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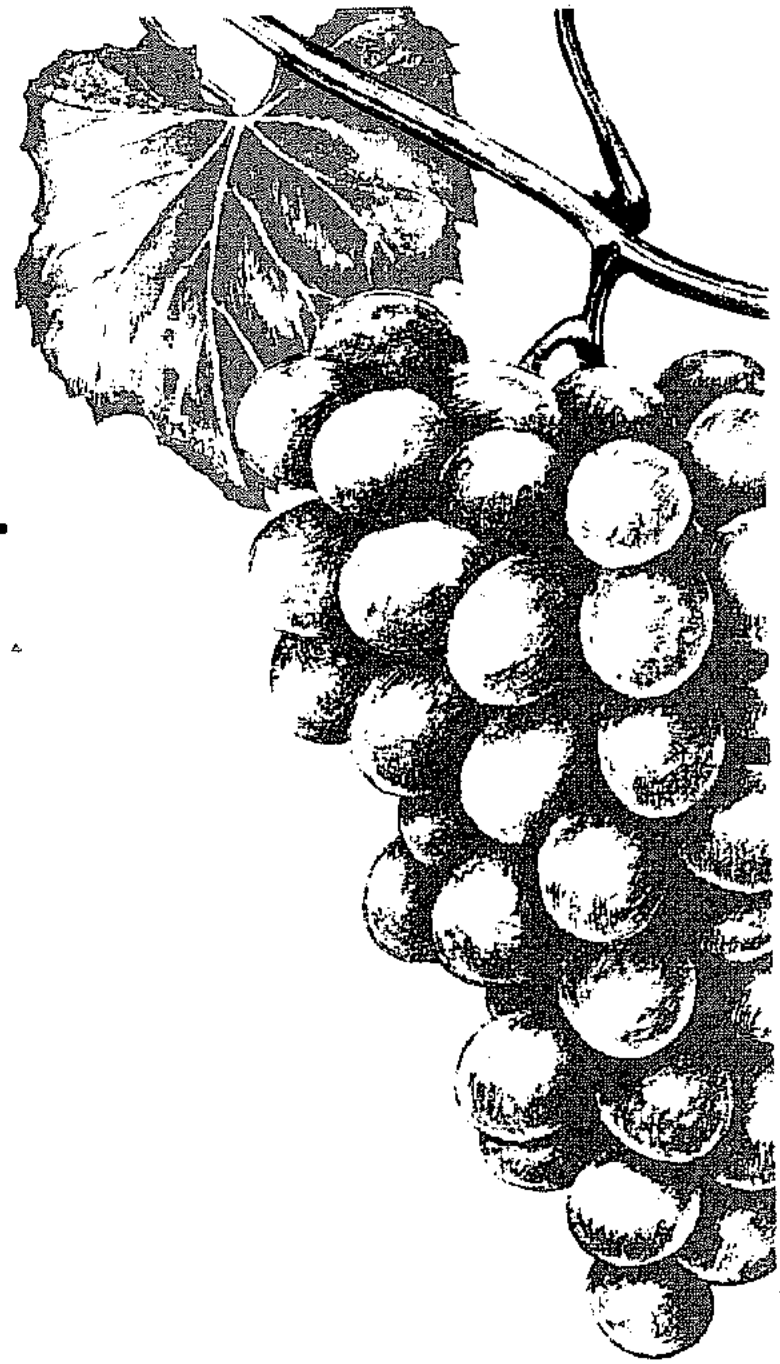
THE NEW YORK GRAPE INDUSTRY



LAKE ERIE GRAPE BELT & THE FINGER LAKES

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Springfield Bank for Cooperatives

Report by:
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Marketing & Research Department
Farm Credit Banks of Springfield
May, 1982

THE NEW YORK GRAPE INDUSTRY
LAKE ERIE GRAPE BELT & THE FINGER LAKES

MAY, 1982

OLEAN FARM CREDIT ASSOCIATION
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Ithaca

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Canandaigua, Penn Yan & Waterloo

SPRINGFIELD BANK FOR COOPERATIVES
Springfield, Massachusetts

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THE NEW YORK GRAPE INDUSTRY

Table of Contents

	Page
Introduction	1
The Report's Statistics - An Aside	3
New York Grape Farm Profitability	5
Fruit Juice Market Fundamentals	13
The Product	13
Brands	15
Supermarket Sales	16
Retail Price Structure	17
Institutional/Restaurant Sales	22
Relationship Between Grower Prices and Wholesale Juice Prices	25
Advertising	25
Exports and Imports	26
Grape Jelly/Jam Market Fundamentals	29
Wine Market Fundamentals	32
The Product	32
Retail Price Structure	33
Wine Sales	37
Characteristics of Wine Consumers	39
The Concord Table Wine Market	43
Consumer Preferences for Wine by Origin	44
Wineries and Wine Brands	45
Imports	49
Exports	52
Wine Sales Considerations	55
Taxes on Wine	55
Wine Advertising	56
Unfermented Grape Products - Long-Term Trends	59
Beverage Consumption	59
Grape Juice/Drink Consumption	61
Consumption of Orange and Other Fruit Juices	62
Market Shares in the Fruit Juice/Drink Market	65
Market Shares in the Jelly/Jam Market	69
Production of Unfermented Grape Products	69
Production of Orange Juice	74
Inventories of Fruit Juice	74
Fruit Juice Prices	79
Grape Jelly/Jam Prices	83

	Page
Wine - Long-Term Trends	89
Wine Consumption	89
Total Wine Sales	93
Total Wine Production	95
Total Wine Sales by Category and Origin	97
Imports and Exports - A Closer Look	102
Inventories	104
Wine Prices	106
The United States Grape Industry - Long-Term Trends	111
The New York State Grape Industry	115
Variety Mix	117
Plantings of Grapes in New York	119
The Changing Variety Mix for the New York Wine Industry	124
Changes in the New York Wine Industry	126
A Chronology of Events, 1965 to 1980	127
The Message in Grape Prices	134
The New York Grape Grower	137
Grape Yields	138
Geneva Double Curtain	140
Welch Foods	143
The Taylor Wine Company	157
Washington - The Competition	165
California - The Competition	171
Wine Grape Varieties	173
Grape Production Regions	177
Plantings of Wine Grapes in California	181
California Wineries	183
E. and J. Gallo Winery	186
California Grape Concentrate	188
Wine Organizations	189
Cost of Production and Other Regional Factors	191
Cost of Production	191
Grape Yields	194
Grower Prices	195
Vineyard Values	197
Cost to Develop New Vineyards	199
Cost of Transportation	202
Orange Juice - The Competition	204

	Page
Foreign Wine Production - The Competition	207
The Outlook for the Future - Unfermented Products	210
The Outlook for the Future - Wine	212
The Alternatives for the New York Grape Industry	218
Supply Marketing Order for Concords	218
Marketing Order for Research and Promotion of Unfermented Grape Products	219
Industry Level Bargaining	220
Marketing Order for Research and Promotion of Wine	221
Wine Sales in Supermarkets	223
Small Wineries	225
Cooperatives	226
Table Grape and Chilled Juice Sales	229
Brandy Production	230
A New York Grape Institute	231
Long-Range Projections of New York Processors' Grape Needs	233
The Alternatives for the New York Grape Grower	234
Improving Productivity and Efficiency	234
Expansion	235
Capital Expenditures and Credit	235
Planting	235
The Role of the Concord	237
Diversification and Marketing	238
Small Wineries	239
Final Thoughts	241
Glossary	242
Sources for Figures in this Report	247

THE NEW YORK GRAPE INDUSTRY - INTRODUCTION

The purpose of this report is to provide a single, comprehensive source of data, analysis, and ideas relevant to the New York grape industry's present and future. With it, individual growers can analyze their own operations and plan for the future. It is also intended to help growers, their cooperatives, farm groups, and others involved in this industry to analyze and develop appropriate industry alternatives. This report does not make specific recommendations for individual growers or the industry.

The impetus for doing this study came from the New York State grape grower community itself. On several occasions during 1979 and 1980, growers expressed concerns, questions, and a desire for an industry study to Farm Credit Service personnel. In response, the Farm Credit Associations of Olean, the Finger lakes, and Ithaca, together with the Springfield Farm Credit Banks, commissioned and funded this study. The study commenced in late 1980 and was mostly completed by late 1981.

It should be noted that this is a report about the New York grape industry in the Finger Lakes and the Grape Belt, and not an analysis of the businesses of specific growers, processors, shippers, or related organizations. However, the importance and dominance of two New York grape processors and the availability of publicly reported financial data about their operations make it instructive and possible to present pertinent information about them. It is emphasized that this analyst has not conducted the necessary company-level research and analysis that would support conclusions about the rightness/wrongness of these firms' past management decisions and practices.

The growing of grapes involves more long-range planning and decision-making than most other farming enterprises because of the long lead time between planting and fruit production. During the 1970's, New York grape growers have had a number of extraordinary factors to consider in making such decisions: the impact of non-Concord grape juice concentrate; revolutions in the wine market, notably the distinct trend in consumer preferences towards white table wines and away from dessert wines; changes in ownership of major New York State wineries; new marketing alternatives, most notably the small farm winery alternative enabled by 1976 State legislation; rapidly escalating production costs that were impossible to offset through improved productivity; and grape prices that did not keep up with either general or production cost inflation. Coupled with the traditional challenges of this industry such as sharp year-to-year fluctuations in crop size, limited market outlets, and rapid perishability, the 1970's were indeed a challenge to the New York State grape grower.

The grower's long-range thinking process was continually confused by a number of paradoxes:

1) The consumer trend toward natural foods has had a very positive impact on fruit juice consumption, and yet most of this increased market has gone to apple, orange, and other juices, not to grape.

2) The United States is in the midst of a well publicized wine "boom". Consumption (both per person and in total) have been growing, and yet New York growers have had difficulties in marketing Concords for wine and many of the wine varieties.

3) In late 1976 it was announced that Taylor/Great Western, New York's largest winery, was to be acquired by the Coca-Cola Company of Atlanta, Georgia and this became effective in January, 1977. Coca-Cola is the nation's largest beverage marketing company, primarily in soft drinks, but also in orange and citrus concentrates (Minute Maid/Snow Crop), fruit juice drinks (Hi-C), coffee, tea, and wine (Taylor, Great Western, Sterling, Monterey Vineyards, and Cinzano). In 1980 it had net sales of $5.9 billion ($4.5 billion in soft drinks alone), net income after income taxes of $422 million, and total assets of $3.4 billion. During 1977, the Wine Spectrum (Coca-Cola's wine subsidiary) increased advertising support of traditional Taylor products with its "Taylor Territory" campaign. In late 1978, however, the focus shifted to California with the test marketing of a new line of "Taylor California Cellars" premium table wines which were extended to national distribution in May of 1979. The introduction of "Taylor California Cellars" has subsequently been an outstanding success that has revolutionized U.S. wine marketing. It has also bewildered New York State grape growers.

4) Other New York State wineries have also been acquired by outside firms in the past decade or so. Gold Seal winery was acquired by Joseph E. Seagram, the nation's fourth largest beverage marketer with 1980 sales at $2.5 billion in distilled spirits and wines (primarily California wines, e.g. Paul Masson.) The Mogen David Winery was acquired by the Coca-Cola Bottling Company of New York. Coca-Cola of New York was an independent corporation with 1980 sales of $420 million, making it the nation's 21st largest beverage marketing company. It also acquired a major California winery, Franzia Brothers, during the 1970's. During late 1981, Mogen David and the other winery assets of Coca-Cola of New York were spun off as a separate business entity headquartered in Ripon, California.

5) During the late 1970's, Italian table wine imports to this country expanded rapidly in terms of both gallons and market share. These were generally low alcohol, fruity, slightly sweet, and slightly carbonated wines. Because they have a unique, pleasant taste and are attractively priced, American marketers were able to cleverly and successfully market them to new American wine consumers. There were several ironies for New York wine producers in the Italian success story. First, this category defied the trend towards white table wines with its largest market in reds. New York red wine grapes were simultaneously encountering distressed markets. Second, New York table wines have often been criticized for the fruity flavor of the American (labrusca) varieties commonly used in them. Through good marketing research by an American wine distributor, it had been found that a large new group of American wine drinkers could be developed by creating a wine for them that had a resemblance to the Concord grape flavor that they had grown up with in their grape juice and soda. Third, this new market carved out by the Italian wine importers was a very unsophisticated one (in terms of wine), but very large in terms of sales. It did not have the knowledge or concern over where the grapes were grown, what variety(ies) they were, what wine-making techniques were used, or even who the winery was. This "wine innocence" is in contrast to American wine connoisseurs who may think first of France or the Napa Valley of California, but who would rarely think of New York or Italy for table wines.

6) The complexity of the Concord grape market with its two major end uses (unfermented and wine) meant that, at times, market signals could be confusing to the grower. Thus, as wine producers were coming off the "Cold Duck" fad of the early 1970's and discouraging Concord production, Welch and other unfermented product processors were encouraging it in order to rebuild depleted juice inventories and to hedge against future shortages of Concord products such as those encountered in the early 1970's.

7) The unfermented segment of the grape market is heavily dominated by farmer cooperative processor/marketers - most notably by Welch Foods, Inc., a wholely owned subsidiary of the National Grape Cooperative with 1981 sales of $235 million. Other important Grape Belt cooperatives are Growers Co-op, Westfield Maid, and Keystone Foods. Despite the dominant role of these farmer organizations in the unfermented Concord market, growers have learned that farmer ownership of processing facilities does not insulate them from problems such as product oversupply, competition from substitute products, high grape production costs, and inflation.

It would be easy for the uninformed novice to propose straight-forward solutions for the New York grape grower: pull out undesirable varieties and replant with desirable ones; increase productivity and exert better cost control; exercise better marketing at the farm level; work through the appropriate channels to improve and/or redirect cooperative marketing efforts; build farm wineries; establish cooperative wine ventures; or leave the grape business altogether. Because of the complexity of vineyard management alternatives, unique business characteristics, and the individuality of growers themselves, the only person who can determine what is best for each grower is that grower himself.

This report does not propose or define a solution for the New York grape industry's current problems. This report will instead examine many of the issues and provide information that will hopefully enable growers to make long-term decisions for themselves and for their industry on a more informed basis. It is this analyst's judgement that the amount of information available to the New York grape grower regarding vineyard management has been excellent, but that the level of marketing information has been inadequate. The reasons for this inadequacy are varied: the complexity of grape markets themselves; the relative smallness of the Concord grape industry from a national viewpoint; the historic stigma attached to alcohol products, including wine, since Prohibition that have prohibited or discouraged government agencies from collecting data about them; the reluctance of some processors to supply government agencies with data; and many grape growers' preoccupation with vineyard management and lack of concern for marketing except in times of market distress.

The Report's Statistics - An Aside

Due to rounding of some numbers, especially where percentages are presented, some data in the tables of this report may not add precisely to the totals shown. For example, while all percentages are shown as totaling 100 percent, adding of individual figures may actually result in 99 or 101 percent.

Because annual grape crops fluctuate substantially, I have often chosen to present moving averages of the data in order to more clearly demonstrate long-term trends as opposed to the normal ups and downs of annual crops. A three-year moving average consists of the number for the named year, plus the preceding two years, all averaged together. For example, a three-year moving average of the grape crop for 1980 is the average of 1980, 1979, and 1978. When used, moving averages will be so indicated.

Sources of data for all of the figures in this report are listed together at the conclusion of the report. Also, a glossary of some technical terms used in this text is presented at the end of the report.

NEW YORK GRAPE FARM PROFITABILITY

New York grape farmers do not need documentation as to the cost/income squeeze and the poor or nonexistent profitability that they have experienced in recent years. However, to understand the economic plight and the current concerns of all New York grape growers, it is useful to examine grape prices, growing costs, and profits for the last three decades.

Figure 1 shows the average price received for all grapes by New York State grape growers for 1956 to 1981. Aside from the year-to-year fluctuation, the average price has generally increased over time. However, the rapid inflation in the American economy since the late 1960's makes this a rather meaningless comparison. The line entitled "Price in $1956" compensates for this inflation and dramatically demonstrates the declining "real" prices (in 1956 dollars) received for New York grapes since 1973. On a three-year moving average basis, the 1980 "real" price of New York grapes was at the lowest level of the last 25 years.

It can be correctly argued that yields per acre have changed dramatically over the past twenty-five years, thus compensating grape growers for some of this loss in real value for their grapes. Figure 2 shows the average value of New York grapes per bearing acre for the past twenty-five years. Again, the two lines that show this on the basis of constant dollars are the most instructive. While yield per acre did increase fairly consistently from 1956 until 1967, it leveled off between 1967 and 1971, and has actually fallen off slightly since then. As a result of both yields and prices, average gross returns have been through five broad phases since 1956, as revealed by the three-year average:

1) 1956 to 1965 was a period of modest increases.

2) 1966 to 1968 was a period of slight declines.

3) 1969 to 1971 was a time of sharp increases in the after-inflation value of grapes.

4) 1972 to 1977 was another period of significant declines in the real value of grape production.

5) 1978 to 1981 was a period of stagnation in real grape values, capped by another major decline in 1981.

While there is no uniform, consistent source of data that would show historical levels of profits/losses per acre of New York grapes, it is possible to study the relationship between crop value per acre and a cost index for grape production items constructed by this analyst (Figure 3A). Both indices are based on the 1956 value being set equal to 100 in order to facilitate comparison. The cost of production index shows the acceleration from the slow creep of the late 1950's and early 1960's to the more uniform increases of 1965-1973, and then finally the uneven, but large increases of recent years.

