its members contributed to it being the best choice of Concord and Niagara grape producers.

Governance and Ownership

In 2003, National Grape’s governance was based on the traditional one-member, one-vote principle of cooperative representation. The key Concord and Niagara grape growing areas for National Grape were: Yakima Valley in Washington State; southwestern Michigan and northern Ohio; the Lake Erie area of New York and Pennsylvania; and the Finger Lakes in New York and Ontario, Canada. These key areas were divided into 13 production districts and 103 geographical sections.

National Grape's board of directors comprised 13 members elected from each of the production areas and was responsible for establishing policies regarding member needs and raw grape production. The board elected the officers of National Grape annually and appointed a general manager to implement board policy and oversee operations. The distribution of directors in the different areas is based on number of grower members in the area. Areas I, II and III each have three directors while Area IV has four directors. Because the directors are elected by area, it is possible for more than one director to come from a particular district. Each director is elected to a three-year term and director terms are staggered into three classes, each class representing a particular ending year on the board. There were no term limits on directors as long as they were willing to serve and elected by members in their area.

In addition to the board, National Grape's members annually elected 13 delegates to represent them in each of the organization's 13 production districts. Their responsibilities included acting as a critical communications link between members, the board, and management and chairing their district's membership meetings. Finally, the advisory committees, comprising 103 members, were elected from the geographical sections to provide direct feedback on issues to the board and to management and provide a gauge on the pulse of the general membership. Advisory committee members met at the local level about four to six times per year.

Patron Financial Performance

Company financial performance can be measured in several ways. Size and change in size is one way. Useful size measures are sales and total assets. Profitability and change in profitability is another way. Useful profitability measures are gross margin percentage, net proceeds, return on sales percentage, and return on equity percentage. Common profitability measures, such as return on equity or investment, cannot be calculated and compared in the usual way to other food processing companies because net proceeds in National Grape are derived from Welch's and are not equivalent to net income. National Grape and Welch's operates on a pool basis, a method unique to some cooperatives. Companies using this method do not include the cost of purchasing grapes from members in the cost of sales. Members are not paid a market price for their grapes. Net proceeds is the return paid to members, including the purchase value of their grapes. A commercial market value (CMV) of those grapes is not reported so it is not known whether the net proceeds is equivalent to a payment above or below CMV. Therefore, the level of gross margins and profit or loss, after paying CMV for grapes, is not known. Although comparisons to other companies are not possible, it is possible to compare National Grape's performance to itself over time.

Patron proceeds have varied widely over the five years from 1998 to 2002. They ranged from a high of \$78.7 million in 2000 to a low of \$66.6 million in 2001 (Exhibit 1). Proceeds per ton have varied from \$255 in 2000 to \$208 in 2002, and parallel the price pattern of finished product sold, the average case price. The most important indicator of profitability to patrons is the proceeds received per acre of production, since costs per acre are relatively constant. Proceeds per acre were highest in 2000 at \$1,764, even though prices or proceeds per ton were lowest, primarily because of very high yields per acre.

Patron distributions are divided between cash payments and distributions to allocated equity accounts as retained equity investments of patrons. Two types of equity investments are made. One is allocation credits, which are retained and then redeemed later for cash on a revolving or

systematic basis, normally after six years. The second is permanent equity credits, which are retained somewhat indefinitely and are increased or decreased (redeemed) only under special circumstances. Welch's did redeem or repurchase \$5.25 million of the outstanding permanent equity credits in 2002 as a temporary reduction. Permanent equity credits of each member-patron are normally adjusted year-to-year based on the volume history and status of each patron. Therefore, permanent equity credits are more accurately viewed as "semi-permanent" equity investment.

Patron equity investment is another important factor in evaluating the performance of the company in providing financial benefits to patrons. Patron equity investment is obtained almost entirely by retaining a portion of the proceeds or patron distribution. The two classes of patron equity investment are permanent equity and allocation credits or revolving equity.

Patron equity investment per acre increased from about \$2,100 in 1998 to about \$2,300 in 2001. It declined to about \$2,250 in 2002 when a special redemption and temporary reduction was made in permanent equity.