FIGURE 1.
AVERAGE GROWER PRICE FOR NEW YORK GRAPES, 1956-81

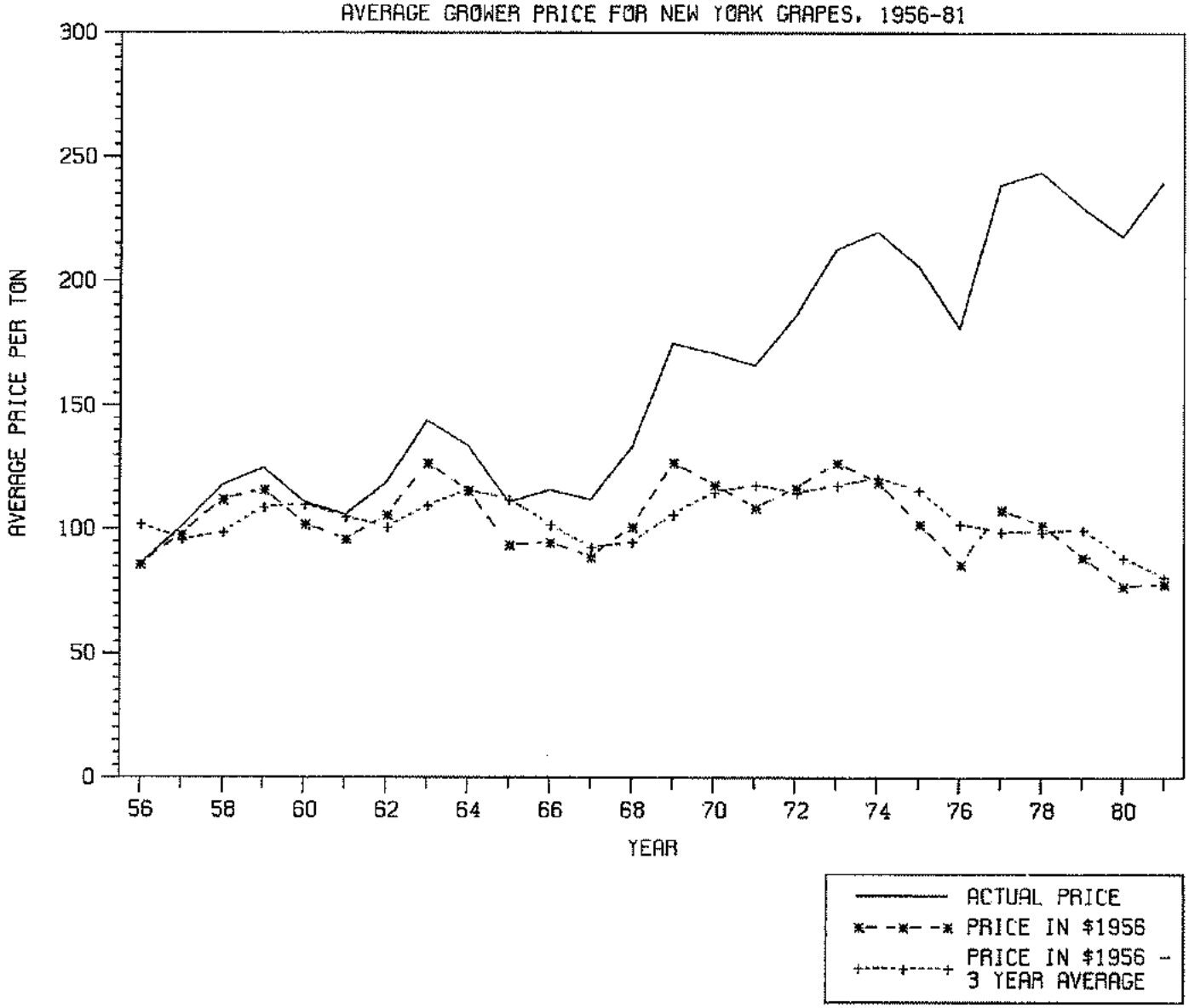


FIGURE 2.
AVERAGE GROSS RETURNS PER ACRE OF
NEW YORK GRAPE PRODUCTION, 1956-81

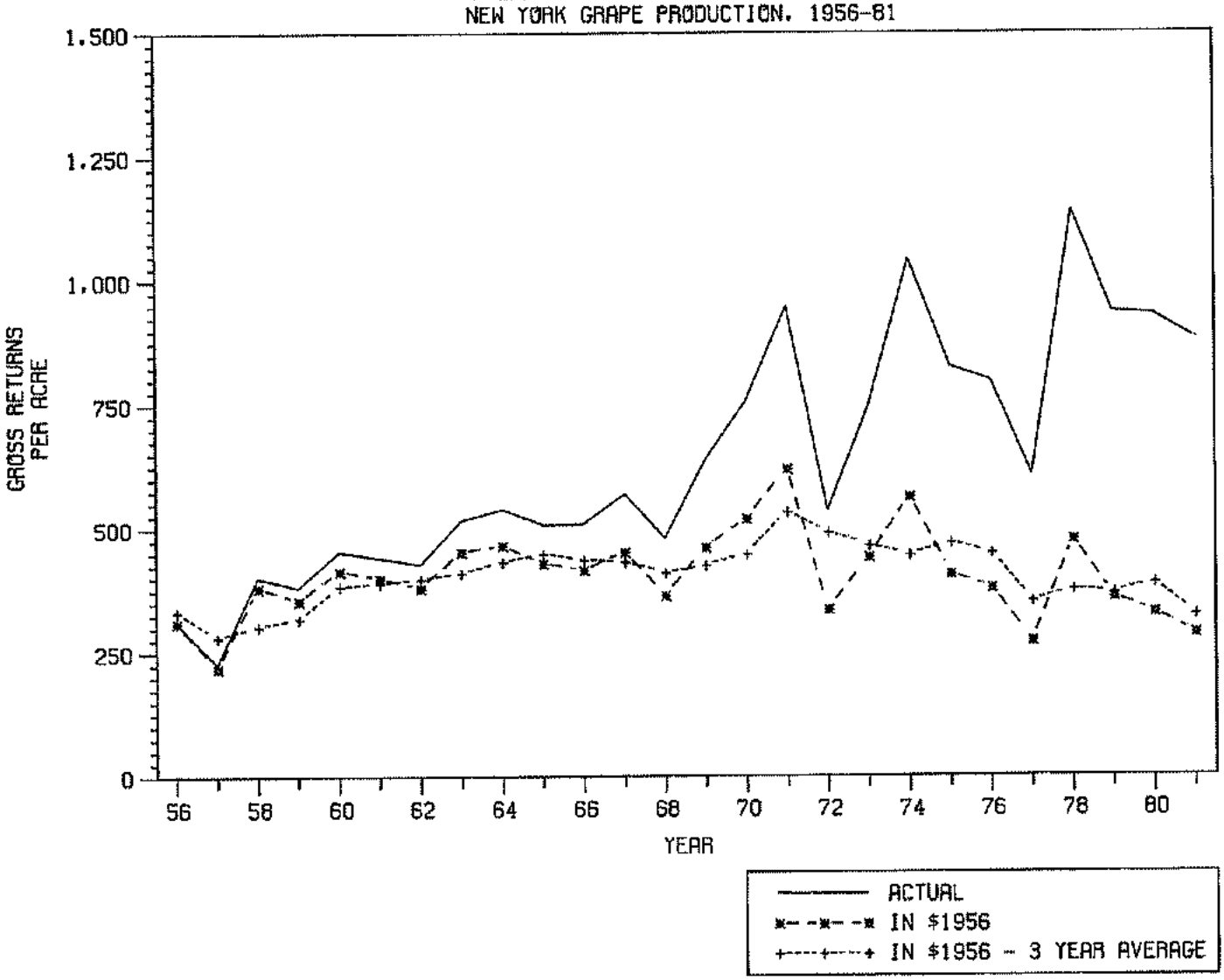


FIGURE 3A.
INDEX OF GROSS RETURNS PER ACRE AND PRODUCTION COSTS, 1956-81

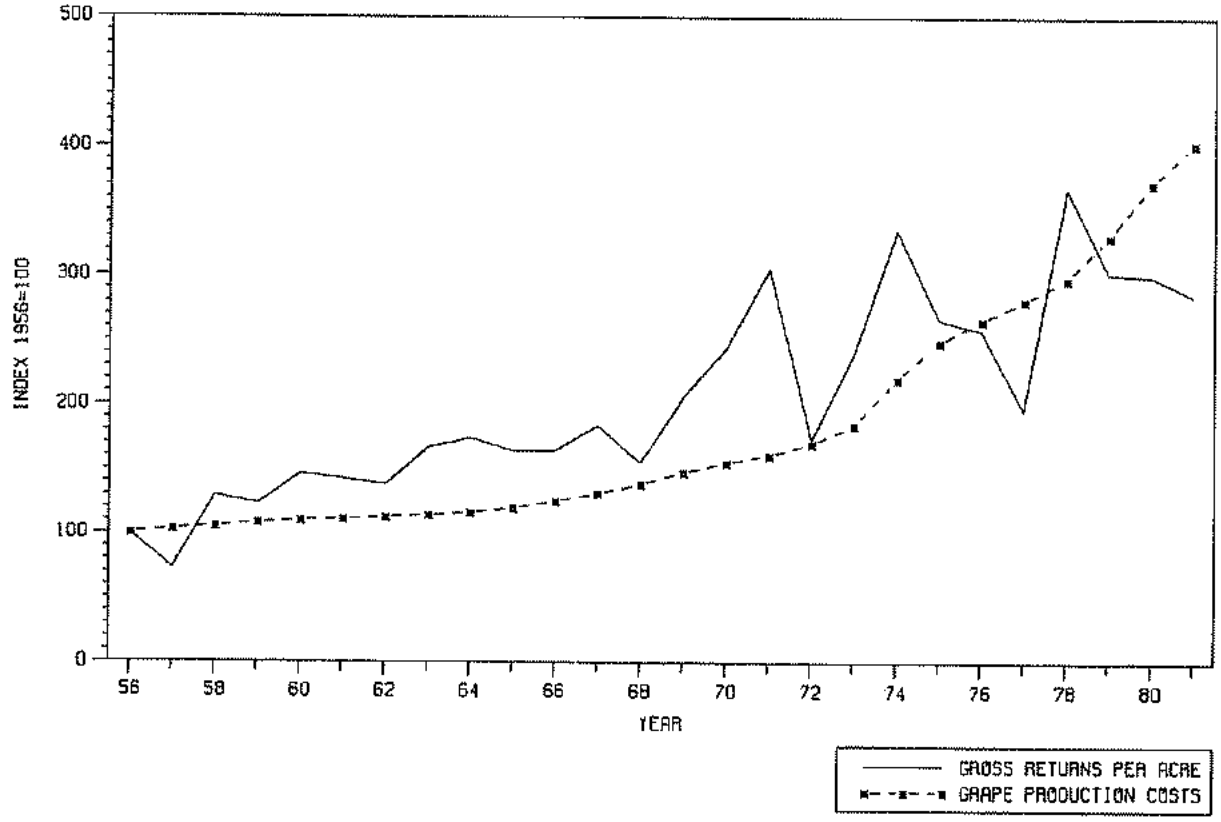


FIGURE 3B.
INDEX OF GRAPE FARM PROFITABILITY, 1956-81

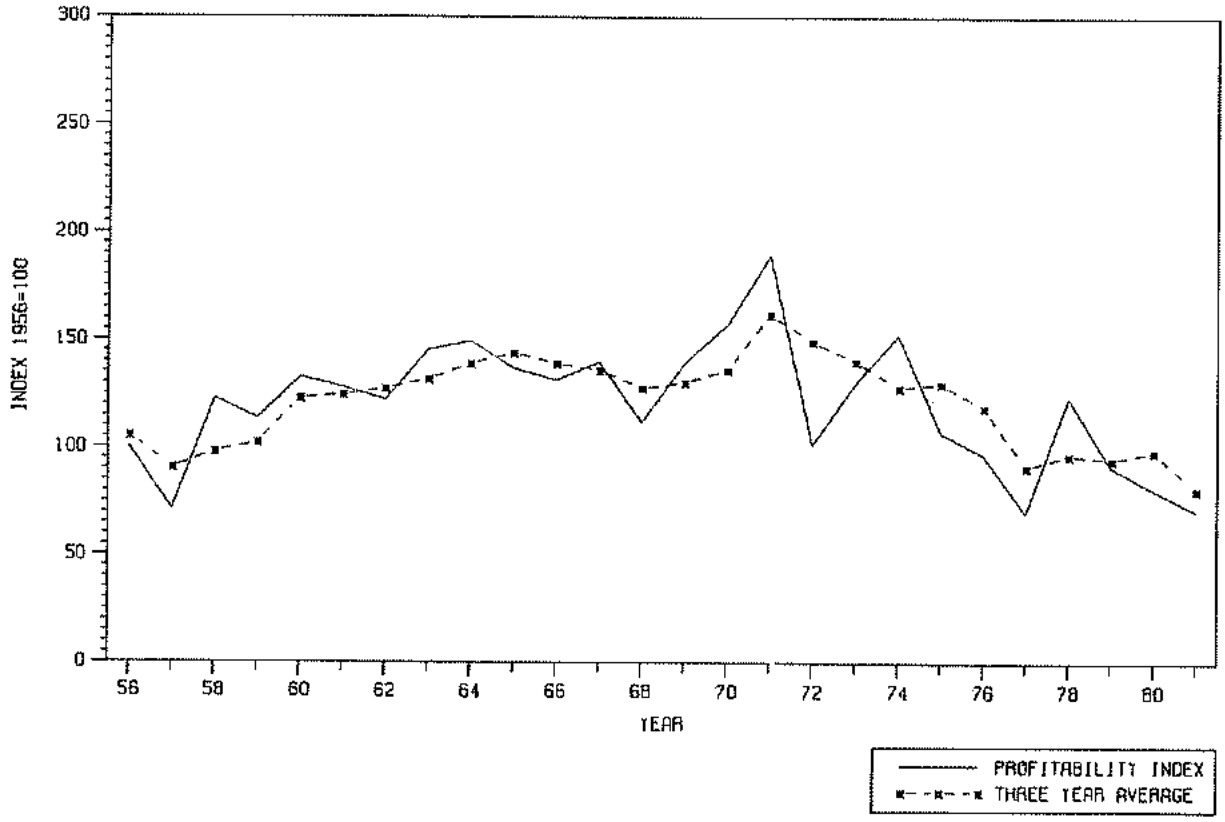


Figure 3B displays a New York grape profitability index for 1956-1981 constructed by dividing the index of crop value per acre by the cost index for grape production items. The resulting index does not show how much profit/loss grape growers had in a given year, but it does show periods of poorer profitability (lower index values) and better profitability (higher index values). While the sharp differences in profitability between years due to changing yields and prices are dramatically obvious, an examination of the three-year average for the profitability index reveals four broad phases for this industry since 1956:

1) Late 1950's to 1965. Crop value per acre increased faster than production costs, due largely to improving yields. This was a period of stability and improving profitability in the industry.

2) 1966 to 1968. There was a dip in profitability as production costs began to increase more rapidly and several years of lower prices occurred.

3) 1969 to 1971. Increasing prices and strong yield levels led to another period of improving profitability.

4) 1972 to the Present. Crop yields were generally stagnant and production cost increases far outstripped grape price increases. As a result, profitability levels declined sharply, reaching the very low level of the recent past (1977-81).

A more detailed picture of the economic distress felt by New York wine grape growers during the past eight years is presented in Table 1. It should be noted that the expense item for operator labor is based on the operator doing the majority of the vineyard work and being paid a level of wages and benefits equal to that paid for manufacturing labor in nearby cities. The deterioration of net margins over the 1974-81 period is very obvious to the point where, in five of the last six years, the margin between price per ton and total expenses for cash items, machinery depreciation, and operator labor has been negative. (This does not account for any interest or return on investment and management.) This is not hard to understand when placed in the context of grape prices increasing at a two percent compound annual rate, cost per acre increasing at approximately seven percent, and yields that have been trending downward.

The same deterioration in profitability has also been experienced by Lake Erie Grape Belt growers who produce predominantly Concords and market them primarily for unfermented products. As shown in Table 2, Net Cash Farm Incomes were relatively stagnant in 1976, 1978, and 1979, with a sharp decline in 1980. However, Net Cash Farm Income does not measure compensation to the grower for his own labor, management, and equity. If a charge is made for his equity, the resulting Labor and Management Income measure shows a serious lack of compensation for the growers' labor in three of the five years between 1976 and 1980. A rather large loss (on paper) was incurred in 1980. Viewed another way in terms of a fixed charge for his labor, the Rate of Return on Equity shows four relatively weak years and a very weak year in 1980. This measure includes appreciation on real estate as well, so the actual rate of return from net farm income would have been even lower.

Table 1. Recent Trends in Profit/Loss for New York Wine Grapes

Expense Item	1974	1975	1976	1977	1978	1979	1980	1981	Compound Rate of Change, 1974-81
	Per Acre								
Hired Labor	68	65	65	72	72	79	82	88	3.8%
Fertilizer & Chemicals	58	68	68	68	75	77	99	122	11.2
Trellis Repair & Tying	37	41	40	40	46	46	56	56	6.1
Machine Operation	62	62	62	62	69	79	103	114	9.1
Custom Harvest & Trucking	136	168	168	168	160	160	192	217	6.9
Taxes	25	30	35	39	39	39	39	40	6.9
Other Cash Expenses	50	53	61	63	66	77	81	75	6.0
Total Cash Expenses	436	487	499	512	527	557	652	712	7.2%
Operator Labor	415	415	401	401	479	511	596	667	7.0%
Machinery Depreciation	53	61	72	75	83	91	105	120	12.4
Total Cash Expenses + Operator Labor + Machinery Depreciation	904	963	972	988	1,089	1,159	1,353	1,499	7.5%
Yield Per Acre (Tons)	5.09	4.58	4.58	2.45	4.67	3.68	4.05	3.77	N/A
	Per Ton								
Total Cash Expenses	$ 86	$106	$109	$209	$113	$151	$161	$189	N/A
Total Cash Expenses + Operator Labor + Machinery Depreciation	$178	$210	$212	$403	$233	$315	$334	$398	N/A
Price Received Per Ton	$265	$244	$197	$264	$272	$272	$282	$310	2.3%
Net Margin Between Price and:									
Total Cash Expense	$179	$138	$ 88	$ 55	$159	$121	$121	$121	N/A
Total Cash Expenses + Operator Labor + Machinery Depreciation	87	34	(15)	(139)	39	(43)	(52)	(88)	N/A

N/A = Not applicable because of fluctuating yields.

Note: All figures based and weighted for a thirty five acre wine grape operation, including 10 acres of Concord, 5 acres of Niagara, 10 acres of Catawba, 5 acres of Delaware, and 5 acres of Aurora. These figures do not account for any interest, return on investment, or vineyard depreciation. Yields and prices for 1981 are estimates by J. Putnam II based on New York Crop Reporting Service data.

Source: "Grape Production Cost Study," New York State Wine Grape Growers, Inc., 1974, 1975, 1976, 1977, 1978, 1979, 1980, and 1981.

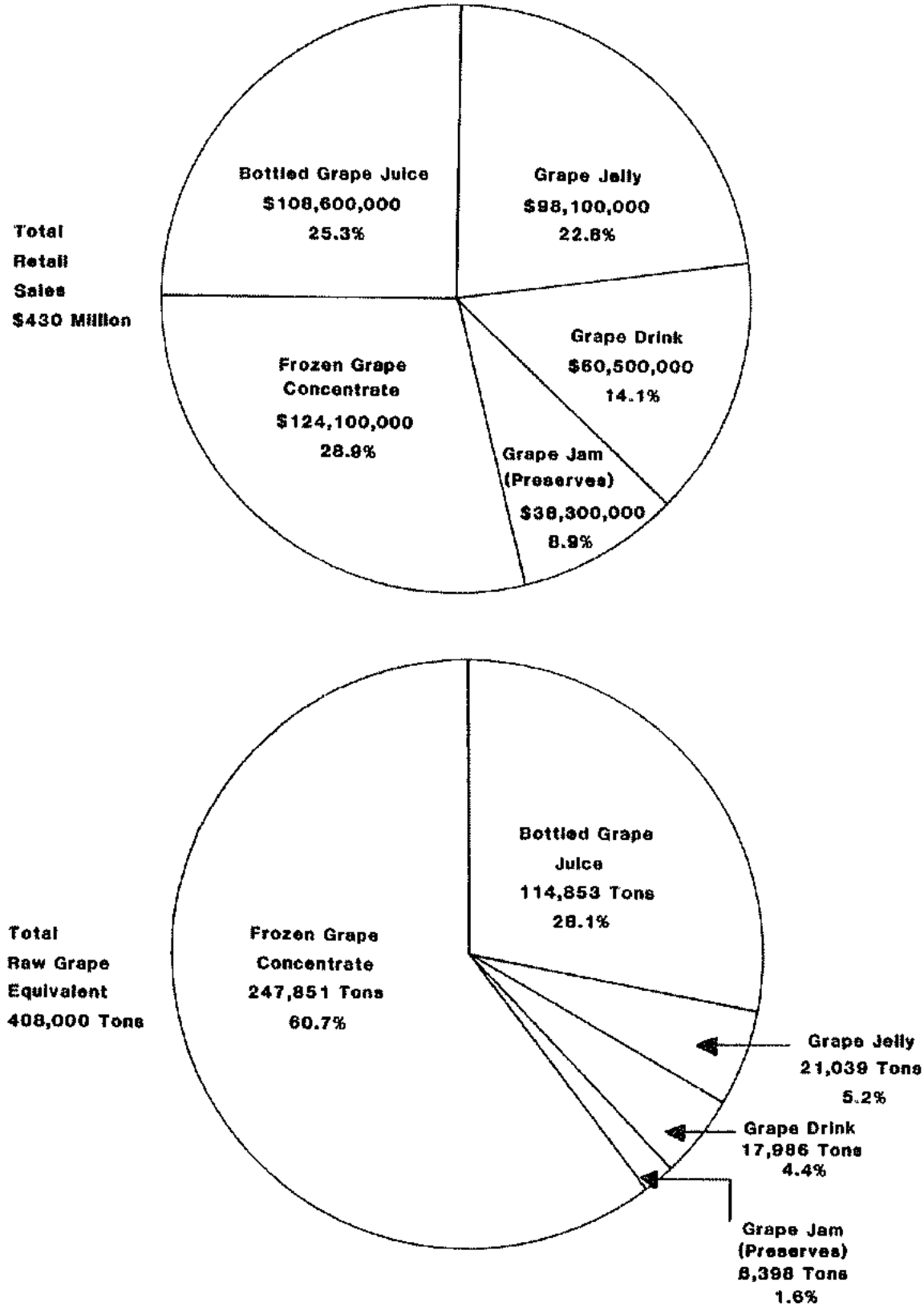
Table 2. Trends in Grape Farm Profitability in the Lake Erie Grape Belt, 1976-80.

	1976	1977	1978	1979	1980
Number of Farms	16	14	13	12	10
Acres of Bearing Grapes	80	87	87	86	85
Yield Per Bearing Acre (Tons)	5.8	3.2	5.5	4.9	4.7
Net Cash Farm Income					
Per Farm	$34,243	$ 5,274	$34,170	$34,317	$ 16,841
Per Bearing Acre	428	60	393	399	198
Per Ton	74	19	71	81	42
Labor & Management Income					
Per Farm	$ 7,738	$-8,188	$28,262	$ 413	$-20,292
Per Bearing Acre	97	-94	325	5	-239
Per Ton	17	-29	59	1	-51
Rate of Return on Equity	5.9%	3.0%	16.7%	6.4%	1.1%

Source: "Great Lakes Region Grape Farm Business Summary and Analysis, 1980," G. B. White and T. D. Jordan, Cornell University, 1982.

FIGURE 4.

U.S. RETAIL SALES AND ESTIMATED RAW GRAPE UTILIZATION OF PRINCIPAL UNFERMENTED GRAPE PRODUCTS, 1980



Source: Figures developed by the author based on data in "Chain Store Age Supermarket Sales Manual.

Unfermented products are the largest user of Concord grapes, especially at the national level but even in New York State where wine use of Concords is also important. Grape juice beverage products are, in turn, the dominant products within the unfermented category, especially in terms of raw grapes. Figure 4 graphically displays these relationships.

The Product

Grape juice is part of a much larger fruit juice market, and fruit juices are in turn part of a much larger market for beverages. In recent decades, Americans have increased their consumption of purchased beverage products and decreased their consumption of plain water. Fruit juices have received a great deal of consumer attention and growth in sales during this time for a variety of reasons:

1) They are basically convenience foods. With changing American lifestyles and expanding after-inflation personal incomes (until recently), convenience foods have enjoyed strong rates of growth.

2) The introduction of frozen concentrated juices, primarily orange and grape, widened the consumer appeal and thus the market for these juices. Both products are sweeter and more similar to the fresh counterpart than are their canned/bottled counterparts. Not only did this give them strong appeal to children, but to consumers of all ages. Improved technology for processing, distributing, and retailing enabled the successful marketing of both frozen concentrate and chilled juices as well.

3) Consumer perception of fruit juices as being necessary for good health and nutrition e.g. the recognition of the necessity for Vitamin C has had a strong impact. In more recent years, the consumer trend towards more "natural" foods has been helpful to fruit juice sales.

4) Marketing innovations such as the original formulation and introduction of frozen orange and grape concentrates, and more recently the development of "new" products such as cranberry/fruit blends ("Cranapple") and "Five Alive" concentrate have widened and expanded the original canned fruit juice market.

5) Strong consumer advertising/promotion by the Coca-Cola Foods Division (Minute Maid, Snow Crop, and Hi-C), the Florida Citrus Commission, Welch Foods, Ocean Spray, Tree Top, and others have built consumer interest in fruit juices and drinks as well as strong sales for their respective products.

As will be quantified later, grape juices and drinks are a relatively small product category in the very large fruit juice market which is dominated by frozen orange juice. There are four basic grape juice products:

1) Frozen Grape Concentrate. By removing some of the water from natural grape juice and flash freezing it, a frozen concentrate is produced. Some sugar is added in processing so that the reconstituted product is somewhat sweeter than natural grape juice. While it can be reconstituted to single strength, it is typically reconstituted with three parts of water to one of concentrate to make a grape drink that is substantially less than single-strength. This product is a direct competitor to frozen orange concentrate. Heaviest users are children, and because of this, most grape concentrate buyers are quite price-conscious relative to the orange concentrate alternative. Pediatricians sometimes recommend it for children as an alternative to citrus juices which have higher acid levels.

2) Bottled/Canned Grape Juice. This is single-strength grape juice that has been pasteurized and sealed in bottles so that it is shelf-stable. It usually has no sugar added, and is therefore somewhat tarter than grape concentrate, especially if made from eastern Concord grapes. Because of this and its higher cost per serving, its strongest market is among older adults who have a loyalty to it. The majority of Americans are not users of it, but it has a nucleus of strong buyers. This group is much less price conscious than those who buy concentrate.

3) Bottled/Canned Grape Drink. This product consists of 10 to 15 percent grape juice, water, sugar, and miscellaneous other ingredients. It is a sweeter beverage than single-strength juice and children are strong consumers of it. This is a very competitive category. Punches, flavor blends, and orange drinks all provide strong competition to grape drink.

4) Chilled Grape Juice. This is a minor volume grape beverage that consists of single-strength juice that has been pasteurized and a preservative added. In the supermarket, it competes against a very strong chilled orange segment in the dairy case. At farmers markets, roadside stands, and specialty shops, it competes head-on with apple cider. Even though it is quite small, this product has received a lot of attention in recent years for several reasons: the success of chilled orange juice and apple cider; the consumer taste trend towards natural products that are not highly processed; and the relative ease with which growers and small wineries can supply this market in their local areas.

It is believed that many American consumers do not care for the strong after-taste left by any of these Concord juice products and thus do not purchase them.

Both the bottled grape juice and chilled grape juice product categories have been broadened in recent years with the introduction and rapidly growing consumer acceptance of white grape juice, based primarily on Niagara grapes. The white juices have several advantages over the traditional purple ("Concord") juice:

1) They are more easily substituted for apple juice and they have appeal to some adults who view purple juice as a children's drink.

2) White juices have a different taste that appeals to some people who do not care for purple juice.

3) Purple juice has a reputation for its ability to stain countertops, floors, and clothing when it is spilled on them. For this reason, some mothers with small children and school lunch programs refuse to serve it. White juice does not have this problem.

It should also be pointed out that grape juice/concentrate is used in a variety of other beverages such as punches and blends ("Cran-Grape") as well as in the canning of some fruit products.

Brands

The Welch Foods label dominates consumer offerings of grape beverage products, although Seneca Foods, Keystone Foods, and several other smaller processors also have their own labels. "Hi-C" is an important marketer of canned grape drink also. After Welch, the next largest category of consumer-packaged grape beverage is the private-label segment - this is each chainstore or grocery wholesaler's own in-store label. Frozen concentrate is usually offered as private label in most stores, while canned/bottled grape juice is less commonly offered under private label and canned drinks even less so.

Some stores have also been offering these grape products under a generic or "no frills" label in recent years. In fact, a recent A. C. Nielsen Company report shows that generics had made significant inroads in these products as of Winter/Spring 1980-81:

Product	Generic Market Share - Rank in all Generic Products	Market Share Range
Preserves	3	6.8% - 9.6%
Jelly	4	6.8% - 9.6%
Bottled Grape Juice	41	3.7% - 4.3%

Source: "Generics in Supermarkets, Myth or Magic?", Copyright © The A. C. Nielsen Company, 1981. Used by permission.

. . . . .

Arrayed against grape beverage consumer packages are a wide variety of brand label juices, concentrates, and drinks. While not intended as a complete listing, these include Minute Maid, Snow Crop, and Five-Alive (all from the Coca Cola Foods Division) in the frozen food case; Ocean Spray, Seneca, and Tree-Top on the canned/bottled juice shelf; Hi-C (Coca Cola Foods Division) and Lincoln on the canned/bottled drink shelf; and Tropicanna and Hood in the chilled juices section of the dairy case. Beyond these, there are many other brand labels, local labels, private labels, and in some stores, the generic label on the many different types of juice products.

Supermarket Sales

As part of the struggle to successfully reach the consumer, each of these products must first win the battle for supermarket shelf space. Based on the 1980 results of the "Chain Store Age Supermarkets" magazine annual survey of supermarkets, the canned juice department (canned juices, drinks, ades, and powdered breakfast drinks) of the average store provides 1.15 percent of the total sales volume, has an overall gross profit margin (markup over wholesale cost) of 20.6 percent, and has 162 different items -- products, brands, and sizes. Grape juice is the fourth largest seller among the fruit juices and accounts for 4.49 percent of the total department's sales and 4.67 percent of its total gross profit. Average gross profit margin was 21.5 percent, normal for this overall category. There were an average of 7 different grape juice items (brands, sizes, and color), or 4.32 percent of the items in this department.

Also in the same department is grape drink, the third largest drink seller after punches and orange. By way of reference, the average store sold $1.00 of grape drinks for every $1.79 of bottled grape juice sales. Grape drinks had 2.50 percent of total department sales and 2.34 percent of the department's gross profit. Average gross profit margin was 19.3 percent for grape drinks, normal for the drink category. The average store stocked six grape drink items, or 3.7 percent of the total items in the canned juice department.

Turning to the frozen juices and drinks category, this department accounted for 0.94 percent of the average store's sales volume. This category is heavily dominated by orange juice concentrate which accounted for two-thirds of the sales. After orange and frozen ades (lemon, lime, and orange), frozen grape concentrate was the third largest seller with 7.40 percent of department sales. Frozen grape concentrate had an average gross profit margin of 28.9 percent, normal for the category, and contributed 7.26 percent of the department's total gross profit. Of the average 47 items in the frozen juice sales case, five (10.6 percent) were frozen grape concentrate items.

There are two important conclusions that can be drawn from the preceding narrative. First, grape beverage products are treated normally by supermarket managers in that the gross profit margins are typical of other competing products and they receive shelf space roughly in proportion to their sales volume. Second and more important, frozen and canned grape juice are both fairly small in their respective categories and therefore receive precious little shelf space for exposure to the consumer. If the typical retailer drops one or two grape items, he may cut consumer exposure by 14 to 40 percent. Salesmen of branded grape products are always struggling to maintain or expand shelf space -- to them product shortages or product allocations to retailers are the worst of nightmares. Because of the limited space available, the sales and merchandising activities of branded label firms are especially crucial in maintaining retail exposure of their grape products.

Retail Price Structure

While canned grape juice has a very small, but devoted following of consumers who are not very sensitive to price, its sales are limited by the fact that many juice consumers are sensitive to its very high price. The 1979-80 price structure for major canned juices under private label is shown in Figure 5. Bottled grape juice exceeds its closest alternative, bottled apple, by about five cents per eight ounce serving, or 25 percent. At the other extreme, a serving of grape juice costs nearly twice as much as canned grapefruit or tomato juice. Also, this is the most competitive position that grape juice has enjoyed in the past seven years. For the consumer who is price-conscious and does not have a strong preference for it, canned grape juice is clearly not price competitive.

The same conclusion cannot be drawn for frozen grape concentrate, as illustrated by Figure 6. Frozen grape is currently very competitive with frozen orange and frozen grapefruit. However, this has not always been true. In 1974-1976, for example, the cost of an eight ounce serving of grape juice was about one third more than for orange juice. Regardless of periods of price imbalance such as that of 1974-76, frozen grape concentrate is much more competitively priced to other frozen concentrate than is bottled grape when compared to other bottled/canned juices. The reason for this is that frozen grape concentrate is typically reconstituted to less than single strength, while bottled grape juice is single strength.

These varying price structures reflect the differing natures of the two markets. Canned grape juice is priced so high above the alternatives that price-conscious consumers have gone to other products, leaving it with a small, but devoted group of loyal adult consumers. Because it is bought for children by price-conscious adults, the price of frozen grape concentrate is forced to stay within a certain range of that for frozen orange.

For the New York grape grower, this means that higher prices to the consumer are likely to result in lower volume sales of grape juice, especially in the frozen concentrate category, so long as other fruit juices do not increase comparably in price. Presumably there is also a limit to how much the more devoted bottled grape juice drinkers will pay.

The previous discussion has dealt only with the structure of private label prices, but there is also substantial variation in retail pricing among brand labels, private labels, and generic labels within each grape category. While no formal price information exists with which to quantify these relationships, this analyst conducted an informal survey of six Springfield, Massachusetts supermarkets during September, 1981. The stores included three standard regional chains, one standard local chain, one regional chain warehouse, and one independent. The results, presented in Table 3, suggest several conclusions which are generally accepted in this industry:

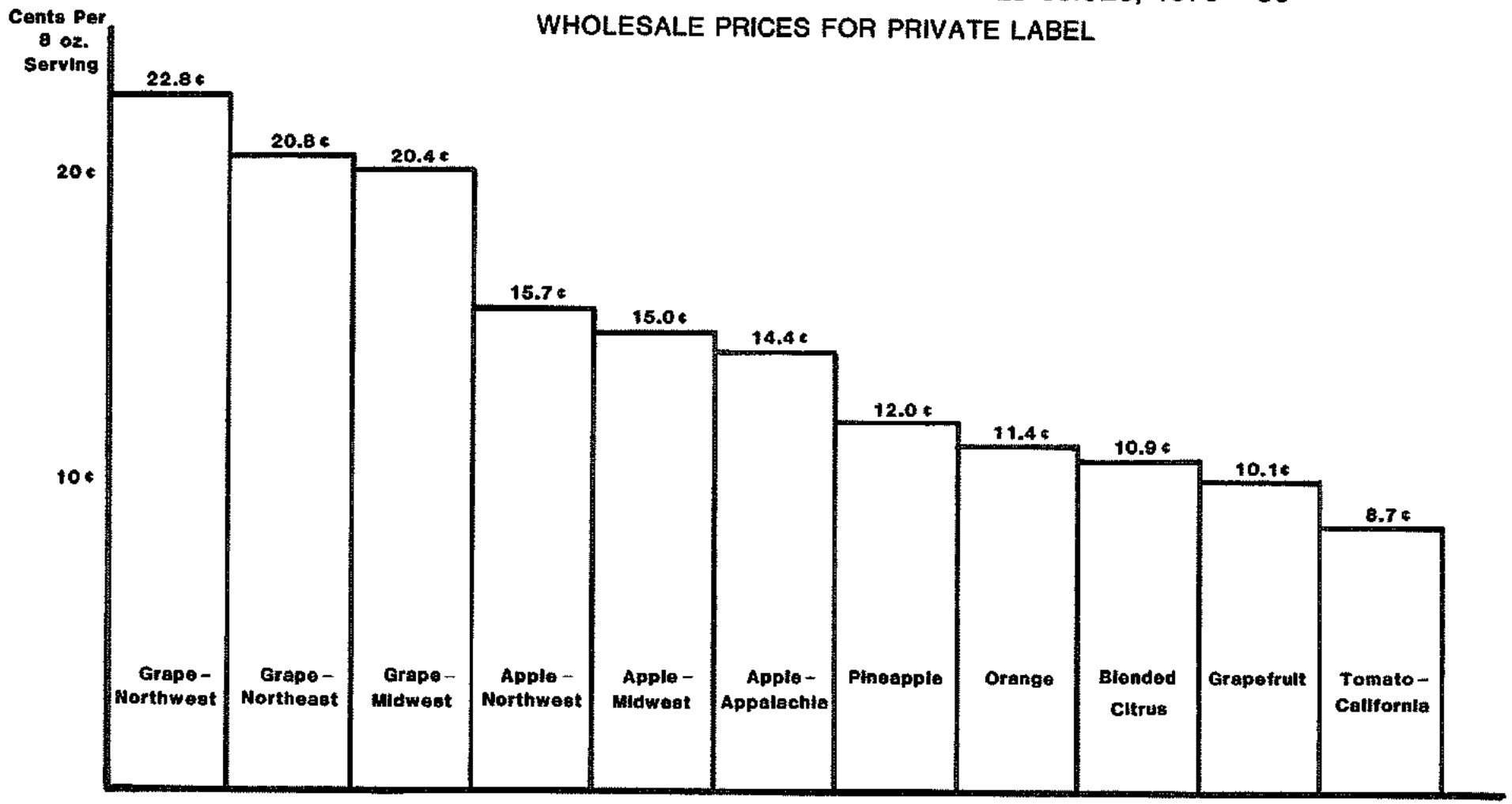
1) The limited number of grape juice items carried in each store.

2) The predominance of the Welch label among those that are offered in the bottled juice and concentrate categories.

FIGURE 5.

COST PER SERVING FOR CANNED/BOTTLED JUICES, 1979 - 80

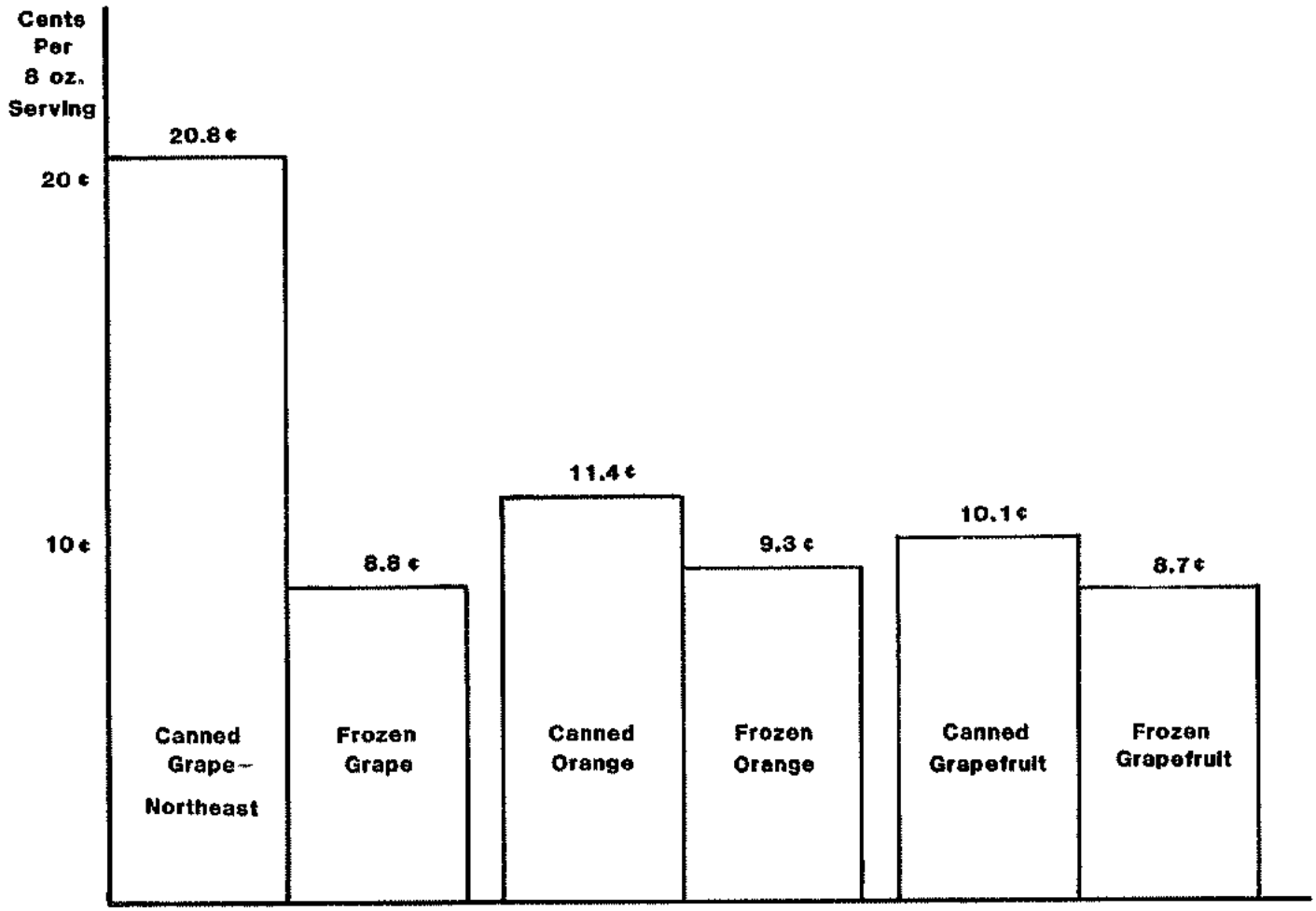
WHOLESALE PRICES FOR PRIVATE LABEL



Source: "Report on Food Markets," Copyright © The Food Institute, various years. Used by permission. Converted to "Per Serving" basis by the author.

FIGURE 6.

COST PER SERVING FOR CANNED/BOTTLED AND FROZEN CONCENTRATE FRUIT JUICES, WHOLESALE PRICES FOR PRIVATE LABEL



Source: "Report on Food Markets," Copyright © The Food Institute, various years. Used by permission. Converted to "Per Serving" basis by the author.

Table 3. Retail Price Structure for Grape Juice Beverages at Six Springfield, Massachusetts Area Supermarkets, September, 1981

Brand	Size	Price (Cents)		Number of Stores Carrying
		Container	8 oz. Serving	
Bottled Grape Juice				
Welch	24 oz.	109¢	36.3¢	4
Private Label	24 oz.	83¢	27.7¢	1
Welch	40 oz.	158¢	31.6¢	6
Private Label	40 oz.	136¢	27.2¢	3
Generic	40 oz.	99¢	19.8¢	2
Seneca	48 oz.	169¢	28.2¢	1
Welch	64 oz.	255¢	31.9¢	1
Frozen Grape Concentrate				
Welch	6 oz.	62¢	20.7¢	2
Seneca	6 oz.	49¢	16.3¢	1
Private Label	6 oz.	43¢	14.3¢	1
Welch	12 oz.	110¢	18.3¢	6
Private Label	12 oz.	77¢	12.8¢	4
Generic	12 oz.	59¢	9.8¢	1
Welch	16 oz.	149¢	18.6¢	2
Private Label	16 oz.	89¢	11.1¢	1
Canned Grape Drink				
Welch*	46 oz.	78¢	13.6¢	6
Hi-C**	46 oz.	71¢	12.3¢	6
Lincoln***	64 oz.	102¢	12.7¢	3
Private Label***	64 oz.	109¢	13.6¢	1
Generic**	64 oz.	99¢	12.4¢	1

*At least 10% natural juice. **10% natural juice. ***15% natural juice.

Source: Informal survey of supermarket shelves in Agawam, Southwick, Westfield, and West Springfield, MA.

3) It is generally accepted that Welch products represent the premium quality consumer label and that it costs more to deliver this quality. For example, Welch juice is usually 90% Concord whereas the Concord content of some private label and generic juices may be 50 percent or even zero. It is also very expensive in terms of advertising, promotional allowances, and brokerage commissions to maintain the widespread exposure that Welch products have acquired in supermarkets. These costs are passed on to the consumer and result in Welch being the highest-priced product in each category. This not only affects Welch sales, but may affect total grape beverage sales in those supermarkets that carry only Welch and thus permit the consumer to only have the option of purchasing a premium-priced grape beverage product.

4) For bottled grape juice, there is a fairly wide spread in price structure - Welch was priced 16 percent over private label, and generic was priced 27 percent under private label. An even wider spread probably exists for frozen concentrates. Based on the informal survey, Welch is priced 43 percent over private label and the single generic offering was priced 23 percent under private label. This price structure has an obvious impact on National Grape/Welch members, but it also has a significant impact on all Concord growers since the cheaper products usually have less Concord juice in them and undermine the higher-priced products that have a higher proportion of Concord juice in them.

5) There is very little price spread among grape drink products, although there is a substantial spread in their grape juice content, e.g., a 15 percent drink uses 50 percent more natural grape juice than does a 10 percent drink.

Institutional/Restaurant Sales

Almost all of the previous discussion in this section has dealt with retail supermarket sales of grape juice beverages. One very important market that grape juice has been unable to extensively tap has been the hotel/restaurant/institutional trade. Some of the increase in frozen orange concentrate and chilled orange juice sales have been a result of rapidly expanding sales in the school lunch (breakfast) program and in the fast-food restaurant business, many of which have developed and heavily promoted breakfast menus in recent years. Florida Department of Citrus data from their "1980 National Restaurant Study" confirms this. During the May-June 1980 period, commercial restaurants had the various juices available for sale as follows: orange - 55 percent of restaurants, tomato - 46 percent, grapefruit - 37 percent, apple - 10 percent, pineapple - 9 percent, grape - 6 percent, pineapple-grapefruit - 3 percent, apricot - 2 percent, and other - 10 percent.

Similarly, the data in Table 4 shows that grape has made only modest gains in penetrating school feeding programs - even during the past two years when apple was able to make large gains due to higher orange juice prices.

Future growth of grape juice sales will depend heavily upon how well these two markets can be penetrated. There is some hope that this can happen, based on Welch's 1979 breakthrough with a West Coast fast food chain adding Welch's Concord Juice to its menu, and increased school lunch interest in grape juice in recent years, especially the white product.