Exhibit 1. Patron Proceeds and Volume

	1998	1999	2000	2001	2002
Distributable Patron Proceeds (in thousands)	72,368	74,832	78,711	66,641	71,340
Patron Tons Sold	256,288	274,850	309,218	245,951	231,529
Distributable Patron Proceeds Per Ton	282	272	255	271	308
Distributable Patron Proceeds Per Bearing Acre	1,713	1,704	1,764	1,447	1,515
Distributable Patron Proceeds Per Acre	1,556	1,595	1,647	1,349	1,439

Source: National Grape Cooperative Association Inc. and Welch Foods Inc. Annual Report, Various years.

Of interest is the return a patron receives by risking this equity investment in the cooperative. A "return on investment" type of measure can be calculated by dividing the proceeds per acre (Exhibit 1) by the investment per acre (Exhibit 2), keeping in mind that proceeds are CMV equivalent sales proceeds plus profits, since proceeds are the bottom line on the operating statement for the pool basis of accounting. This ROI-like measure is more like an asset turnover measure, where sales are divided by assets. The patron's sales are the proceeds and the asset is the patron's investment. This return on investment measure varies from 74 percent in 1998 to 59 percent in 2001.

Exhibit 2. Patron Acreage and Equity Investment

	1998	1999	2000	2001	2002
Number of Patrons	1,497	1,461	1,442	1,423	1,388
Patron Acreage	46,523	46,917	47,797	49,409	49,567
Patron Bearing Acreage	42,246	43,915	44,621	46,055	47,089
Average Acres Per Patron	31.1	32.1	33.1	34.7	35.7
Patron Permanent Equity (in thousands)	14,045	14,099	13,843	13,648	7,114
Patron Permanent Equity Per Acre	302	301	290	276	144
Patron Revolving Equity (in thousands)	83,766	88,839	95,231	100,147	104,472
Patron Revolving Equity Per Acre	1,801	1,894	1,992	2,027	2,108
Revolving Fund Length (yrs)	6	6	6	6	6
Total Equity Investment Per Acre	2,102	2,194	2,282	2,303	2,251
Return on Investment (“asset turnover”)	74%	73%	72%	59%	64%

Source: National Grape Cooperative Association Inc. and Welch Foods Inc. Annual Report, Various years.

Appendix A

The U.S. Grape Juice Industry

The United States has the third largest grape output after Italy and France and the fifth largest acreage after Spain, France, Italy and Turkey. Its acreage and production shares have averaged about 5 percent and about 10 percent respectively over the past four years (FAO, 2002). The USDA (2002) reported that the U.S. grape industry has consistently been, over more than a decade, the most valuable crop among nuts, fruits and vegetables, ahead of oranges, apples and strawberries.

Total U.S. utilized grape production, divided between processing and table grapes, increased by 52.5 percent, from 4.3 million short tons to about 6.6 million short tons between 1977 and 2001. This increase resulted from acreage increases and improved varieties. Between 1991 and 2001, processing grapes' share of total utilized grapes averaged about 86.5 percent of annual production. Table grapes' share of total U.S. grape production has declined due to imports from countries such as Chile, which accounted for about 78 percent of total U.S. imports in 2001.

These improvements in production have been accompanied by strengthening average prices in the grape production industry (Exhibit A1). The average price per ton of table grapes increased by 57 percent compared to a 151 percent increase in the average price per ton of processing grapes between 1977 and 2001. The average annual growth rate in processing grape prices was 3.8 percent over that period compared to 2 percent for table grapes.

United States grape production is concentrated in California, which accounts for about 90 percent of total processing grape production and utilization. New York and Washington each account for about 3 percent of total domestic grape production. Weather and soil conditions support the distribution of grape varieties because the vinifera varieties are primarily grown in California while the juice grape varieties of Concord and Niagara are primarily grown in New York and Washington.