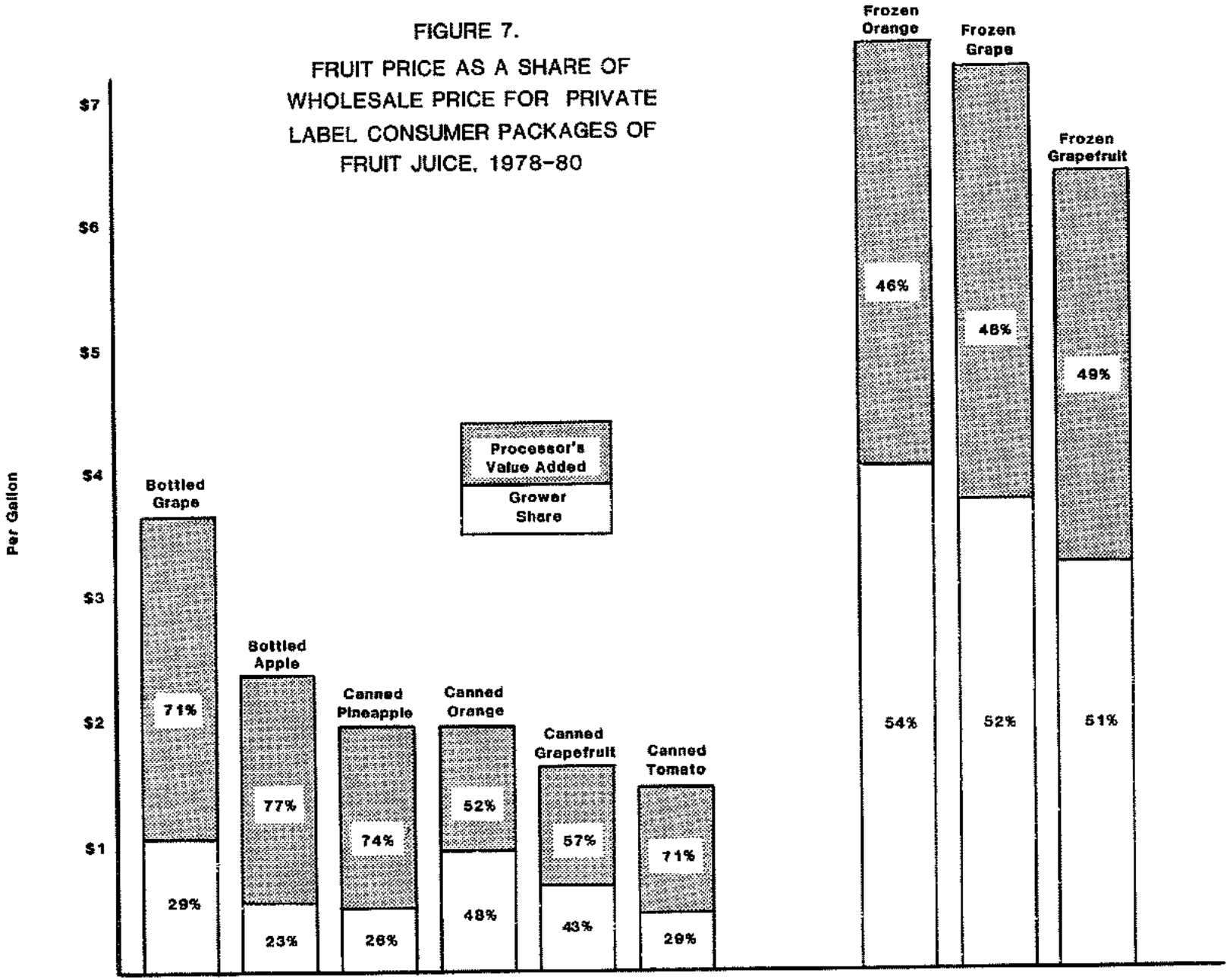
Table 4. Public School Systems Serving Fruit Juice Beverages, 1977-80

Percent of School Systems Serving	1977	1978	1979	1980
Orange Juice	85%	72%	61%	63%
Apple	17	23	51	49
Tomato Juice	15	20	27	34
Pineapple	12	11	21	25
Grape	12	15	20	19
Grapefruit	30	21	18	16
Apricot	2	2	3	6
Pineapple/Grapefruit	2	4	5	4
Other	17	14	8	11

Source: "Beverage Industry", March 13, 1981. Copyright © "Beverage Industry", 1981. Used by permission.

FIGURE 7.

FRUIT PRICE AS A SHARE OF WHOLESALE PRICE FOR PRIVATE LABEL CONSUMER PACKAGES OF FRUIT JUICE, 1978-80



Sources: Developed by the author based on data from "Report on Food Markets," Copyright © The Food Institute, various years; and "Noncitrus Fruits and Nuts," "Citrus Fruits," and "Vegetables," all by Statistical Reporting Service, U.S. Department of Agriculture, various years.

Table 5. Nonalcoholic Beverage Advertising Expenditures for Major Brands in 1980

Fruit Juices	
Minute Maid (Coca Cola Foods) - Mostly frozen orange	$16,467,000
Florida Citrus Commission (Nonbrand) - Mostly frozen orange	15,150,000
Snow Crop/Five Alive (Coca Cola Foods) - Frozen orange & blend	6,611,000
Welch Foods - Grape and others	4,000,000*
Ocean Spray - Cranberry and blends	2,472,000
Total of Above	$44,700,000

Noncarbonated Soft Drinks	
Kool-Aid	$21,213,000
Country Time	11,753,000
Hawaiian Punch	8,647,000
ReaLemon	3,889,000
Lemon Tree	3,171,000
Gatorade	2,877,000
Total of Above	$51,550,000

Carbonated Soft Drinks	
Pepsi-Cola	$ 47,510,000
Seven-Up	43,533,000
Coca-Cola	43,418,000
Dr. Pepper	13,514,000
Tab	13,309,000
Diet Pepsi	12,642,000
Sprite	11,788,000
Mountain Dew	10,511,000
Canada Dry	10,525,000
Eight Other Major Brands	50,984,000
Total of Above	$257,734,000

*Estimate for consumer advertising of grape beverages only.

Source: "Beverage World," June, 1981.

Relationship Between Grower Prices and Wholesale Juice Prices

Figure 7 shows the share of the wholesale juice product dollar actually paid to growers for the raw fruit based on 1978-80 average grower and wholesale product prices, and typical product recovery rates. Wholesale prices are for private-label container sizes, e.g. cases of a dozen 24 oz. bottles of grape juice, cases of a dozen 32 oz. bottles of apple juice, cases of a dozen 46 oz. cans of other fruit juices, cases of forty-eight 6 oz. cans of frozen orange and grapefruit concentrate, and cases of twenty-four 6 oz. cans of frozen grape concentrate.

For frozen concentrates, slightly over one-half of the final wholesale price of orange, grape, and grapefruit is attributable to what the grower was paid for the fruit. This share is remarkably close for all three fruits even though both the actual wholesale price for the concentrate and the grower value have averaged lower for grapefruit than for the orange and grape. This relationship implies that wholesale, and ultimately consumer prices, are fairly sensitive to prices paid to growers for the fruit - in rough terms, every two percent change in the grower price affects the wholesale price by one percent for all three fruits.

The grower share of canned juice wholesale prices is substantially lower than for frozen concentrates. Canned orange juice is the highest with a 48 percent grower share and this ranges down to a 23 percent grower share for bottled apple juice. Bottled grape juice has a 29 percent grower share, towards the lower end of the range for these six juices. However, bottled grape juice has the highest actual grower cost of $1.07 per gallon, followed by orange at 95 cents, grapefruit at 69 cents, and apple at 56 cents. There are two apparent reasons why the processor's value-added share is higher for canned juices than for frozen concentrates. First, the frozen concentrates are substantially higher volume products, especially the price-leader orange, than are most of the canned/bottled items. Not only is this market more price competitive, but certain manufacturing efficiencies may also exist. Second, on the basis of the farm weight of the raw fruit, frozen concentrate requires relatively less and cheaper packaging than does the canned/bottled product. The lower grower share of the canned/bottled products means that wholesale and consumer prices are not as sensitive to grower prices in comparison to frozen concentrates. For example, a five percent change in the grower price would affect wholesale juice prices as follows:

Canned Orange:	2.4%	Frozen Orange:	2.7%
Canned Grapefruit:	2.1%	Frozen Grapefruit:	2.6%
Bottled Grape:	1.4%	Frozen Grape:	2.5%
Canned Tomato:	1.4%		
Canned Pineapple:	1.3%		
Bottled Apple:	1.1%		

Advertising

If viewed in terms of the fruit juice category alone, grape juice beverages must compete against relatively large advertising budgets. Table 5 shows consumer advertising expenditures for five fruit juice categories which account for a large proportion of all fruit juice consumer advertising. Welch similarly accounts for a very large proportion of grape juice beverage consumer advertising. For the five major brands in Table 5, nine cents out of every consumer advertising dollar was spent on grape beverages through Welch.

The "its not just for breakfast anymore" consumer advertising message of the Florida Citrus Commission in recent years is a fitting reminder that growth in fruit juice sales must now come mostly from promoting their use as refreshment beverages, rather than as strictly breakfast beverages. This is especially true for grape concentrate and grape drink with their heavy use in the child market. Because of this, fruit juice advertising must also be considered in terms of the advertising dollars spent for other soft drinks. The six leading noncarbonated soft drinks, mostly powdered mixes, spent somewhat more on consumer advertising than did the six leading fruit juice brands. However, it is the consumer advertising clamor created by the soda pop industry that really drowns out fruit juices' message - the leading 17 brands outspent fruit juices by a factor of almost six to one. Pepsi-Cola alone spends more than the five leading fruit juice advertisers.

Summarizing the extent to which consumers are exposed to grape juice beverages via Welch's advertising expenditures, Welch accounts for:

- 9 cents out of every consumer advertising dollar for fruit juices. This actually compares quite favorably to grape concentrate's 7.4 percent share of total retail sales of fruit juice concentrates and bottled grape's share of 6.0 percent in 1980. (These shares include Welch and all other grape products.)

- 4 cents out of every consumer advertising dollar spent for fruit and other non-carbonated soft drinks.

- 1 cent out of every consumer advertising dollar spent for all soft drinks.

This is highly indicative of the tough marketing climate in which grape beverages must fight to maintain/increase sales.

Exports and Imports

The data on unfermented grape products foreign trade is fairly limited and exists only for very recent years. This reflects the very limited foreign trade in these products between the U.S. and other countries.

In the government's fiscal 1980 year (October 1, 1979 to September 30, 1980), this country exported 1,103,376 gallons of single-strength equivalent juice valued at $9,839,000. This was roughly equivalent to 5,517 tons of raw grapes or 1.6 percent of the crush for unfermented products in the major Concord States. Details on product form are sketchy, e.g. it is unknown whether it was in bulk or consumer packs, but the breakdown is as follows: single-strength juice - 24 percent of juice equivalent and 41 percent of sales dollars; frozen concentrate - 16 percent of juice equivalent and 18 percent of sales dollars; and unfrozen concentrate - 60 percent of juice equivalent and 40 percent of sales dollars. Canada is our best customer with 36 percent of 1980 export sales dollars, followed closely by Japan with 31 percent. After these two, there are a number of very small customers - the Netherlands Antilles with five percent of export sales dollars, Taiwan with four percent, Hong Kong with three percent, and Leeward and Windward Islands with three percent.

Data is available for only three years, but it appears that grape juice exports are on an upswing:

	1978	1979	1980
Single-Strength Equivalent (Gallons)	400,207	1,209,710	1,103,376
Raw Grape Equivalent (Tons)	2,001	6,049	5,517
Value of Sales	$4,097,000	$8,198,000	$9,839,000
Canada	1,189,000	3,555,000	3,496,000
Japan	1,658,000	2,564,000	3,057,000

Source: "U.S. Foreign Agricultural Trade Statistical Report," Economic Research Service, U.S. Department of Agriculture, 1979 and 1980 issues.

. . . . .

Ample product availability at attractive prices is probably responsible for current export levels, although Japan appears to be a growing market that will be reliable in the future. Welch Foods has had its best off-shore experience in selling their grape juices in Japan.

Grape juice imports were so small in fiscal 1980 that the government did not publish the statistics. For fiscal 1979, they amounted to 150,411 single strength equivalent gallons valued at $1,004,000. This was roughly equivalent to 752 tons of grapes or 0.2 percent of the 1979 unfermented product grape crush. Imports consisted of: single strength juice - five percent of the juice equivalent and 25 percent of the import dollars; frozen concentrate - 28 percent of the juice equivalent and 15 percent of the import dollars; and unfrozen concentrate - 67 percent of juice equivalent and 60 percent of import dollars. The government figures do indicate that grape juice imports were much larger back in the early 1970's:

Fiscal Year	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Value of Imports in $Million	$7.8	$2.3	$0.5	$0.4	$1.2	$1.0

Source: "U.S. Foreign Agricultural Trade Statistical Report," Economic Research Service, U.S. Department of Agriculture, various years.

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The higher import levels of the mid-1970's correspond to tighter domestic grape juice supplies back then, while the current low import levels correspond to ample domestic supplies.

From the preceding discussion, it is quite clear that foreign trade of grape juice is relatively minor to U.S. grape growers and processors, and that the U.S. currently exports much more grape juice than it imports. The net foreign trade position can be summarized as follows:

	1977-78	1978-79
Single Strength Juice Equivalent (Gallons)		
Exports	400,207	1,209,710
Imports	217,425	150,411
Net Exports	182,782	1,059,299
Grape Equivalent (Tons)		
Exports	2,001	6,049
Imports	1,087	752
Net Exports	914	5,297
Sales $		
Exports	$4,097,000	$8,198,000
Imports	$1,165,000	$1,004,000
Net Exports	$2,932,000	$7,194,000

GRAPE JELLY/JAM MARKET FUNDAMENTALS

As shown at the beginning of the previous section, grape jellies and jams (preserves) are not major users of raw grapes. However, they do provide a home for a small part of the crop, permit better utilization of juice processing equipment at some plants, and create sales opportunities for some grower co-operatives.

In recent years, grape spreads have not enjoyed a particularly favorable market for two basic reasons:

1) Changing American breakfast habits have led to a decline in the proportion of the population that eat a complete sit-down breakfast that might include toasted bread with grape jelly or jam on it.

2) With the decline in the U.S. birthrate, the number of children in this country has actually declined from the levels of the 1960's. Children are the prime market for grape jelly.

Grape jelly consists of approximately 45 percent grape juice with the remainder being sugar and miscellaneous other ingredients. Its heaviest use has been for "peanut butter and jelly" sandwiches which are a staple in the diet of many American children. Of course, many people of all ages use it as a breakfast spread as well. Grape is nearly synonymous with jelly since grape so heavily dominates the category. In 1980, grape jelly accounted for 71 percent of retail jelly sales (dollars) and the second largest jelly seller, apple, had 8 percent. Strawberry, raspberry, and blueberry jellies are relatively minor.

Grape jam (preserves) is formulated similarly to grape jelly except that deseeded grape pulp is used instead of grape juice. It is a much smaller seller than grape jelly with only 39 percent of the retail sales that grape jelly had in 1980. Its use is somewhat more restricted as a breakfast spread and is more uniformly spread over both adults and children. The total fruit jam category has nearly twice the sales that the fruit jelly category has. Strawberry jam dominates sales within this category the way grape jelly dominates the jelly category. In 1980, 45 percent of retail jam sales were strawberry, followed by grape with 13 percent and raspberry with 12 percent.

Because of its popularity, grape jelly is sold under a variety of brand, private, and generic labels. Unlike grape juice beverages, Welch does not overwhelmingly dominate brand-labeled jelly - both Welch and Smuckers are the leaders with other smaller selling brand labels as well. Because grape jam is more of a specialty product, there are far fewer labels available. Brand labels dominate this category and Welch dominates over the other brands.

The spreads department of the average U.S. supermarket, which includes jellies, jams and preserves, marmalades, apple/fruit butters, peanut butter, and marshmallow spread, accounted for 0.54 percent of the average store's total dollar sales in 1980. Grape jelly accounted for 8.28 percent of the spread department's total sales, 8.99 percent of its profit, and 12.62 percent of the items (sizes and brands) carried in the department. The average gross profit margin was 24.7 percent, slightly higher than the department average of 22.8 percent, and the average store carried 13 different grape jelly items (brands and sizes).

Table 6. Retail Price Structure for Grape Spreads at Six Springfield, Massachusetts Area Supermarkets, September, 1981

Brand	Size	Price (Cents) Container	Price (Cents) Per Oz.	Number of Stores Carrying
Grape Jelly*				
Welch	10 oz.	79¢	7.9¢	4
Kraft	10 oz.	79¢	7.9¢	1
Polaner	10 oz.	68¢	6.8¢	3
Smuckers	10 oz.	84¢	8.4¢	2
Private Label	10 oz.	69¢	6.9¢	1
Smuckers	18 oz.	120¢	6.6¢	2
Polaner	18 oz.	91¢	5.1¢	3
Private Label	18 oz.	106¢	5.9¢	3
Welch	20 oz.	116¢	5.8¢	6
Jam Lovers	28 oz.	129¢	4.6¢	3
Welch	32 oz.	159¢	5.0¢	4
Kraft	32 oz.	159¢	5.0¢	1
Smuckers	32 oz.	119¢	3.7¢	2
Polaner	32 oz.	156¢	4.9¢	3
Jamboree	32 oz.	109¢	3.4¢	2
Private Label	32 oz.	129¢	4.0¢	3
Generic	32 oz.	89¢	2.8¢	5
Welch	48 oz.	209¢	4.3¢	2
Jam Lovers	48 oz.	182¢	3.8¢	3
Grape Jam				
Welch	10 oz.	79¢	7.9¢	2
Private Label	12 oz.	79¢	6.6¢	2
Polaner	18 oz.	115¢	6.4¢	2
Welch	20 oz.	116¢	5.8¢	6
Welch	32 oz.	159¢	5.0¢	3
Smuckers	32 oz.	119¢	3.7¢	1
Private Label	32 oz.	129¢	4.0¢	1
Welch	48 oz.	169¢	3.5¢	1

*Does not include eight different items (brands and sizes) offered in only one store.

Source: Informal survey of supermarket shelves in Agawam, Southwick, Westfield, and West Springfield, MA.

Grape jam contributed another 3.23 percent of the spread department's dollar sales and 3.06 percent of its gross profit. Its average gross profit margin was 21.6 percent. The average store carried six different grape jam items -- 5.83 percent of the items in the department.

Little data exists with which to quantify how price-competitive grape spread prices are with competing spreads. However, there is good reason to believe that they are quite competitive. First of all, the cost of all spreads is heavily influenced by the cost of sugar, containers, and manufacturing which are basically the same for all types of jams and jellies. Raw fruit or juice cost is a relatively small proportion of costs and thus has less influence on the price that the consumer pays. Second, as large volume items (especially grape jelly), grape spreads enjoy the benefits of efficiencies in manufacturing and distribution. Large volume sales attract more manufacturers and thus pricing tends to be more competitive and retailers are more likely to promote and feature grape jelly.

The nature of the retail price structure for grape jellies and jams can be ascertained from Table 6. It is interesting to note the ability of Welch to penetrate nearly all the stores while no other brand comes close to doing so. Also, there is a wide array of brands and sizes of grape jelly, while jam offerings are much more limited, which reflects its specialty nature. There are four basic tiers in the grape jelly market:

1) National, premium brands, such as Welch, Kraft, and Smuckers that come in a wide variety of sizes and are priced approximately 11 percent over the comparable private label.

2) Other brands such as Polaner, Jamboree, and Jam Lovers that come in fewer sizes and are priced only slightly over the private labels.

3) Private labels that come in only a few sizes, but which are carried in many stores.

4) Generic labels that are priced 31 percent below the comparable private label.

The structure of the grape jam market is less complex because of the more limited consumer offerings, although Welch is clearly the premium priced product within any given size. In the case of both jellies and jams, these price differentials reflect differences in quality (cost of manufacture) and promotional activity.

Foreign trade statistics pertaining to grape jelly and jam are not available, but if they were, they would show that both imports and exports are relatively small. Total exports of all jellies and jams amounted to $4.6 million last year while imports of all jellies and jams (including grape, if any) were $1.5 million.

While grape spreads are not especially important in terms of utilizing large grape tonnages, they cannot be ignored in their overall role in the New York Concord grape market -- this is especially true for National Grape/Welch members.

WINE MARKET FUNDAMENTALS

The Product

Wine is a common name for a diverse set of products that is offered to the consumer in hundreds of different items. It is important to understand the basic differences between the different wine categories because New York's ability to produce different wine types varies and because there are substantial differences to the consumer.

The first major category is the table wines, the largest category by far with 75 percent of 1980 wine shipments. Its name derives from its traditional use with food during a meal. Wine experts consider table wine a food in itself that complements other foods and enhances the overall dining experience. In recent years in this country, table wines have also become popular "cocktail" or refreshment beverage drinks, especially the white table wines. When most people think of wine, they are probably thinking of a table wine - burgundy, chablis, rose, chianti, lambrusco, and many grape variety names such as Cabernet Sauvignon, White Riesling, Seyval Blanc, Niagara, etc.

Technically, table wines are those with less than 14 percent alcohol that are made from grapes or other fruit, but have no added flavor. Under certain conditions, some water may be added and certain types of chemical additives used in the fermentation process. Outside of California where state law prohibits it, some sugar may also be added to the fermentation.

The second major wine category is the dessert wines, - the largest category until the mid-1960's, but now down to 9 percent of 1980 wine shipments. The name is misleading since it includes sherry, which is often an appetizer, as well as the ports, muscatels, and tokays which are more commonly served with dessert. These wines are 14 percent or more alcohol, are unflavored, and are vinted from either grapes or other fruit. They often are fortified with grape brandy (distilled from wine) to raise their alcoholic content.