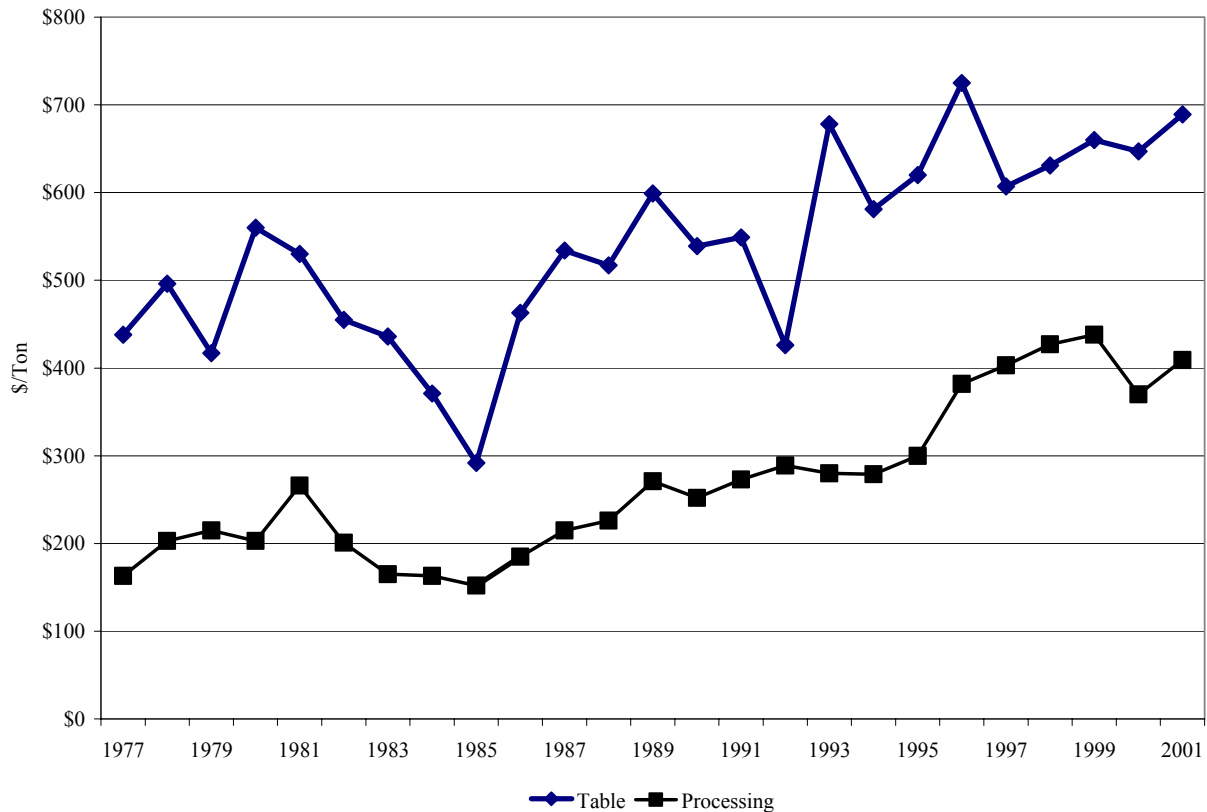
Processed grape products are divided into four main categories: juice; canned; raisins; and alcoholic beverages (mainly wine). Wine and raisins account for about 60 percent and 30 percent respectively of total processing grape production in the United States. Less than 1 percent of total processing grape production goes to canned and the remaining 9 percent is allocated to juice. Although there are 8,000 varieties of grapes, the largest proportion of juice grape acreage in the U.S. is planted to the native Concord and Niagara varieties.

These varieties are also the most common varieties used in juice production and are primarily produced in four states: Michigan, New York, Pennsylvania, and Washington (Exhibit A2). Total juice grape production increased from 353,250 tons in 1998 to almost 418,000 tons in 2002, an increase of about 18 percent. This was a result of both acreage and yield improvement in the industry.