The third largest category is "other special natural" wine, which is somewhat of a catch-all, with eight percent of 1980 shipments. This consists of the "pop" or flavored wines which may include artificial or natural fruit flavors or fruit juice. The total category is not specific as to alcoholic content, but most of it is less than 14 percent alcohol. It includes sangrias and "pop" wines such as "Boones Farm," "Annie Green Springs," "Ripple," etc. None of these items purport to be a mealtime beverage, but they are refreshment beverages for parties or inexpensive substitutes for distilled spirits. Many of these items have experienced fads, surges in popularity that often disappear as quickly as they came. However, some of them have also accustomed first-time wine consumers to wine use and most of these consumers have continued on in the table wine category.

Sparkling wines accounted for six percent of U.S. wine shipments in 1980. Characterized by their effervescence, they are often used for special occasions - both before and after meals and as a special beverage by themselves. Champagne is the most famous sparkling wine, of course, but sparkling burgundies and cold duck are also in this category. Technically, these are unflavored wines containing more than 0.256 grams of carbon dioxide per milliliter.

Vermouth is the smallest wine category, accounting for two percent of wine shipments to U.S. markets in 1980. It is used as a cocktail ingredient and as an aperitif (appetizer). In technical terms, it is grape wine flavored with herbs.

Because it is by far the largest wine category, some additional distinctions must be made within the table wine category:

- Red, white, and rose define the three color classes of table wine. White wines are fermented from only the juice of grapes. Red and rose wines are fermented "on the skins" of colored grapes with the juice separated from the must (grape pulp) at some state during the fermentation process.

- Nonvarietal or generic table wines are a mix of grape varieties blended by the winemaker to achieve the desired end result, usually an imitation of the style of wine coming from a particular region of Europe; e.g. Burgundy, Chablis, Rhine, etc. Varietal table wines consist primarily of wine from the named grape variety such as Cabernet Sauvignon, Chenin Blanc, Pinot Noir, Chardonnay, Seyval Blanc, Aurora, De Chaunac, Cayuga White, Delaware, Concord, and many others.

- Vintage wines are those that consist of grapes picked in a given year while nonvintage wines may be a blend of more than one year.

- Estate bottled wines are those made from grapes grown by the winery itself.

Retail Price Structure

Wines are priced over a wide range, although the lower-priced wine items account for the bulk of the sales. (See Table 7). While sparkling wines are clearly the highest priced wine category, table wines cover the widest range. Almost half of table wine sales are in the popular-priced "jug wine" category, but nearly a quarter of their sales are in the premium or above category costing more than $2.76 per 750 milliliters (approximately a fifth of a gallon).

Table 7. Wine Sales by Price Classes, 1980

Price Range Per 750 Milliliter Bottle Equivalent	Percent of Bottles Sold				
	Table	Dessert	Sparkling	Vermouth	Total
$2.00 or Less	49.0%	48.2%	-	14.8%	44.9%
$2.01 - $2.75	27.3%	45.2%	-	55.3%	28.7%
$2.76 - $4.25	13.7%	4.5%	54.9%	29.9%	15.4%
$4.26 - $5.75	6.6%	-	25.2%	-	6.7%
$5.76 or More	3.4%	2.1%	19.9%	-	4.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Estimates by "Wine Marketing Handbook". Copyright © Gavin-Jobson Associates, Inc., 1981. Used by permission.

Table 8. Retail Price Structure for Table Wines at Six Springfield, Massachusetts Area Discount Wine Outlets, March 1982

Brand	Product	Price Per 750 ML	Number of Stores Carrying
Carlo Rossi (Gallo)*	Paisano	$1.49	6
Carlo Rossi (Gallo)*	Chablis, Rhine	1.52	6
Colony (United Vintners)	Rose	2.20	5
MOGEN DAVID*	CONCORD	2.25	4
Colony (United Vintners)	Rhine	2.27	6
Colony (United Vintners)	Chablis	2.28	5
Gallo	Rhine	2.37	6
Gallo	Hearty Burgundy	2.39	5
Colony (United Vintners)	Chenin Blanc	2.39	4
Gallo	Rose	2.41	6
Gallo	Chablis Blanc	2.41	5
Riunite (House of Banfi)	Lambrusco	2.53	6
Riunite (House of Banfi)	Bianco, Rosato	2.57	6
Inglenook (United Vintners)	Chablis	2.63	6
Inglenook (United Vintners)	Burgundy	2.65	6
Paul Masson (Seagrams)	Rose	2.66	4
MANICHEVITZ	CONCORD	2.67	6
Inglenook (United Vintners)	Ruby Cabernet	2.68	4
Taylor California Cellars	Chablis, Rhine	2.74	4
MANICHEVITZ	PINK CATAWBA	2.74	2
Wine Cellars of E. & J. Gallo	French Columbard	2.75	5
Castel Roubon	Lambrusco, Bianco	2.77	6
Almaden (National Distillers)	Rhine	2.79	6
Almaden (National Distillers)	Burgundy	2.79	5
MANICHEVITZ	CREAM WHITE	2.81	6
TAYLOR LAKE COUNTRY	RED, WHITE	2.82	5
Wine Cellars of E. & J. Gallo	Sauvignon Blanc	2.82	5
MANICHEVITZ	CREAM RED	2.83	5
TAYLOR	BURGUNDY	2.88	4
GOLD SEAL	CATAWBA PINK	2.88	5
WIDMERS	LAKE NIAGARA	2.91	4
Paul Masson (Seagrams)	Rhine	2.92	6
Paul Masson (Seagrams)	Emerald	3.14	4
GREAT WESTERN	BACO NOIR	3.59	3
Taylor California Cellars	Cabernet Sauvignon	3.72	3

*Not 750 ML. bottles. Price converted to 750 ML. basis.

Note: Lines divide the products into three groups. Wines by New York State wineries in capital letters.

Source: Informal survey of six retail wine outlets in the Springfield, MA metropolitan area - four discount wine and liquor stores, and two supermarkets.

In order to present some perspective on the retail price structure for New York State wines and those of its competitors, the author conducted an informal survey of retail prices for forty popular table wine products at six local wine outlets. While no detailed conclusions should be drawn for what this means in other metropolitan markets, it is believed that the price structure shown in Table 8 is similar to that found throughout the U.S. The lowest priced third of these forty wines is clearly dominated by California wines - especially Gallo, which has seven of the thirteen products. New York State has only one wine, Mogen David Concord, in the lower third price category. In the middle third price category, New York has only two products, while Italy has four and California has seven. It contrast, New York State has eight of the fourteen popular wines in the upper third price category.

The implications of this retail price structure are:

1) New York's Concord wines are priced comparably to many Californian and Italian wines - wines with strong consumer recognition, a reputation for good value, strong advertising support, and strong promotion.

2) Almost all of New York State's other popular table wines are priced above the Californian and Italian alternatives.

Aside from differences in consumer recognition and acceptance, New York State table wines are generally priced above many good everyday wines from California and Italy. This has significant implications in terms of New York State wineries' grower prices and their need for grapes.

Based on the same informal survey, the retail price structure for selected dessert and sparkling wines is shown in Table 9.

As would be expected, Taylor, Great Western, and Gold Seal are priced at the high end of the range for both of these wine categories. It is generally believed that consumers perceive these to be premium products and a certain segment of them will pay these higher prices. California clearly dominates the lower end of the price range for popular dessert wines. Interestingly, Canandaigua Industries' J. Roget sparkling wines anchor the lower end of the sparkling wine price structure, with a significant price differential below the leader in this end of the price range, Andre produced by Gallo. With this exception, New York State dessert and sparkling wines are clearly positioned as premium in both price and quality in these categories. This is good for growers and wineries in terms of prices and returns for their respective products, but it limits the volume of grapes and wine that can be sold through these products.

Table 9. Retail Price Structure for Dessert and Sparkling Wines at Six Springfield, Massachusetts Area Discount Wine Outlets, March 1982

Brand	Product	Price Per 750 ML	Number of Stores Carrying
Dessert Wines			
MOGEN DAVID	20/20	$1.92	4
Colony (United Vintners)	Port	1.99	1
Gallo	Cream Sherry	2.00	6
Gallo	Port	2.04	6
Almaden (National Distillers)	Cream Sherry	2.69	1
Almaden (National Distillers)	Port	2.69	1
TAYLOR	PORT	2.97	6
TAYLOR	DRY SHERRY	3.06	6
Sparkling Wines			
J. ROGET (Canandaigua)	AMERICAN SPUMANTE	$2.44	2
J. ROGET (Canandaigua)	PINK CHAMPAGNE	2.59	3
J. ROGET (Canandaigua)	COLD DUCK	2.64	2
Andre (Gallo)	Pink Champagne	3.07	6
Andre (Gallo)	Sparkling Burgundy	3.07	6
Andre (Gallo)	Cold Duck	3.07	6
GOLD SEAL	EXTRA DRY CHAMPAGNE	5.99	1
GOLD SEAL	BRUT	5.99	1
GOLD SEAL	COLD DUCK	5.99	1
TAYLOR	EXTRA DRY CHAMPAGNE	6.03	4
TAYLOR	COLD DUCK	6.03	4
GREAT WESTERN	COLD DUCK	6.50	5
GREAT WESTERN	PINK CHAMPAGNE	6.51	5
GREAT WESTERN	SPARKLING BURGUNDY	6.64	4
Paul Masson (Seagrams)	Brut Champagne	6.84	2

Note: Wines by New York State wineries in capital letters.

Source: Informal survey of six retail wine outlets in the Springfield, MA metropolitan area - four discount wine and liquor stores, and two supermarkets.

Wine Sales

Total wine sales have been growing quite rapidly for several decades, as will be shown in more detail in a later chapter. However, the growth of the total category can be misleading as it consists of strong growth for table wines, especially white wines; moderate growth of sparkling wines which boomed in the late 1960's and early 1970's, then fell off, and are now growing well once again; boom and bust growth for other special natural wines which are still in a declining phase; and declines for dessert wines and vermouths. Table wines have been growing fast enough to more than offset the losses in other categories.

There are a number of reasons for the rapid growth in wine sales:

1) Because of its lower alcohol content, table wine is a beverage of moderation, and American drinking habits have been trending towards moderation on all fronts.

2) Table wine is lower in calories than most other alcoholic beverages and has thus found favor with some calorie conscious consumers.

3) American table wines, especially the white and rosés, have vastly improved in technical quality, catching up to and often surpassing their European competitors. Use of stainless steel fermentation equipment, cold fermentation, centrifuges, and filtration have all contributed to this wine-making revolution. This has occurred in all wine price categories, but America now has the best wine in the world at everyday prices.

4) A rapidly increasing supply of good wines at reasonable prices, from both domestic and foreign sources, has favored growing consumption.

5) Increasing real incomes in certain population segments has favored wine as a complement to the "good life."

6) Growing wine awareness among Americans, sparked by experiences with "pop" wines, increased promotional efforts, and the effect of the California wine industry on Californian drinking habits, and through California's role as a fashion leader, on the rest of the United States.

7) Not to be ignored is that the United States does not have a strong wine-drinking tradition and whatever tradition that had developed, was snuffed out by Prohibition. Thus, U.S. wine sales have an extremely low base, even today after three decades of significant growth.

8) Increasing availability of wine in supermarkets has made it more available to consumers and has enabled better merchandising opportunities. This is not true in all states, though.

Table 10. Estimated Annual Consumption of Wine in Selected Countries, 1978-79

Rank	Country	Gallons Per Capita	Gallons Consumed Per One Gallon Consumed in U.S.
1	France	24.5	12.2
2	Italy	23.8	11.9
3	Portugal	22.7	11.4
4	Argentina	20.3	10.2
5	Spain	18.5	9.3
6	Chile	12.3	6.2
7	Switzerland	12.2	6.1
8	Greece	10.8	5.4
9	Luxembourg	10.4	5.2
10	Austria	9.5	4.8
11	Hungary	9.2	4.6
12	Romania	9.2	4.6
13	Yugoslavia	7.3	3.7
14	Uruguay	6.6	3.3
15	West Germany	6.4	3.2
16	Bulgaria	5.8	2.9
17	Belgium	5.4	2.7
18	Czechoslovakia	4.6	2.3
19	Australia	4.4	2.2
20	U.S.S.R.	3.7	1.9
21	Denmark	3.7	1.9
22	Netherlands	3.2	1.6
23	New Zealand	2.9	1.5
24	Poland	2.6	1.3
25	Sweden	2.5	1.3
26	Cyprus	2.4	1.2
27	South Africa	2.2	1.1
28	Finland	2.2	1.1
29	East Germany	2.1	1.1
30	Canada	2.1	1.1
31	U.S.A.	2.0	1.0
32	United Kingdom	1.9	1.0
33	Iceland	1.5	0.8
34	Ireland	1.2	0.6
35	Israel	1.1	0.6
36	Norway	1.0	0.5
37	Brazil	0.7	0.4
38	Tunisia	0.7	0.4
39	Lebanon	0.5	0.3
40	Paraguay	0.5	0.3
41	Morocco	0.3	0.2
42	Algeria	0.3	0.2
43	Peru	0.3	0.2
44	Turkey	0.2	0.1
45	Japan	0.1	0.1
46	Mexico	0.1	0.1
47	Cuba	0.1	0.1

Source: "Produktschap Voor Gedistilleerde Drunken" in the "Wine Marketing Handbook 1981". Copyright © Gavin-Jobson Associates, Inc., 1981. Used by permission.

Characteristics of Wine Consumers

By world standards, the U.S. is an underdeveloped wine market. Table 10 compares annual wine use per person for nearly fifty countries. Americans rank 31st with two gallons per capita, behind nearly all of Europe, the southern part of South America, Australia, and New Zealand. France and Italy, with consumption per person at approximately 24 gallons, outdrink Americans by about 12 gallons of wine to one every year. Of course there are good reasons for these sharp differences and the European pattern cannot be strictly taken as a prediction or a model of what the American pattern should be. Consumption per person in France, Italy, and some other European countries is actually falling, due to changing social conditions and as these nations address problems of alcoholism with both adults and children. Finally, Americans have a much different mix of beverages available to them than their European counterparts do, and have developed a different consumption pattern. The relatively low level of American wine consumption, by world standards, indicates a strong potential for growth from the current base.

Within the United States, there are sharp regional differences in wine consumption. The West and the Northeast are strong wine-drinking areas while the South Atlantic and the entire midwestern interior are much lower wine users. On a regional basis, wine use per person ranges from almost double (+96%) the national average in the Pacific states, to only one-third of the national average (-64%) in the East South Central area. (See Table 11.) The leading major state, California, averages more than double the national level of wine consumption. One very important reason for these disparities is ethnic mix in the population, but religious beliefs, income levels, and regional factors are also important. The strong local presence of the California wine industry is widely credited with a major role in that state's high wine consumption levels. California's level of wine use may be indicative of the potential for growth of wine use in other states.

A recent consumer report sponsored by Lehman Brothers Kuhn Loeb characterized frequent table wine users as:

- Age 25-34 years
- College graduate
- Full-time white collar employee
- Household income of $15,000 per year or more

The same general conclusions are confirmed in greater detail by another consumer survey conducted by National Family Opinion, Inc. during 1980, the results of which are shown in Table 12. Of special importance is the detail on the close relationship between high family incomes and high wine use. This relationship is even higher for the table wine category, and higher yet for white table wines. Families with incomes of $25,000 or more consume 29.6 percent of all beverages, 42.3 percent of all wine, 44.6 percent of all table wine, and 49.5 percent of all white table wine. The study also confirms that women are slightly higher users of wine than are men - a result confirmed by several other studies as well. Also of importance to the marketing of wine is that nearly 80 percent of it is consumed in homes - 60.7 percent at the consumer's home and 18.0 percent at someone else's home.

Table 11. Regional Wine Consumption, 1980

	Gallons Per Capita	
	Actual	Percent Above/Below U.S. Average
Pacific (WA, OR, CA, AL, HA)	4.07	+ 96%
New England (ME, NH, VT, MA, CT, RI)	2.83	+ 36%
Middle Atlantic (NY, NJ, PA)	2.42	+ 16%
Mountain (MT, ID, WY, CO, NM, AR, UT, NA)	2.30	+ 11%
U.S.	2.08	-
South Atlantic (DL, MD, DC, VA, WV, NC, SC, GA, FL)	1.71	- 18%
East North Central (OH, IN, IL, MI, WI)	1.64	- 21%
West South Central (AK, LA, TX, OK)	1.25	- 40%
West North Central (MN, IA, MO, ND, SD, NE, KS)	1.16	- 44%
East South Central (KT, TN, AL, MS)	.75	- 64%
Top Dozen States		
District of Columbia*	6.49	+212%
Nevada*	5.01	141%
California	4.41	112%
New Hampshire*	3.73	79%
Rhode Island	3.37	62%
Washington	3.17	52%
Oregon	3.10	49%
Vermont	2.95	42%
New Jersey	2.94	41%
Colorado	2.94	41%
Alaska	2.92	40%
New York	2.88	38%

*These states are probably overstated due to large purchases by non-natives for tax or tourist reasons.

Source: U.S. Bureau of Census and the Wine Institute. Compiled by the "Wine Marketing Handbook 1981." Copyright © Gavin-Jobson Associates, Inc., 1981. Used by permission.

A 1980 study by Time Magazine Marketing observed that, based on their previous surveys, wine sales to consumers in the top twenty percent of household income had increased by 88 percent between 1973 and 1979, while wine sales to the lowest twenty percent of consumers by household income had declined by 53 percent. This not only reiterates the close relationship between household income and wine sales, but points out that wine sales are actually declining in some segments of the population.

Table 12. Wine Consumption Characteristics in 1980 - National Family Opinion, Inc. SIP (Share of Intake Panel) Study

	All Beverages	All Wine	Table Wine	Table Wine Color		
				Red	White	Rose
	Percent of Beverage Category Consumed by this Group (Row)					
By Age Group						
Under 20	22.0%	1.8%	1.7%	4.5%	0.5%	0.6%
20-29	17.7	16.8	17.7	20.1	17.0	15.3
30-39	19.6	26.5	27.9	31.4	26.3	28.4
40-49	11.9	20.1	22.2	15.8	25.3	25.4
50-59	13.0	19.2	19.0	16.3	20.8	18.3
60 and Over	15.8	15.6	11.4	11.8	10.1	12.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
By Household Income						
Under $14,000	33.6%	22.1%	18.5%	19.3%	16.5%	18.7%
$14,000 - $24,999	36.8	35.6	36.8	45.3	34.0	32.5
$25,000 and Over	29.6	42.3	44.6	35.3	49.5	48.8
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

	All Beverages	Coffee	Carb. Soft Drinks	Fruit Juice/ Drinks	Ale/ Beer	Distilled Spirits	Wine
By Gender							
Male	53.0%	49.4%	51.7%	51.7%	82.6%	55.8%	48.1%
Female	47.0	50.6	48.3	48.3	17.4	44.2	51.9
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Where Consumed							
Home	70.7%	69.4%	52.3%	84.2%	53.1%	53.3%	60.7%
Restaurant	6.1	6.6	12.3	2.1	6.1	10.2	11.5
Bars/Private Clubs	1.3	0.2	0.6	0.1	13.4	13.8	4.9
Party/Other's Home	6.1	4.5	7.3	5.0	14.8	16.8	18.0
Office/Work/School	11.8	16.6	18.5	5.4	1.5	0.8	0.8
Other	4.0	2.7	9.0	3.2	11.1	5.1	4.1
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: "The IMPACT American Wine Market Review and Forecast." Copyright © M. Shanken Communications, Inc., 1981. Used by permission.

A number of consumer studies have found that a relatively small proportion of American consumers account for a high proportion of wine sales. A 1975 nationwide consumer survey sponsored by the U.S. Department of Agriculture (USDA) found that 30 percent of American households will never drink wine. Of the remaining 70 percent, many additional households are not purchasing wine, but might at some future time. In fact, during the year of the survey, only 39 percent of the total households actually purchased wine. Of those that did purchase wine, the ten percent who made the largest wine purchases accounted for 54.4 percent of total wine sales, and the next ten percent accounted for another 12.3 percent of total wine sales. In other words, 20 percent of the households who purchase wine (approximately eight percent of all households), bought two-thirds of the wine. A 1979 consumer study by NPD Research observed that the number of households buying wine was growing slowly, while the amount of wine bought by the average buying household was rapidly increasing. This suggests a growing sophistication in the wine market as wine consumers gain experience. It also illustrates a crucial marketing consideration: should marketing efforts be focused on the nonpurchaser of wine or on the established wine consumer?

The USDA consumer study previously referred to provides some additional insight as to the characteristics of wine purchasers. It found that 60 percent of the actual purchasers of wine (not users) were female, although this proportion is much smaller in the lower wine use areas of the Midwest and the South. Fifty one percent of the households usually purchased wine in a supermarket, 39 percent bought it in a liquor store, 3.8 percent purchased in a drug store, and 6.3 percent purchased at other locations. The popularity of supermarket sales exists despite outright prohibition of grocery store wine sales in 14 states (including New York and Pennsylvania) and significant restrictions in eight other states. Nonvarietal table wines are consumed primarily for everyday use (63 percent of purchases) with 23 percent of purchases for special occasions and the remainder for cooking and gifts. Varietal table wines accounted for only 12.4 percent of table wine purchases, but 34 percent of these purchases were for special occasions, somewhat higher than nonvarietals, which is not surprising given their generally higher price. Fifty-six percent of the varietal purchases are still for everyday use.