There were also some significant shifts in the distribution of juice grape production within that period. For example, Washington's share of juice production increased from 43 percent in 1998 to 52 percent in 2002 while Michigan's share decreased from 19 percent to 11 percent over the same period. There was little change in New York and Pennsylvania. A similar trend was

observed for Niagara production. It is important to recognize the increasing production in Ontario, Canada, which is being shipped to the U.S. for processing, production and is not reflected in Exhibit A2.

Exhibit A1. Nominal Price of US Table and Processing Grapes in Current Dollars, 1977- 2001



Source: NASS/USDA

Exhibit A2. Production of Juice Grapes by State, 1998-2002

State	1998	1999	2000	2001	2002
	<i>Quantity (Tons)</i>				
Michigan	67,500	71,500	83,600	26,000	29,200
New York	87,000	152,000	111,000	107,000	109,000
Ohio	5,000	7,500	6,400	4,700	4,500
Pennsylvania	41,500	74,000	46,000	48,500	45,900
Washington	152,000	195,000	175,000	183,000	217,000
Others	250	2,050	2,250	650	2,200
US Total	353,250	502,050	424,250	369,850	417,800

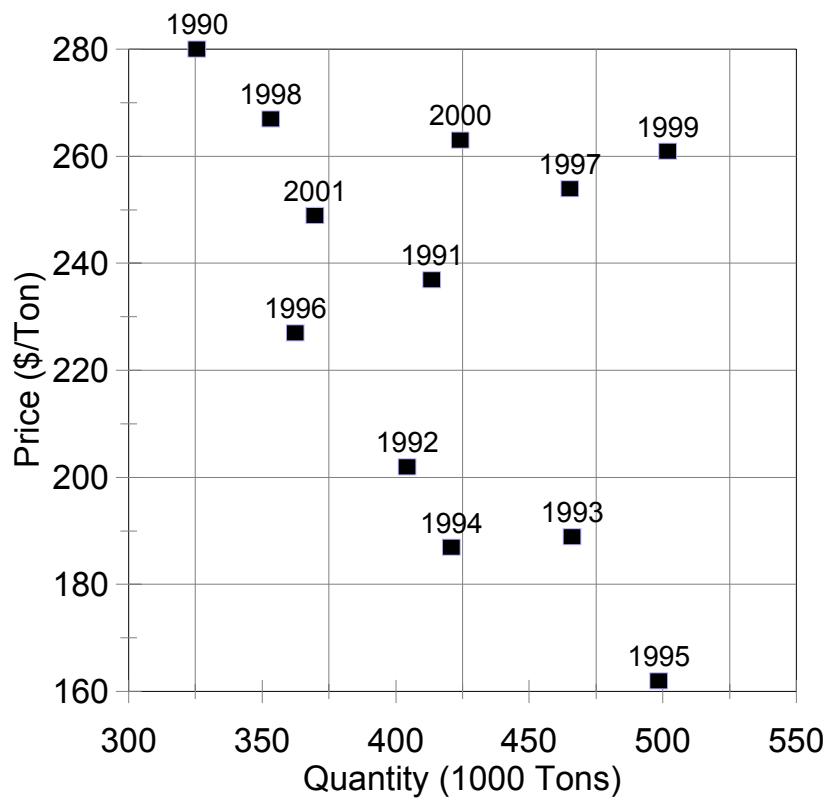
Concord grapes are native to North America and grow well only in certain geographical regions. In New York, Pennsylvania and Ohio, Concord grapes grow along a narrow stretch of no more than six miles in its widest points along a 90-mile stretch along Lake Erie, Lake Ontario and the Finger Lakes in northwest New York. Michigan's production all occurs in a 40-mile stretch in the southwestern region of the state. Washington's Concord grape production is primarily located in the semi-desert region of lower Yakima Valley, east of the Cascade Mountains and is

irrigated with water from the Cascades. The higher temperature and water availability are the major advantages that Washington has in Concord grape production.

Concord grapes have higher yields, higher sugar-acid ratios, and milder labrusca flavors than other grape varieties. Europe, for example, uses Vinifera or wine grape strains to make grape juice, giving it a lower sugar-acid ratio and as well as a less sweet taste than the juice made from Concord and Niagara grape production. These natural production advantages allow the industry to have better control over its marketplace in comparison to other agricultural commodities. That notwithstanding, the juice grape market is subject to price volatility because of supply fluctuations due to weather and other factors, competition among the different uses and the substitutability among different varieties.

When both quantity and price increase over time, it is indicative of product demand increasing faster than its supply. However, juice grape demand has been variable over the past 10 years (Exhibit A3).

Exhibit A3. Juice Grape Demand, 1990-2001

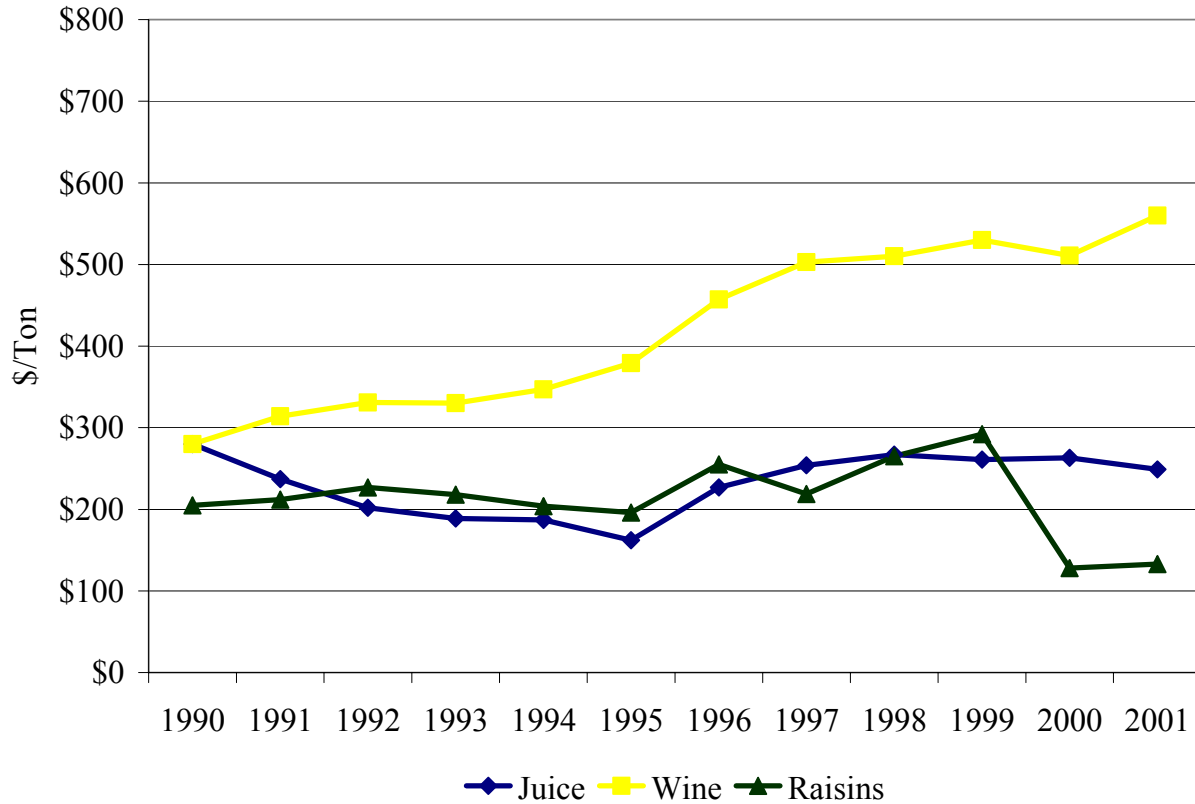


Source: Economic Research Service/US Department of Agriculture, 2002.

The average price per ton of wine and juice grapes was about \$280 in 1990. However, the average price of wine grapes by 2001 was about twice that of juice grapes at \$250 per ton (Exhibit A4). The growth of the wine industry in the last decade likely explains a significant component of the price trend for wine grapes during the same time period. The industry has seen enhanced competitiveness against traditional French and Italian products arising from increased

varieties, technology and education. The price of raisin grapes has fallen significantly over the same period, reaching about \$130 per ton in 2001. The trend in juice grape prices, however, indicates that prices have been strengthening since the mid-1990s after consistently falling between 1990 and 1995.