The same study established a ranking of factors that consumers find important in choosing a wine to purchase. The most important factor was brand. Placing brand at 100 on a scale of 0 to 100, here are how the other reasons ranked:

Brand - 100
Advice of friends - 88
Price - 87
Information on label - 52
Area where produced - 44
Flavor - 33
Advertising - 31
Advice of Sales People - 26
Advice of Wine Critics - 16
Point of Purchase Display - 14
Other Reasons - 11
Menu in Restaurants - 4

While brand is obviously very important, the study found strong brand loyalty existed only for the wines of United Vintners, Mogen David, and Franzia Brothers. This appears to be contradictory at first, but apparently most consumers are not overly loyal to a particular brand, relying instead on their recognition, memories, and past advice on a variety of wine brands.

Thirty percent of the consumers in the USDA study stated that they would never drink wine - this percentage is substantially higher in the South. Reasons given were: taste - 46 percent; religious beliefs - 39 percent; know too little - 23 percent; health reasons - 13 percent; too expensive - 8 percent; and other reasons - 6 percent. While some of these reasons are obviously insurmountable, others such as "know too little," "taste" and "too expensive" may be amenable to change over time for some people. This large group of nonconsumers is a significant force in defining the marketing and regulatory climate within which wine must operate.

The Concord Table Wine Market

Nationally, the Concord table wine market is a relatively small, specialty market which is typically associated with both a religious (kosher wine) use and a regional (nonreligious) popularity in the Midwest. For New York State, however, Concord wines are exceedingly important as a user of Concord grapes, especially in the Lake Erie grape belt where the two leading Concord table wine producers obtain most of their grapes. This section will summarize the findings of a 1974-75 consumer survey by Drs. R. J. Folwell and John L. Barritelle published in the August, 1975 edition of "Wines and Vines."

The nationwide survey of 7,441 households found that only 5.1 percent purchased Concord table wine during the survey period, or 10.8 percent of those who purchased any wine. Compared to the 10.8 percent national share of wine consumers, these wines are most popular in the Midwestern states where per capita consumption of all wines is the lowest, e.g. 19.8 percent of wine consumers in the West North Central states, 16.7 percent in the East South Central, 14.9 percent in the East North Central, and 12.6 percent in the West South Central had bought Concord wines. Conversely, the regions with the highest overall per capita wine consumption, such as the Pacific and New England states, have the lowest market shares for Concord table wines.

In terms of consumer characteristics, the typical household purchasing Concord wines tended to be older, less educated, have smaller household incomes, and live in smaller markets than those households purchasing other types of wine.

These findings suggest that the Concord table wine market is a "no growth" area - that as wine consumption and popularity grows and follows the California example, perhaps Concord wine will be gradually displaced. The two authors of the "Wines and Vines" article conclude as follows:

> "The Concord wine market is unique. Because it is unique, it may be faced with problems. Persuading traditional wine purchasing households and non-wine purchasing households to purchase Concord wines could prove difficult."

Consumer Preferences For Wine By Origin

American consumers have developed preferences for wines from different areas of California, from other states such as New York, and from other countries such as Italy and France. California, for example, is its own best customer, supplying 91.5 percent of its own in-state wine sales. Because of its high wine consumption per person, its large population, and loyalty to its own product, 28 percent of California's 1980 wine shipments remained in-state, although it has only 10 percent of the U.S. population. California had a lower, but still impressive 65.1 percent share of wine shipments to the remaining United States.

While no concrete figures are available to document where New York State's strongest markets are, the available evidence suggests that they are in the Midwest and the South with Concord table wines and dessert wines. New York's finer table and sparkling wines under such labels as Great Western and Gold Seal have achieved their highest market shares within the Northeast region, but these do not account for large volumes of wines. Most New York State wines have not even achieved distribution on the Pacific Coast.

Table 13. Top Twenty Metropolitan Wine Markets By Share of U.S. Wine, 1980

	Total Cases Sold	Share of Cases Sold	
		% U.S. Wine	% Foreign Wine
Five With Highest Share for U.S. Wine			
Seattle-Everett, Riverside-San Bernadino-Ontario, San Jose, Anaheim-Santa Ana-Garden Grove, Denver-Boulder	10,140,356	88.7%	11.3%
Five With Second Highest Share for U.S. Wine			
San Diego, Los Angeles-Long Beach, Baltimore, San Francisco-Oakland, Houston	27,180,453	85.5%	14.5%
Five With Third Highest Share for U.S. Wine			
Dallas-Fort Worth, Detroit, Washington, D.C., Chicago, Boston-Eastern Massachusetts	18,922,814	67.6%	32.4%
Five With Lowest Share for U.S. Wine			
Philadelphia, Cleveland, Newark, New York City, Long Island, NY	21,454,558	50.0%	50.0%

. . . . .

Note: These twenty metropolitan areas account for 47.1 percent of the total U.S. wine case sales, 44.5 percent of domestically-produced wine case sales, and 55.0 percent of imports' case sales. They had 30.1 percent of the U.S. population in 1978.

Source: Time Magazine, Marketing Department. Copyright © Gavin-Jobson Associates, Inc., 1981. Used by permission.

Imports have captured 21.4 percent of the U.S. wine market as of 1980. As illustrated in Table 13, there are sharp differences in their penetration of the market in different regions. Using the twenty metropolitan areas with the largest wine sales, a distinct regional pattern emerges for imports' share of the market. The five metropolitan areas with the highest market share for imports (50 percent average) center around New York City, but include Philadelphia and Cleveland as well. The five cities with the lowest import market share are all in the West, with three in California itself. Given New York City's role as an importation center for European wines and California's loyalty to its own wines, it is not surprising that imports' market share tends to decline as distance from New York City increases.

Wineries and Wine Brands

According to the most recent U.S. Census of Manufacturing in 1977, there were 233 companies with 269 production locations engaged in the production of wines, brandy, and brandy spirits (grape alcohol). These companies shipped $1,362 million of product, used $894 million of materials including grapes, paid $134 million in wages, and had end-of-year inventories of $560 million. Because individual companies are generally secretive regarding their annual wine production, there are no publicly available figures on actual production for individual companies. The best available indicator of wine production capacity is the amount of wine storage capacity that a company has - this is shown for the ten largest companies and selected New York wineries (the larger ones) in Table 14. Of the 105 largest U.S. wineries listed by "Wines and Vines," the largest ten companies have 71 percent of the storage capacity and the nation's largest winery, E & J Gallo, has 23 percent of it. For perspective, Taylor, Mogen David, Canandaigua, Hammondsport, Fredonia, Widmers, Monarch (Manischevitz), and Gold Seal added together have only 5.7 percent of the wine storage capacity of the nation's largest 105 wineries.

Many wineries buy and sell bulk wine and may sell more or less bottled wine than they actually ferment. The largest ten shippers of American wine are shown in Table 15, along with their estimated gallon shipments and market shares. Reviewing the growth rates for the decade of the 1970's, the fastest growing firms were Almaden, Wine Spectrum (Coca-Cola), Paul Masson, and Sebastiani - all strong in the premium California wine category. The two industry leaders, Gallo and United Vintners, actually had lower sales growth and lost market share. For Gallo, this was at least partially by design as will be discussed later.

Table 16 focuses more closely on the "premium wine" category that encompasses nearly all of New York's non-Concord wine production. Shipments from the 27 listed premium wineries have grown substantially faster than U.S. wine shipments, e.g. at a compound annual rate of 14.7 percent for 1970-80 compared to 6.0 percent for all wine shipments. Furthermore, the rate of growth for these wineries has accelerated in the last five years, while the growth for all wine has slowed. A number of these wineries have gone from small or nonexistent production to substantial shipments in the course of ten years - Almaden, Taylor California Cellars, Paul Masson, Inglenook, Sebastiani, etc. The premium wine category was quite clearly the growth market in the 1970's.

Table 14. Storage Capacity of the Ten Largest U.S. Wineries Plus Other New York Wineries, 1980

Rank	Winery	State	Total Gallons Storage Capacity	Number of Plants
1	E & J Gallo	CA	250,000,000	4
2	Heublein, Inc.	CA	133,800,000	10
3	Almaden Vineyards	CA	88,037,000	5
4	Guild Wineries	CA	59,000,000	8
5	Sierra Wine Corp.	CA	54,000,000	3
6	The Wine Group	CA		
	Franzia Brothers	CA	38,700,000	3
	Mogen David	NY	4,100,000	1
	Total		42,800,000	4
7	Vie-Del Company	CA	40,754,000	2
8	Wine Spectrum	GA		
	The Monterey Vineyard	CA	7,300,000	1
	Sterling Vineyards	CA	650,000	1
	Taylor Wine Co.	NY	31,300,000	1
	Total		39,250,000	3
9	The Christian Brothers	CA	39,200,000	7
10	La Mont Winery	CA	36,000,000	1
13	Canandaigua Wine Co.	NY		
	Canandaigua Wine Co.	NY	12,000,000	1
	Hammondsport Wine Co.	NY	500,000	1
	Bisceglia Bros. Wine	CA	6,000,000	1
	Richards Wine Cellars	VA	2,000,000	1
	Tenner Bros.	SC	2,000,000	1
	Total		22,500,000	5
25	Fredonia Products Co.*	NY	4,750,000	1
26	Widmers Wine Cellars	NY	4,000,000	1
29	Monarch Wine Co.*	NY	3,500,000	1
34	Gold Seal Vineyards	NY	3,000,000	1

*Fredonia is a major supplier of wine to Monarch (Manischevitz).

Note: Top ten wineries have 71.3 percent of capacity for the 105 largest wineries. New York wineries listed above have 5.7 percent of storage capacity for the 105 largest wineries.

Source: "Wines and Vines, The Authoritative Voice of the Grape and Wine Industry," July, 1981. Copyright © The Hiaring Company, 1981. Used by permission.

Table 15. The Top Ten Shippers of American Wine, 1970-80

	1970	1975	1976	1977	1978	1979	1980	Compound Annual Rate of Growth 1970-80	Compound Annual Rate of Growth 1975-80
	Millions of Gallons								
1. E. & J. GALLO	79	100	102	110	106	113.2	121.9	+ 4.4%	+ 4.0%
2. UNITED VINTNERS (Heublein)	44	59	59	57	56	55.1	52.5	+ 1.8	- 2.3
3. ALMADEN (National Distillers)	8	16	19	21	26	28.8	32.1	+14.9	+14.9
4. THE WINE SPECTRUM (Coca-Cola of Atlanta) (A)	8	12	11	12	14	16.4	22.4	+10.8	+13.3
5. THE WINE GROUP (Coca-Cola of N.Y.) (B)	12	22	22	21	22	19.7	21.7	+ 6.1	- 0.3
6. PAUL MASSON (Seagram)	4	9	10	12	14	14.9	17.5	+15.9	+14.2
7. CANANDAIGUA (C)	9	15	14	14	15	13.1	15.0	+ 5.2	0
8. GUILD WINERIES	8	14	15	14	14	15.6	14.7	+ 6.3	+ 1.0
9. MONARCH (N.Y.) (D)	6	10	11	11	12	12.3	13.0	+ 8.0	+ 5.4
10. SEBASTIANI	*	2	3	6	9	9.1	10.0	-	+38.0
Total - Ten Largest	178	259	266	278	288	298.2	320.8	+ 6.1	+ 4.4
Total Wine Shipments in U.S.	267	368	376	400	431	444.1	475.8	+ 6.0	+ 5.3
	Share of Market								
1. E. & J. GALLO	30%	27%	27%	28%	24.6%	25.5%	25.6%		
2. UNITED VINTNERS	17	16	15	14	13.1	12.4	11.0		
3. ALMADEN	3	4	5	5	6.0	6.5	6.7		
4. THE WINE SPECTRUM	3	3	3	3	3.3	3.7	4.7		
5. THE WINE GROUP	4	6	6	5	5.1	4.4	4.6		
6. PAUL MASSON	1	2	3	3	3.2	3.4	3.7		
7. CANANDAIGUA	3	4	4	4	3.4	2.9	3.2		
8. GUILD WINERIES	3	4	4	4	3.2	3.5	3.1		
9. MONARCH (N.Y.)	2	3	3	3	2.7	2.8	2.7		
10. SEBASTIANI	-	1	1	1	2.0	2.0	2.1		
Total - Ten Largest	66%	70%	71%	70%	66.6%	67.1%	67.4%		

*Under 500,000 gallons.

(A) Includes New York and California brands. Excludes imports.
(B) Includes Mogen David, Tribuno, and Franzia. Excludes imports.
(C) Includes New York, California, and other states.
(D) Manichevitz and other brands.

Note: Years 1970-1978 have totals rounded in millions. 1979 and 1980 gallonage rounded in hundreds of thousands of gallons. Percentage change accuracy to hundred thousand for both 1979 and 1980.

Source: "The IMPACT American Wine Market Review and Forecast." Copyright © M. Shanken Communications, Inc., 1981. Used by permission.

Table 16. Estimated Case Sales of 27 Leading Premium Wine Companies In The United States (1970-75-80)

Winery	1980 Ranking	1970	1975	1980	Compound Annual Rate of Change 1970-80	1975-80
		Thousands of Cases				
Almaden	1	2,625	6,825	13,390	+17.7%	+14.4%
Taylor						
New York		2,710	4,005	4,250	+ 4.6	1.2
California Cellars		-	-	3,800	-	-
Total	2	2,710	4,005	8,050	+11.5	+15.0
Paul Masson	3	1,850	3,885	7,310	+14.7	+13.5
Inglenook	4	215	1,625	6,600	+40.8	+32.4
Sebastiani	5	270	1,035	4,175	+31.5	+32.2
Christian Bros.	6	1,565	1,820	2,075	+ 2.9	+ 2.7
C. Mondavi	7	1,305	1,595	2,070	+ 4.7	+ 5.3
Beringer	8	75	360	1,600	+35.8	+34.8
Geyser Peak	9	-	85	1,325	-	+73.2
Robt. Mondavi	10	45	195	1,300	+40.0	+46.1
Pleas. Vly	11	610	805	800	+ 2.7	0
Wente Bros.	12	185	335	715	+14.5	+16.4
Gold Seal	13	865	850	650	- 2.8	- 5.2
Beaulieu Vyd.	14	155	220	510	+12.6	+18.3
Souverain	15	10	90	480	+47.3	+39.8
Sonoma Vyds.	16	125	225	465	+14.0	+20.2
Weibel	17	120	255	405	+12.9	+ 9.7
Meier's	18	445	335	390	- 1.3	+ 3.1
Widmer	19	345	485	375	+ 0.8	- 5.0
Korbel	20	120	280	355	+11.5	+ 4.9
Mirassou	21/22	35	150	340	+25.5	+17.8
San Martin	21/22	105	190	340	+12.5	+12.3
Papagni Vyds.	23	-	-	330	-	-
L. Martini	24	235	255	325	+ 3.3	+ 5.0
Parducci	25	-	35	245	-	+47.6
Foppiano	26/27	-	70	200	-	+23.4
Ste. Michelle	26/27	-	35	200	-	+41.7
Group Totals		14,015	26,045	55,020	+14.7	+16.1
California Wineries		9,040	19,530	48,605	+18.3	+20.0
NY Wineries		4,530	6,145	6,075	+ 3.0	- 0.2

"PREMIUM", as used in this table, denotes brands generally retailed at average price levels substantially (at least 10%) higher than comparable "popular-priced" brands. Most California winery figures in this table have been converted from gallons on official tax returns at 2.4 gallons/case, thus overstating or understating the winery's actual case volume, depending upon actual use of case sizes larger or smaller than 2.4 gallons. Secondary and private label volume usually included. Intra-state in-bond shipments excluded. All data rounded to the nearest 500 gallons.

Sources: California State Board of Equalization wine excise tax returns, for most California wineries. All others are derived from data supplied by winery officials or by other sources considered reliable. All data unaudited. Copyright © Louis R. Gomberg & Associates, 1981. Used by permission.

Unfortunately, New York's premium wineries did not have the product needed to capitalize on this growth - namely the premium table wines vinted from premium vinifera grapes with which the California wineries were so successful. The four premium Finger Lakes wineries increased shipments at an annual rate of 2.6 percent between 1970 and 1980, but have actually declined somewhat between 1975 and 1980. Both Gold Seal and Widmers have lost substantial sales. While the Finger Lakes wineries have prided themselves as being in the premium category and have priced their products as such, there is little question that most wine consumers have felt otherwise in recent years.

Imports

Imported European wines have always played an important role in supplying the established American market for premium wines. During the 1970's, a number of American distributers teamed with various European wine merchants to imaginatively and aggressively mass market "new" wine products in this country. Some of these turned out to be fairly short-lived fads while others have established permanent positions in the market. Regardless of how short-lived some of these have been, they have all contributed to the growing American wine consciousness that has increased consumption of all wines. Most of them found gaps in the market that they could fill rather than competing with existing products. Examples include sangria, lambrusco, Blue Nun, Mateus, and Lancers.

Imports now have a 21.4 percent share of the American wine market, up from historical levels, and are even stronger in the growing table wine segment where they have a 24.7 percent market share. (See Table 17.) While more than 26 different countries shipped wine into the American wine market last year, five Western European nations accounted for 96 percent of the American imports:

1) Italy dominates the import scene with a 58 percent share, nearly all of which is table wine. In light of the current American white wine "boom", it is ironic that 51 percent of Italy's table wine shipments are red and only 39 percent are white. Slightly over two thirds of Italian wine imports are of the inexpensive lambrusco type.

2) France and Italy traditionally had equivalent shares of the U.S. market for off-shore wines, but since 1974 Italy has rapidly increased its shipments while France's have stagnated. As a result, France now has a 13 percent share of U.S. imports. It is especially strong in the super-premium table wines and in sparkling wines. Its table wine shipments were 41 percent red and 55 percent white in 1980.

3) West Germany has a twelve percent share of the American market for imports, almost entirely in white table wines.

4) Spain's 7.3 share of the American import segment rests on specialties in the other special natural category (sangria) and in the dessert wine category (sherries).

5) Portugal's 5.7 percent share rests primarily on table wines, 74 percent of which are rose.

The ten leading import brands are shown in Table 18. Italy's domination over other imports is readily apparent. In turn, the domination of one Italian brand, Riunite, imported by the American firm House of Banfi is also obvious.

Table 17. A Profile of Imports' Role in the American Wine Market, 1980

	Table	Dessert	Vermouth	Sparkling	Other Special Natural	Total
Million Gallons Entering U.S. Distribution Channels	88.6	2.8	2.9	4.8	3.4	102.5
Share of Total Imports	86.4%	2.7%	2.8%	4.7%	3.4%	100.0%
Share of U.S. Market	24.7%	6.2%	32.7%	16.1%	9.4%	21.4%
Thousands of Gallons by Country						
Italy	54,259	123	2,416	2,727	20	59,545
France	11,381	19	441	1,450	4	13,295
West Germany	11,659	6	6	201	3	11,874
Spain	1,643	2,255	10	391	3,170	7,469
Portugal	5,683	108	-	6	-	5,798
All Other	3,957	247	13	51	258	4,526
Share of U.S. Import Market						
Italy	61.3%	4.5%	83.7%	56.5%	0.6%	58.1%
France	12.8	0.7	15.3	30.0	0.1	13.0
West Germany	13.2	0.2	0.2	4.2	0.1	11.6
Spain	1.9	81.8	0.3	8.1	91.8	7.3
Portugal	6.4	3.9	-	0.1	-	5.7
All Other	4.4	8.9	0.5	1.1	7.4	4.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: U.S. Bureau of Census, U.S. Department of Commerce. Compiled by "Wines and Vines, The Authoritative Voice of the Grape and Wine Industry," July, 1981 issue. Copyright © The Hiaring Company, 1981. Used by permission.

Table 18. The Top Ten Imported Table Wines

Rank	Brand	Country	Importer (Owner)	Case Depletions (000)	Annual Change 1979-80	Market Share of Imported Table Wines
1	RIUNITE	Italy	House of Banfi (Private)	9,070	+38%	23.9%
2	CELLA	Italy	Garneau Co. (Brown-Forman)	2,370	+23	6.2
3	GIACOBAZZI	Italy	Wine Imports of Amer. (Priv.)	2,340	+31	6.2
4	BOLLA	Italy	Garneau Co. (Brown-Forman)	1,530	+11	4.0
5	FOLONARI	Italy	"21" Brands (McKesson)	1,470	+13	3.9
6	YAGO	Spain	Monsieur Henri Wines Ltd. (Priv.)	1,330	+21	3.5
7	BLUE NUN	Germany	Schieffelin (Moet-Hennessy)	1,260	+ 5	3.3
8	MATEUS	Portugal	Dreyfus, Ashby (Schenley)	1,240	+ 3	3.3
9	ZONIN	Italy	F. Bonanno (Private)	1,000	+18	2.6
10	LANCER'S	Portugal	Heublein Spirits Group (Heublein)	790	-	2.1
	Top Ten Imported Wine Brands			22,400	+24%	59%

Source: "The IMPACT American Wine Market Review and Forecast." Copyright © M. Shanken Communications, Inc., 1981. Used by permission.

Seven countries spent a total of $638,000 advertising their wines in the U.S. last year. The Italian Trade Commission alone spent $273,000 of this with the French Wine Promotion Office close behind at $217,000. While this support is significant in terms of demonstrating support for their domestic wine producers, it is quite insignificant in terms of consumer impact and contribution to the growth of these wines in the U.S. These generic advertising expenditures pale in comparison to the brand advertising of the largest five American importers who spent $26.9 million on their foreign brands. The largest of these, House of Banfi, spent $10.3 million on its Riunite brand alone.