Exhibit A5. Grape Product Prices, 1990-2001



Source: Economic Research Service/US Department of Agriculture, 2002.

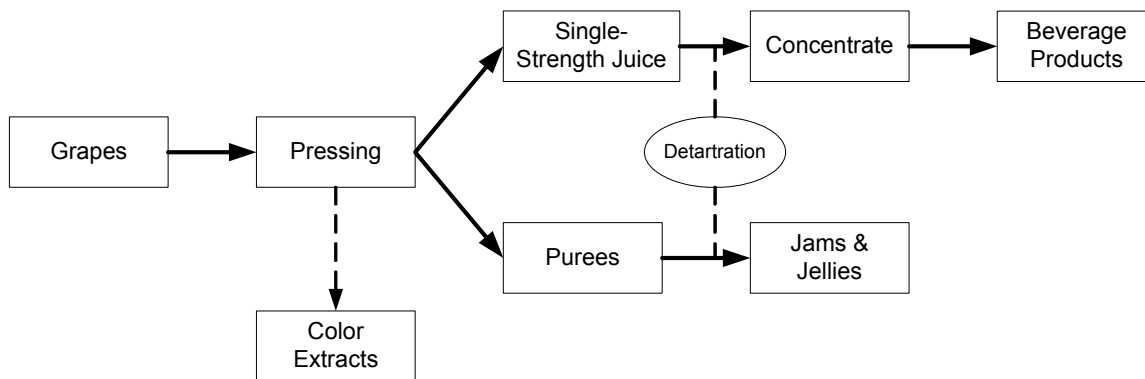
Appendix B

Processing Grape Juice Industry

Grape juice processors obtain 185 to 190 gallons of single strength juice from a ton of grapes, regardless of the variety.¹ However, depending on the brix (or sugar solids) strength of the single strength juice, a ton of Concord grapes yields only 34 gallons of 68° brix concentrate. The higher the brix of the juice, the higher the volume of concentrate it produces. In general, the soil and water conditions in Washington gives its Concord grapes a higher brix than Concord grapes produced in Michigan, New York, and Pennsylvania. This implies that in general Washington Concord grapes yield higher volumes of concentrate than Eastern Concord grapes. In contrast, Eastern Concord grapes have higher acids and deeper color, allowing them to be blended with concentrates from cheaper viniferous varieties without losing their taste. Processors who purchase the concentrate add water to reconstitute the original single strength or some other strength juice.

Grape juice production is different from other fruit juices because it is the only fruit juice that cannot be concentrated immediately after pressing because of the presence of potassium salts, commonly called tartrates, in the juice that cannot be filtered or centrifuged out. They have to be detartrated by gravity, a process that usually takes about six weeks. Juice grapes such as Concord and Niagara are used in the manufacture of jelly, jam, straight or sparkling juice, drinks diluted 50% or more with water, ades diluted with up to 98% water and added sugar, drink bases, carbonated beverages, frozen and shelf stable concentrates that may be diluted with water, frozen bars and slush, ice cream topping, yogurt base, pie mix, powders, and crystals (Exhibit B1).

Exhibit B1. A Simplified Overview of the Grape Processing Process



The total value of shipments for frozen fruits, juices, drinks and cocktails was about \$2.86 billion in 1997. The total value of shipments for companies producing grape juice concentrates was almost \$58 million in 1997 compared to \$74.2 million in 1992. This implies that the grape juice industry is a relatively small component of the fruit juice industry and it is accounted for by very few companies. In fact, there were only 17 companies in 1997, down from 20 in 1992 (Exhibit B2).² It is important to note that these data do not present the whole picture of the grape juice processing industry because, as shown in Exhibit B1, there are other products being supplied by

¹ Single strength means straight juice that is neither diluted nor concentrated. Concentrates are produced from single strength juice by evaporating water from the juice using heat and vacuum.