There is no evidence that the European countries are subsidizing wine exports to the U.S. or "dumping" wine on the U.S. market, although there are price supports for their domestic producers. What Italy has done has been to create a program that upgraded and standardized its wine quality. This program has been given a great deal of credit for their successful expansion in the American wine market. France's lack of growth in the American market is partially attributed to acquiring a reputation for high-priced wines of inconsistent quality, and there are indications that the French government is beginning a program patterned after the successful Italian one.

There have been few barriers to foreign wines coming into the United States as is borne out by their rapid market growth in recent years. The U.S. collects modest customs duties which are as follows:

Wine Product	Customs Duties Per Gallon	Customs Duties Equivalent Per 750 ML Bottle
Champagne, Sparkling & Artificially Carbonated	$1.17	$.232
Table Wine (Not Over 14% Alcohol)		
Containers of 1 gallon or less	.375	.074
Containers of 1 gallon or more	.625	.124
Dessert Wine (Over 14% Alcohol)		
Marsala	.315	.062
Sherry and Other	1.00	.198
Vermouth - Container of 1 gallon or less	.21	.042

There can be little question that imported wines have established a firm foothold in the American wine market and are a major force in the market. What is not straightforward is whether they have had much of a negative influence on the New York State wine industry. While the Europeans have obviously increased the supply of wine available to American consumers, they have not done this in a way that has depressed American wine prices. Furthermore, their wines have played an important role in turning many American consumers on to wine in the 1970's which has increased the market for all wines.

Exports

The U.S. has traditionally been a minor exporter of wine by European standards and most of what was exported went to Canada and countries where there was an American tourist or military presence, e.g. the Netherland Antilles, Panama, the Bahamas, the Philippine Republic, and Mexico. Ten years ago the thought of exporting U.S. wines to Europe, the world's largest and most sophisticated wine market, would have been considered to be unrealistic. In the last five years, U.S. exports of wines to all markets have grown rapidly, but the most dramatic growth has occurred in Great Britain, Belgium, Luxembourg, Holland, and now West Germany. The "coming of age" of California's premium wine industry during the 1970's has created a situation where fine California wines are now an excellent product at lower cost than European wines of corresponding quality. The aggressive marketing efforts of several U.S. companies have capitalized on this advantage.

For perspective, it must be remembered that total U.S. wine exports in 1980 were equivalent to only 2.1 percent of the American wine shipped to domestic markets. Table 19 provides a profile of 1980 wine exports from this country. Three-quarters of our wine exports are table wine. Canada still remains our best customer with 58 percent of total exports, down from what it once was.

Table 19. Profile of American Wine Exports in 1980

	Gallons	Percent of Total Exports
Table Wine	5,888,889	74.5%
Dessert, Sparkling, & Vermouth	1,649,351	20.9
Other Special Natural	366,291	4.6
Total All Wines	7,904,531	100.0%
Canada	4,612,792	58.4%
Great Britain	530,963	6.7
Bahamas	339,718	4.3
Belgium and Luxemburg	225,509	2.9
Netherlands Antilles	216,198	2.7
Japan	207,316	2.6
West Germany	178,516	2.3
Bermuda	150,510	1.9
Leeward & Windward Islands	142,718	1.8
Trinidad	113,060	1.4
All Other Countries	1,187,231	15.0
Total	7,904,531	100.0%

Source: Bureau of the Census, U.S. Department of Commerce. Compiled by "Wines and Vines, The Authoritative Voice of the Grape and Wine Industry," July, 1981 issue. Copyright © The Hiaring Company, 1981. Used by permission.

In contrast to the ease of entry for foreign wines to the U.S., most countries of the world have significant barriers to the importation of wine. These barriers fall into two classes. First, most countries have heavy customs duties on imported luxury goods such as wine because they are a convenient and lucrative item to tax. Most of the world's less wealthy countries also have a natural interest in discouraging the use of scarce foreign exchange for the importation of a luxury consumer good such as wine. The second class of barrier is the promulgation of various rules and standards for the import procedure and the wine product itself. This pertains primarily to the Common Market countries which are both the world's largest wine market and its largest wine producer. Examples of Common Market trade barriers are:

1) Common Market wine producers are subject to stringent rules on acceptable winemaking practices. For example, amelioration of wine with water is prohibited. Use of certain chemicals and procedures which may be acceptable in the U.S. are prohibited. In order to satisfy its wine producers, the Common Market prohibits importation of wines that are not made in conformity to European standards.

2) In order to detect the use of prohibited practices, the Common Market would like to require that each shipment of American wine be accompanied by a laboratory analysis certificate and a certification by the U.S. Department of the the Treasury's Bureau of Alcohol, Tobacco, and Firearms (BATF) that the wine was made in accordance with Common Market standards. This issue is currently being negotiated.

3) The Europeans have very strict rules regarding the use of an appelation of origin - a name referring to where the grapes were grown and vinted. Thus, while American winemakers have adopted European appelations for generic wine types such as chablis, burgundy, champagne, etc., the Europeans prohibit the importation of wines with such labels.

4) Because they have a support program for wine producers and problems with overproduction of wine, the Common Market has taken measures to discourage the production of certain types of high yielding grapes, including French American hybrids. As a result, they would also like to prohibit the importation of wines from such grapes. This issue is also currently under negotiation.

Since the early 1970's, the U.S. Special Trade Representative has been negotiating the subject of such barriers with the Common Market. A special Interagency Committee for Wine Trade was established to coordinate U.S. efforts to respond to the Common Market wine trade rules. It consists of representatives from the Foreign Agricultural Service (U.S. Dept. of Agriculture), Customs Bureau (Treasury), BATF (Treasury), and the State Department. The initial import rules established by the Common Market would have all but ruled out U.S. exports to that market. Because their exports of wine to this country are so large, the U.S. Trade Representative has been able to buy time and concessions. Negotiations are still in progress and some tough issues remain to be resolved.

It should be pointed out that while the Common Market import policies serve the interests of protecting their domestic markets from foreign imports, most of these rules are grounded in regulations with which their own producers must comply. Furthermore, wine production is a crucial industry in many areas of southern Europe that are subject to social and political unrest. Therefore, their domestic wine policies are often rooted more deeply in social/political factors than they would be in this country. This makes the resolution of these trade issues very difficult, although the U.S. has strength in its position as a large net importer of Common Market wines.

The U.S. position as a net importer of wines can be expressed as:

	Gallons
Total 1980 Imports	102,507,000
Total 1980 Exports	7,904,531
Net 1980 Imports	94,602,469

This clearly illustrates the significance of wine imports to the American grape producer.

Wine Sales Considerations

Despite prohibition or severe restrictions on supermarket wine sales in many states, it is estimated that 45 percent of wine sales in this country occur in supermarkets. A "Progressive Grocer" article noted that the average store with wine stocked 300 different wine items (brands, types, and sizes) which accounted for 4 percent of total store sales and 5 percent of store gross profits - a 29 percent gross profit margin. However, half the stores had wine sales of two percent or less. The same article reported that the average supermarket wine department sold a mix of 20 percent premium wines, 30 percent mid-premiums, and 40 percent popular-priced wines. Most supermarkets selling wine have a separate wine department, but it is generally agreed that the best merchandising possibilities are wine displays throughout the store that tie-in with other items.

Many people within the wine marketing field agreed that supermarket sales offer great potential for expanding the market for wines rather than taking it away from other outlets. There are a variety of reasons advanced for this: 1) greater accessibility to the consumer, especially women who are the primary wine buyers; 2) association of wine with food rather than with hard liquors; 3) avoiding the stigma that liquor stores have for some people, especially women; 4) supermarkets are noted for their consumer merchandising abilities while the traditional liquor store is not; and, 5) supermarkets are generally a lower markup operation than traditional wine outlets and this enables consumers to shop for more reasonable prices. Several years ago, the Chairman of California's Wine Institute cited an estimate that table wine sales are 70% impulse sales.

In a survey of 833 consumers at the International Wine and Cheese Festival by the Taylor Wine Company in 1974, the following reasons were given for prefering to buy wine in the supermarket: convenience of one-stop shopping (68%), close-to-home (12%), cheaper price (12%), atmosphere better in the supermarket (12%), larger selection (6%), catches the eye when shopping (6%), and variety (4%). Buying wine in a liquor store was preferred for better selection (67%), store personnel's wine knowledge (10%), better quality (9%), better prices (8%), availability of imports (8%), more sizes (4%), delivery (4%), availability of chilled wines (4%), and nice displays (4%).

Taxes on Wines

Wine is subject to both Federal excise taxes and a bewildering variety of State excise tax structures. Especially for champagnes, sparkling wines, and carbonated wines, these taxes add a significant cost to the retail purchase price of wine. The impact also varies widely by state, as shown in Table 20. For convenience, this table also shows the combined impact of Federal and State excise taxes. For table wines, the taxes are not a major cost factor except in a few states such as Florida that have a heavy tax on them. At the other extreme, the excise tax becomes a major cost component passed along to the consumer for champagnes and sparkling wines. It is interesting to note that New York is among the states with the lowest state excise tax, although California is even lower.

Table 20. Wine Excise Taxes - Federal and Selected States

	Table Wine Under 14%	Dessert Wine 14-21%	Champagne, Sparkling Wine	Carbonated Wine	Vermouth
	Tax Per Gallon				
Federal	$ .17	$ .67	$3.40	$2.40	$ .67
California	.01	.02	.30	.30	.02
New York	.10	.10	.53	.26	.10
District of Columbia	.15	.33	.45	.45	.33
Texas	.17	.34	.43	.43	.34
Illinois	.23	.60	.23	.23	.60
New Jersey	.30	.30	.30	.30	.30
Massachusetts	.55	.55	.70	.70	.55
Florida	1.75	2.43	3.50	1.75	2.43
	Combined State/Federal Tax Per 750 ML Bottle				
California	$ .04	$ .14	$ .73	$ .54	$ .14
New York	.05	.15	.78	.53	.15
District of Columbia	.06	.20	.76	.56	.20
Texas	.07	.20	.76	.56	.20
Illinois	.08	.25	.72	.52	.25
New Jersey	.09	.19	.73	.54	.19
Massachusetts	.14	.24	.81	.61	.24
Florida	.38	.61	1.37	.82	.61

Source: Compiled by California Wine Institute. Calculations for 750 ML Bottle by J. Putnam II.

Wine Advertising

By any measure, advertising budgets for wine have grown significantly in recent years reaching an estimated $134 million in 1980. Between 1970 and 1980:

- Total wine advertising expenditures increased by more than four times.
- Advertising expenditures per gallon of wine shipped more than doubled (up 133%). Even after adjustment for inflation, wine advertising increased by 20 percent per gallon shipped.
- Advertising expenditures per gallon shipped grew significantly faster for wine than it did for beer or distilled spirits.

Table 21. 1980 Wine Advertising

Advertising by Type	National Total Dollars	National Total Percent	New York State Brands Dollars	New York State Brands Percent	Percent of National Total
Network Television	$ 59,185,200	44.1%	$1,745,900	16.0%	2.9%
Spot Television	38,768,200	28.9	5,262,600	48.1	13.6
Network Radio	623,900	0.5	623,900	5.7	100.0
Spot Radio	13,387,200	10.0	2,599,500	23.8	19.4
Magazine	16,444,986	12.3	76,283	0.7	0.5
Newspaper	5,518,600	4.1	617,000	5.6	11.2
Outdoor	122,100	0.1	8,800	0.1	7.2
Total	$134,050,186	100.0%	$10,933,983	100.0%	8.1%

Advertisers with Budgets Over $5 Million	Dollars	Percent of National Total
Gallo (Gallo, Andre, Carlo Rossi, etc.)	$ 25,565,667	19.1%
Seagram (Paul Masson, Christian Bros., Black Tower, Gold Seal, etc.)	20,412,235	15.2
Heublein (Colony, Harvey's, Inglenook, Lancers, etc.)	13,997,665	10.4
Wine Spectrum, Inc. (California Cellars, Taylor, Great Western, Monterey, Sterling, etc.)	13,698,296	10.2
House of Banfi (Riunite, Bell'Agio)	10,280,972	7.7
Brown-Forman (Bolla, Cella)	9,219,229	6.9
National Distillers (Almaden, etc.)	6,816,729	5.1
All Others	34,059,393	25.4
Total	$134,050,186	100.0%

New York Brand Advertising	Dollars	Percent of NY Total
Wine Spectrum - Taylor	$ 5,334,888	48.8%
Great Western	704,300	6.4
Seagram Co., Ltd. - Gold Seal, Charles Fournier	776,975	7.1
Widmer's Wine Cellars, Inc.	214,100	2.0
Monarch - Manischevitz	2,289,020	20.9
Wine Group - Mogen David	1,614,700	14.8
Total	$10,933,983	100.0%

Source: "The Wine Marketing Handbook 1981." Copyright © Gavin-Jobson Associates, Inc., 1981. Used by permission.

This growth reflects wine marketers' efforts to gain their share of the wine consumption boom as well as the entry of consumer marketing firms such as Coca-Cola (Wine Spectrum) that introduced aggressive advertising budgets and tactics to the wine industry. It has also, undoubtedly, contributed to the growth of wine consumption, although the consumer fundamentals for increased wine use were already there before advertising.

The wine industry's 1980 advertising "program" is detailed in Table 21. Television dominated advertising expenditures with $59 million (44%) in network television and $39 million (29%) in spot television (local broadcasting and non-network). While nearly all wine brands are advertised to a certain extent, seven wineries/distributors/importers account for three quarters of total wine advertising - Gallo, Seagram, Heublein, Wine Spectrum, House of Banfi, Brown-Forman, and National Distillers. This constitutes the "major leagues" of consumer advertising with large budgets, significant economies due to size, and extensive use of national network television.

Wine brands that are bottled in New York and may contain New York State wine $10.9 million on advertising in 1980. This level is 8.1 percent of national wine advertising and compares quite favorably to New York's 7.1 percent share of 1980 wine shipments. The mix of advertising for New York State wine brands is substantially different than the national mix, with much heavier emphasis on spot television and radio, and much less on network television. This is no surprise, given that most New York State wines do not have national distribution and most brands are much smaller than Gallo, Inglenook, Riunite, etc. that are advertised on national television.

Over one-half of New York's wine brand advertising is spent by Wine Spectrum, mostly on its Taylor label (<u>not</u> including California Cellars), but also some on the Great Western label. Most of the remaining advertising is done by the kosher Concord wineries, Mogen David and Monarch (Manischevitz) - some portion of their advertising is probably for wines that contain little or no New York State wine. No expenditures are displayed for Canandaigua Industries, which had a $1.1 million advertising budget in 1980. This was split between the Bisceglia label which is Californian, and the Richards brand which contains some New York wine. It should be pointed out that most of the advertising for New York wines does not refer to a New York state origin for the grapes, but is for brands that are bottled in New York and may be blended with California bulk wine.

UNFERMENTED GRAPE PRODUCTS - LONG-TERM INDUSTRY TRENDS

Beverage Consumption

As background to a discussion of trends in grape juice and wine use, it is helpful to first examine some rather significant trends in the average American's use of beverages. As shown in Table 22, most beverage categories have been increasing in use, but wine has had the single largest growth. Of course wine's 5.7 percent rate of annual growth is due in part to its very low level from which it started in 1965. Nonetheless, this magnitude of growth in use per person has created a rapidly growing market for wines. The fruit juice segment has also had a strong of 4.0 percent annual growth rate during the past 15 years, although they too started from a relatively small base. It is interesting to note that of the ten packaged beverage categories shown in Table 22, eight have been growing in use, while only milk and coffee have been declining.

Table 22. Beverage Use in the United States, 1965-80

	Gallons Per Person				Compound Rate of Change, 1965-80
	1965	1970	1975	1980	
Soft Drinks	20.3	27.0	31.0	38.8	+ 4.4%
Coffee	37.8	35.7	33.0	27.0	- 2.2
Tea	4.9	5.5	6.2	6.6	+ 2.0
Milk	26.0	23.1	22.3	20.9	- 1.4
Powdered Drinks	NA	NA	4.8	6.0	NA
Juices	3.8	5.2	6.9	6.9	+ 4.0
Beer	15.9	18.5	21.6	24.3	+ 2.9
Wine	1.0	1.3	1.7	2.3	+ 5.7
Distilled Spirits	1.5	1.8	2.0	2.0	+ 1.9
Bottled Water	NA	NA	1.2	1.6	NA
Total Packaged Beverages	111.2	118.1	130.7	136.4	+ 1.4%
Imputed Water Consumption*	71.3	64.4	51.8	46.1	- 2.9%
Total All Beverages	182.5	182.5	182.5	182.5	-0-

NA = Not available

*Includes powdered drinks and bottled water in 1965 and 1970.

Source: "Beverage Industry," May 7, 1982. Copyright © Beverage Industry and John Maxwell, 1982. Used by permission.

FIGURE 8A.
RETAIL SALES PER PERSON OF
UNFERMENTED GRAPE PRODUCTS

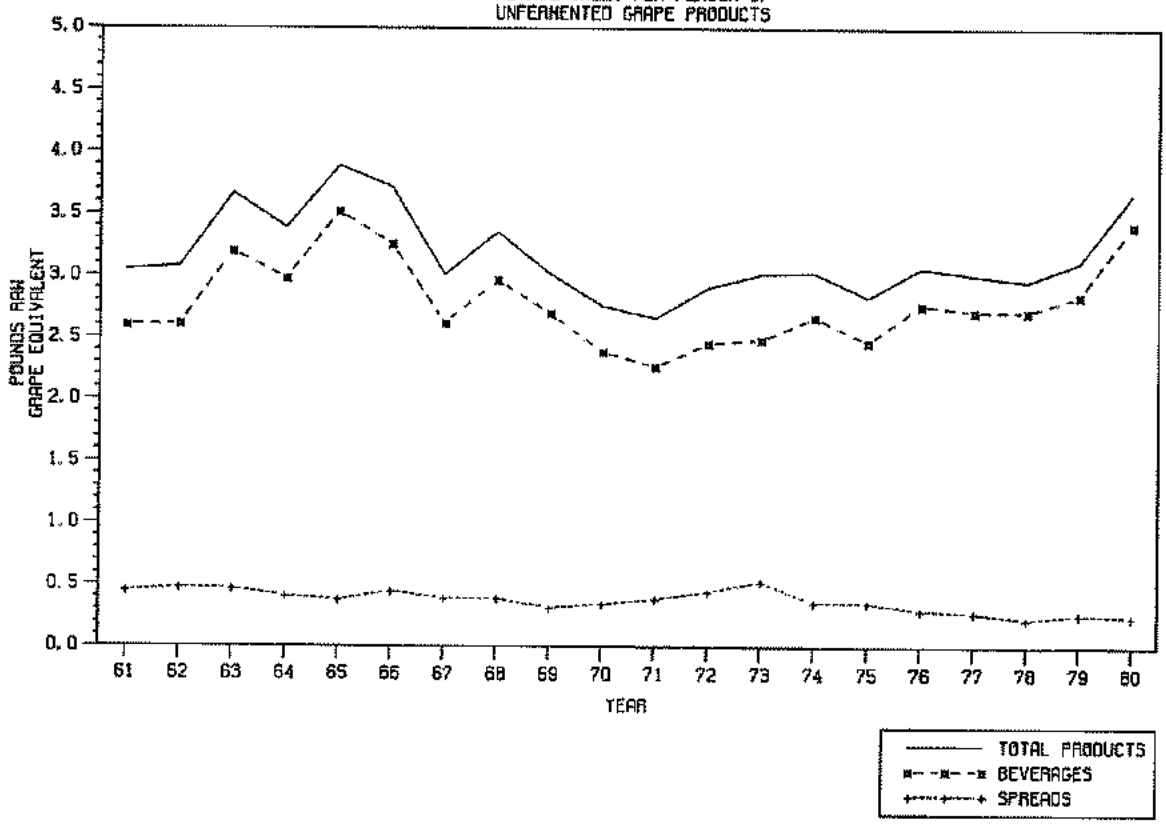
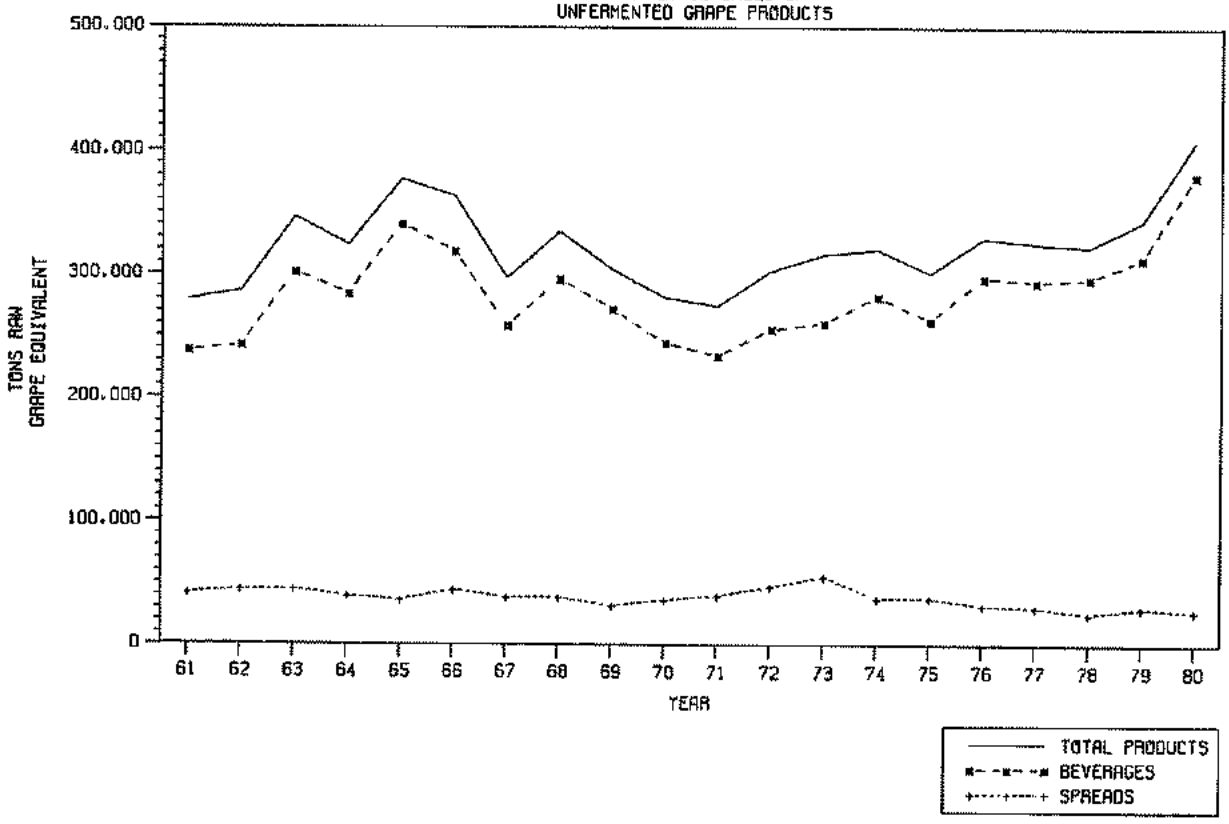


FIGURE 8B.
TOTAL RETAIL SALES OF
UNFERMENTED GRAPE PRODUCTS



Source: Figures developed by the author based on data in "Chain Store Age Supermarket Sales Manual.