² Companies in the Census are defined as businesses with value of shipments in excess of \$100,000.

the industry besides frozen concentrates. It does, however, illuminate the challenge in the industry with respect to the general trends of consolidations and rationalization of products toward retail packs.

Exhibit B2. Number of Firms, Shipment Quantity and Value for Frozen Grape Juice Concentrate Manufacturers

Product Types	1997			1992		
	No. of Companies (\$100K + shipments)	Quantity of Shipments	Value of Shipments (\$ 1000)	No. of Companies (\$100K + shipments)	Quantity of Shipments	Value of Shipments (\$ 1000)
Frozen Concentrate grape juice (4.1 oz-7 oz) 1000 cases of 48	4	1770.1	18057	5	1745.6	17750
Frozen Concentrate grape juice (10.1 oz-13 oz) 1000 cases of 24	6	1994.6	24643	5	2709.1	31300
Frozen Concentrate grape juice (Other sizes) 1000# solid	7	16.9	15290	10	28.9	25150

Source: Frozen Fruit, Juice, and Vegetable Manufacturing, 1997 Manufacturing Industry Census, Washington, D.C.: US Census Bureau, November 1999, p. 10.

Grape Juice Consumption

Per capita consumption of grape juice has exhibited an upward trend since 1977, growing at about 2.2 percent per annum. It increased from 0.28 gallons per capita per annum in 1990/91 to 0.33 gallons per person per year in 2001/02 (Exhibit B3). Citrus is the only fruit increasing its share of fruit juice consumption in the U.S. Between 1990/91 and 2001/02, it was estimated that citrus share of the per capita consumption of fruit juices increased at an average annual rate of 0.45 percent. This contrasts with -0.4 percent for grape juice, -0.13 percent for apple juice, and -6.0 percent for pineapple.

Citrus was by far the fruit juice of choice in the U.S., accounting for almost 70 percent of the total fruit juice consumed on a per capita basis in 2001/02. Apple juice was the second largest with a share of almost 21 percent in the same year. The remaining 9 percent is distributed among the rest of the fruit juices, with grapes and pineapple accounting for 3.9 percent and 3.7 percent respectively and cranberry accounting for 2 percent. The year-to-year change in per capita consumption of total fruit juice consumed has been most unstable for grape juice. For example, between 1996/97 and 1997/98, the per capita consumption of grape juice increased by 8 percent, decreased by about 34 percent the following period and increased by 63 percent thereafter. This pattern is likely due to data collection methods, inventory, and promotional activities carried out by processors.

Exhibit B3. Per Capita Consumption of Selected Fruit Juices (Gallons per Year Single Strength Equivalent)

Season	Apple	Grape	Pineapple	Cranberry	Prune	Total Non-Citrus	Total Citrus	Total Fruit Juice
1990/91	1.72	0.28	0.50	0.14	0.04	2.68	5.21	7.89
1991/92	1.51	0.36	0.50	0.17	0.03	2.57	4.82	7.39
1992/93	1.56	0.38	0.47	0.16	0.04	2.61	5.96	8.57
1993/94	1.78	0.35	0.41	0.15	0.04	2.73	5.79	8.52
1994/95	1.77	0.29	0.35	0.19	0.04	2.64	6.16	8.80
1995/96	1.57	0.45	0.38	0.16	0.03	2.59	6.14	8.73
1996/97	1.69	0.38	0.38	0.17	0.03	2.65	6.18	8.83
1997/98	1.54	0.41	0.34	0.20	0.03	2.52	6.29	8.81
1998/99	1.79	0.27	0.29	0.21	0.03	2.59	6.00	8.59
1999/00	1.78	0.44	0.32	0.23	0.02	2.79	6.66	9.46
2000/01	1.80	0.34	0.30	0.20	0.02	2.66	5.95	8.61
2001/02	1.76	0.33	0.31	0.17	0.03	2.60	5.81	8.41

Source: Economic Research Service/US Department of Agriculture, 2002.

This case was written using public data from USDA and National Grape's annual reports.

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