Grape Juice/Drink Consumption

There is very little published data regarding trends in unfermented grape product consumption, sales, and production. This is due in part to the industry being relatively small and specialized by national food industry standards, and also to the relatively small number of firms involved in it. Also, the government statistical gathering agencies have not yet adjusted to the major role that California now plays in supplying unfermented juice for blending purposes.

Figure 8 shows the 1961-80 retail sales experience for the major unfermented grape juice products - canned/bottled juice, frozen concentrate, drinks, jellies, and jams. It should be noted that this data does not account for some relatively minor unfermented grape categories such as institutional sales of the above products; grape juice used in punches, combination drinks (Cran-Grape), and fruit canning; and exports. Nonetheless, this analyst believes that the figures in Figure 8 realistically portray the trend in consumption and sales for the unfermented grape products industry.

Looking first at per person sales of these products, it can be seen that sales were generally growing quite well in the early and mid-1960's with total sales moving from 3.0 pounds (Concord grape equivalent) in 1961 to 3.9 pounds in 1965, an increase of 30 percent. As will be seen later, a combination of short crops and higher retail prices during the late 1960's and early 1970's, (including actual physical shortages of the product at times) combined to reduce unfermented grape product sales, especially the beverages, during the 1968-73 period. During this period, long-term damage was done to the consumer demand for grape products as consumers turned to other fruit juices and food stores reduced the amount of shelf/freezer space allotted to them. Beginning in the early 1970's, grape product consumption began an upward trend once again as product availability increased from both larger crops and rapid industry acceptance of the practice of blending California or even foreign juice/concentrate with Concord juice. Consumption has once again reached the mid-1960's level during the past two years, due in large part to a favorable price relationship with competing fruit-based beverages.

It is interesting to note that the grape jelly/jam category grew throughout the 1960's and early 1970's before peaking in 1973 and then falling off since then. Of course these products do not use raw grapes in the magnitude that beverage products do - in recent years only one out of every 14 tons of grapes used for unfermented products has gone to grape jelly/jams. It is apparent that the short crops of the late 1960's and early 1970's did not impact on grape jelly/jam sales as they did for grape beverages. There are three important explanations for this. First, crop shortages did not affect jams/jellies to the same extent as beverages since raw material needs were not as great and some processors probably chose to use limited grape supplies for production of higher value-added jelly/jams. Second, grape jelly/jam prices were not as sensitive to raw grape prices since the grapes are a much lower proportion of the total manufacturing cost than they are for beverage products. Finally, consumers are not as price sensitive to jelly/jam prices as they are for beverages. The post-1973 declines in grape jelly/jam consumption were triggered by very large increases in sugar prices (the other major ingredient) and a decline in the number of children in the United States, the primary consumers of grape jelly.

Figure 8B displays the trend in total retail sales of unfermented grape products in terms of the raw grape tonnages needed to produce them. This figure differs from 8A in that it accounts for the growing U.S. population and shows the actual tonnages of grapes sold (demanded) in retail product form, which is ultimately the most important figure for grape growers. The most important conclusion that can be drawn from this figure is that after the 1965 level of sales was established, it took until 1979 (14 years later) before that level was again equaled. In the meanwhile, American consumers had time to try and develop tastes for other fruit juice products and California grape juice/concentrate became a major supply factor in this market.

Consumption of Orange and Other Fruit Juices

Table 23 displays trends in fruit juice consumption per person for the past twenty years for all major fruit juice categories. (Several product lines, most notably frozen concentrated grape, apple, and cranberry, are missing because the USDA does not collect data on them.) Total consumption of the fruit juices included in Table 23 has grown substantially in this period: from 28.9 pounds annually in the 1961-65 period to 55.8 pounds annually in the 1976-80 period, a 93 percent increase. Analyzing this net gain of 26.9 pounds even further, 18.5 pounds was in frozen orange juice, 3.5 pounds was in chilled orange, and 0.2 pounds was in canned orange juice, for a total of 22.2 pounds or 83 percent of the net gain from orange juice products alone. Most of the remaining gain in consumption occurred in bottled/canned apple juice (during the 1970's) and other canned citrus juices (primarily grapefruit).

The data in Table 23 vividly depicts the rapid growth in fruit juice consumption during the past two decades, led almost entirely by orange juice. The growth in orange juice consumption occurred primarily in the frozen concentrate segment. It should be pointed out that small amounts of the gain in orange juice sales replaced juice formerly prepared at home from fresh oranges, but this was a relatively small factor, e.g. most of the gain in orange juice consumption has been a genuine change in the American diet.

The outstanding success of orange juice has had implications for grape juice marketing. Foremost, it pitted the relatively small grape juice marketing industry against a large, dynamic, successful orange juice marketing industry. The orange juice industry, in large part, set the competitive arena and conditions for all other fruit juice beverages including grape. While it might be argued that in growing the overall fruit juice market to the extent it has, orange juice has made it possible to sell more grape juice. However, there is little evidence to support this, and in fact, frozen grape concentrate has had to struggle with frozen orange concentrate for freezer display space in supermarkets. As will be seen shortly, frozen orange concentrate prices have had a very significant impact on frozen grape concentrate pricing.

Figure 9 graphically displays the impact of rising per capita consumption and increasing population on Florida orange juice sales. (This includes imports, but not oranges processed in other states which account for roughly ten percent of U.S. oranges processed.) The dramatic rise in frozen concentrate shipments speaks for itself, and even the rapid growth of the chilled juice category is impressive. These trends are indicative of the fruit juice marketing climate in which grape juice marketers have had to operate.

Table 23. Trends in Per Person Consumption of Major Fruit Juices*

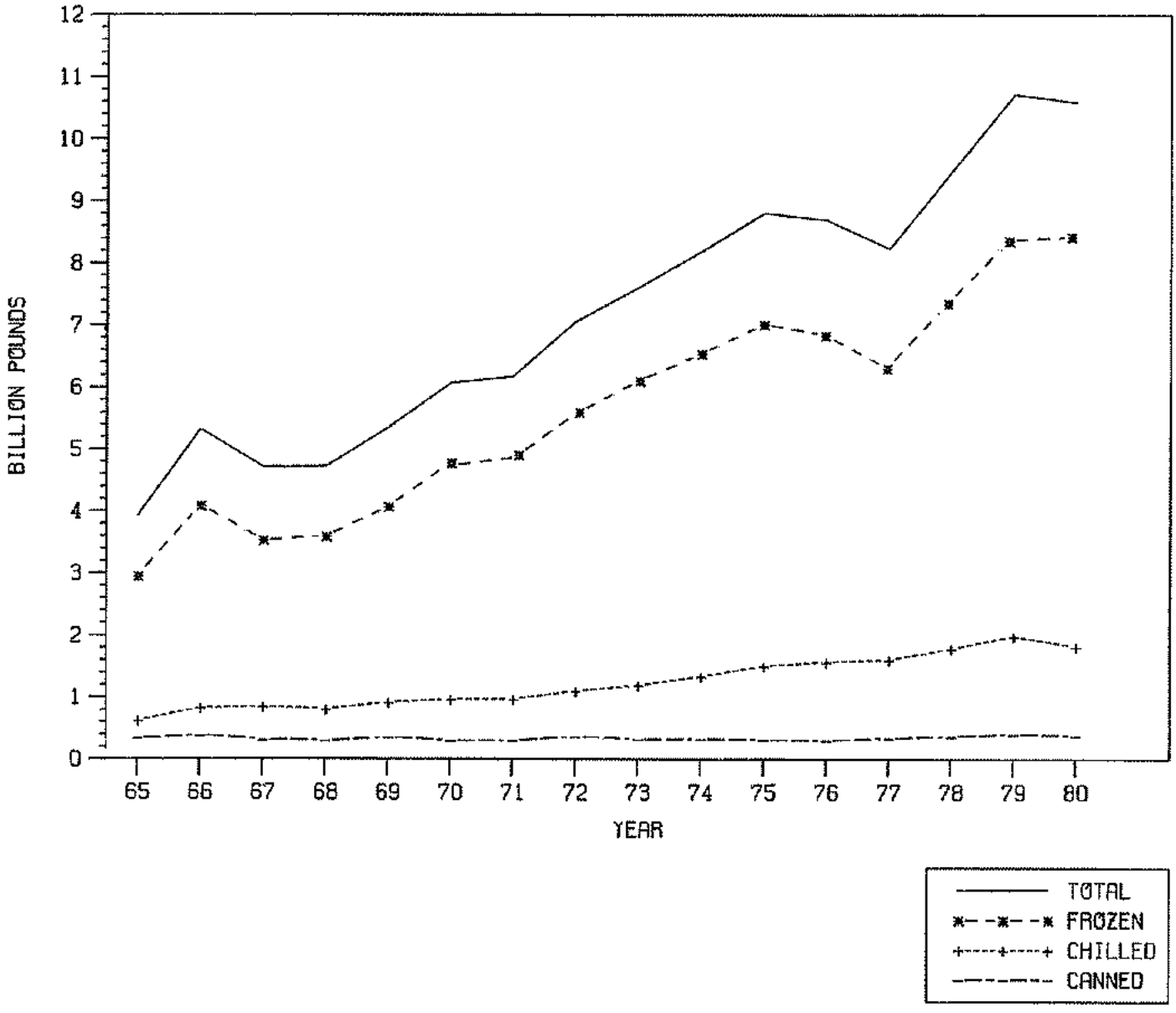
	1961-65	1966-70	1971-75	1976-80	Percent Change, 1961-65 to 1976-80
	Pounds Juice Per Capita - Single Strength				
Canned Citrus	4.56	5.56	6.82	6.84	+ 50%
Chilled Citrus	1.69	4.12	5.19	5.82	+244
Frozen Conc. Citrus	15.70	19.98	28.86	34.16	+118
Total Citrus	21.95	29.66	40.87	46.82	+113%
Canned Apple	1.25	1.86	2.76	4.18	+224%
Canned Pineapple	3.50	3.29	2.67	2.57	- 27
Other Canned Noncitrus*	2.19	2.07	2.08	2.22	+ 1
Total Canned Noncitrus	6.94	7.22	7.51	8.97	+ 29%
Total Citrus & Canned Noncitrus	28.89	36.89	48.38	55.79	+ 93%
	---	---	---	---	---
Canned Orange	1.54	1.47	1.54	1.75	+ 14%
Chilled Orange	1.63	3.87	4.64	5.14	+215
Frozen Orange	15.70	19.98	28.86	34.16	+118
Total Orange	18.87	25.32	35.04	41.05	+118%

*Does not include several important and many minor noncitrus fruit juice items such as all frozen concentrates and chilled juice items, cranberry cocktail, etc.

**Includes canned/bottled grape, prune, and fruit nectars (blends).

Source: "Fruit Situation", Economic Research Service, U.S. Department of Agriculture, July, 1981.

FIGURE 9.
FLORIDA SALES OF ORANGE JUICE PRODUCTS, 1965-80



Market Shares in the Fruit Juice/Drink Market

While there is no uniform, consistent source of either volume or dollar sales of all fruit juices and drinks available, market shares of retail supermarket dollar sales have been calculated for the three major product categories and are presented in Table 24.

The frozen juice concentrate segment is the most important market segment because, as shown earlier, this has been where most of the sales growth has occurred. Market shares in this category have been fairly steady over the past twenty years. Grape juice concentrate lost market share in the last half of the 1960's and the first half of the 1970's, but has recovered somewhat since then. Nonetheless, grape has still lost 1.4 market share points over the two decade span, and while not significant in the total concentrate market segment, this is a twenty percent loss of the share that grape had in the early 1960's. Also of interest and of potential significance to the frozen concentrate segment is the rapid growth of the "All Others" category during 1979 and 1980. This reflects the success of the "Five Alive" brand of concentrate which is a blend of five fruit juices, and to a much lesser extent, gains in apple and cranberry concentrate sales.

In contrast to concentrates, there has been a rather dramatic restructuring of the canned/bottled juice segment during the past twenty years. Apple juice has surged ahead in sales and has increased its market share more than 2.5 times -- and its growth in market share has shown no sign of leveling off in the past several years. Cranberry and grapefruit juice have also each made significant gains in market share as well. On the losing end have been tomato, prune, and orange juice. Bottled grape has behaved similarly to frozen grape, losing market share in the late 1960's and early 1970's and then staging a partial recovery in the last five years. Its net loss of 1.2 market share points over the twenty years represents 17 percent of its 1961-65 market position.

The canned/bottled fruit drink category consists of those beverages that contain 10-15 percent natural fruit juice with the bulk being water and miscellaneous other ingredients. There has been significant restructuring of this market as well. The punch and "all other" (mostly combinations of flavors) categories have gained substantial market share, mostly at the expense of pineapple/grapefruit drinks and to a lesser extent, grape drinks and orange drinks. Grape drinks have lost a net of 4.3 market share points since the early 1960's or 23 percent of their 1961-65 market share position. This actually understates the severity of the current trend because grape drinks increased market share in the late 1960's to an average of 23.2 percent, but have declined by 8.5 points to 14.7 percent in the 1976-80 period. Grape drinks' market share has continued to drop in each of the past five years.

Summing this up, there has been dramatic restructuring of the canned/bottled juice segment, some restructuring in the canned drink segment, and very little change in market shares within the frozen concentrate segment during the past twenty years. Grape juice has lost market share in all three categories - significant losses for grape because of its small niche in the market. The trend for the past several years alone is quite positive for grape concentrate, fairly steady for canned/bottled grape juice, and very negative for grape drinks. While it may be possible to sell more volume (pounds, cases, or dollars) despite the declining market share if the market is growing, losses of market share should be of concern to the grape industry.

Table 24. Fruit Juice Beverage Market Shares of Retail Dollar Sales Volume, 1961-1980

	1961-65	1966-70	1971-75	1976-80	1976	1977	1978	1979	1980	Gain in Market Share 1961-65 to 1976-80
	Percent of Retail Supermarket Sales in Category									
Frozen Juice Concentrates										
Orange	74.3%	73.8%	79.2%	74.8%	74.1%	79.4%	80.5%	72.9%	67.0%	+ 0.5
Grape	6.8	6.5	4.4	5.4	5.4	4.4	4.5	5.3	7.4	- 1.4
Lemonade and Other Ades	7.4	7.8	8.3	10.7	14.0	9.5	8.9	11.3	10.0	+ 3.3
All Others	11.5	12.0	8.1	9.1	6.5	6.7	6.1	10.5	15.6	- 2.4
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-
Canned Juices										
Apple	10.0%	12.6%	15.2%	26.3%	21.7%	25.1%	27.2%	27.8%	29.7%	+16.3
Cranberry	(a)	6.7	9.7	11.1	9.8	9.7	10.4	12.3	13.3	NA
Grape	7.1	5.9	4.9	5.9	5.7	5.9	5.8	6.0	6.0	- 1.2
Prune	13.8	13.5	10.4	7.0	8.0	7.9	6.6	6.9	5.8	- 6.8
Pineapple	9.5	7.7	6.1	4.6	5.3	4.3	4.4	4.5	4.4	- 4.9
Grapefruit	6.6	10.7	13.7	12.0	13.2	11.7	12.4	11.5	11.2	+ 5.4
Orange	8.1	5.5	4.6	3.5	3.4	3.6	3.7	3.9	2.9	- 4.6
Tomato	19.5	17.0	14.3	9.3	12.0	10.4	8.8	8.0	7.5	-10.2
Vegetable Cocktail	7.8	8.1	8.0	8.8	8.5	9.4	8.8	9.9	7.6	+ 1.0
All Others	17.5(a)	12.3	13.0	11.4	12.4	12.0	11.9	9.2	11.6	NA
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-
Canned Fruit Drinks										
Orange	17.8%	23.9%	17.3%	14.6%	12.9%	12.5%	15.0%	18.7%	14.0%	- 3.2
Punch	22.4	20.6	30.5	32.5	38.0	33.3	31.2	28.8	31.1	+10.1
Grape	19.0	23.2	21.6	14.7	17.0	15.8	15.0	12.8	12.7	- 4.3
Pineapple/Grapefruit	19.5	13.9	6.6	5.3	4.4	4.6	5.4	5.8	6.1	-14.2
All Others	21.4	18.4	24.0	33.0	27.7	33.8	33.4	33.9	36.1	+11.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-

(a) Cranberry included with "All Others" prior to 1976. NA = Not available on consistent basis.

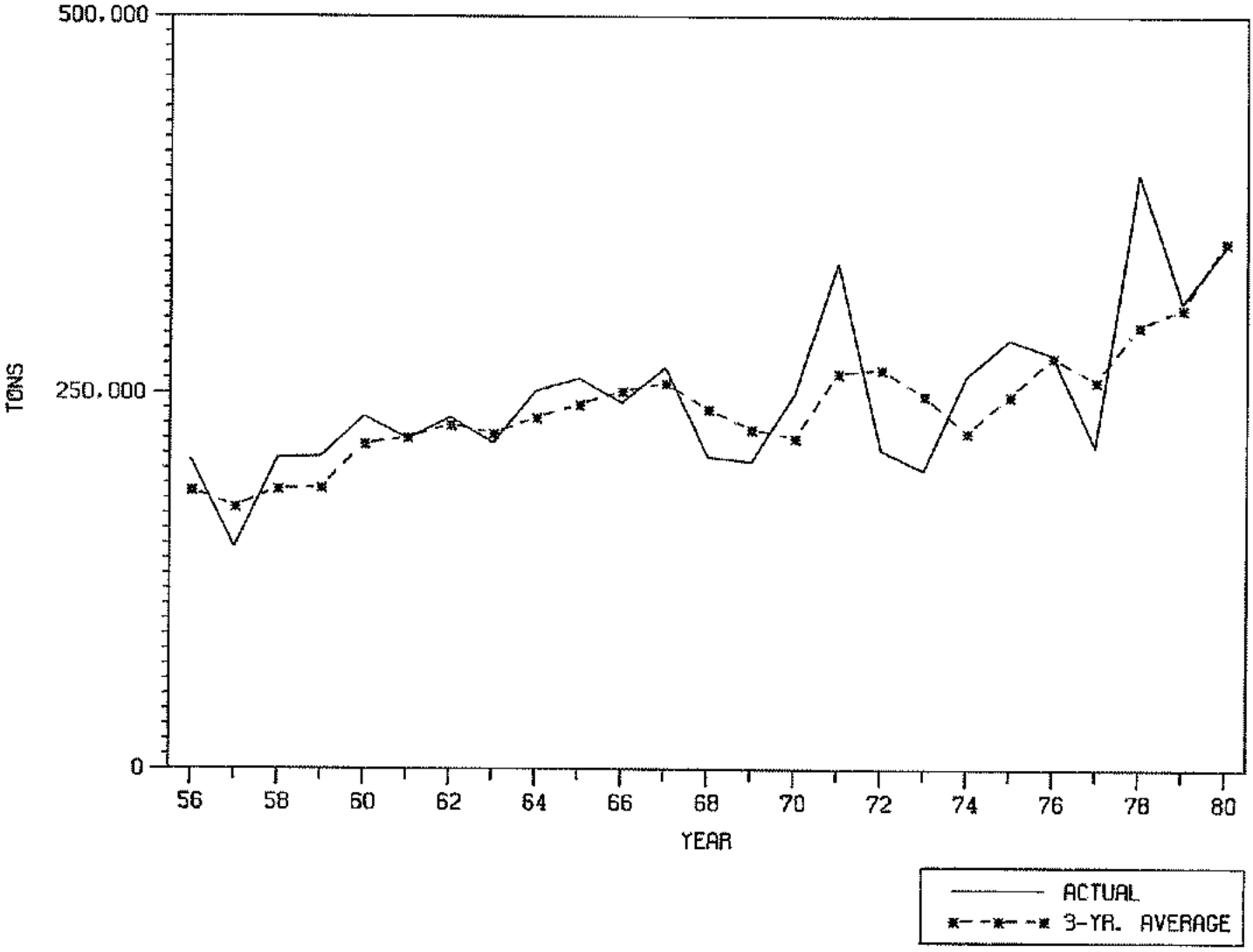
Source: "Chain Store Age Supermarket Sales Manual", various years.

Table 25. Jams and Jellies' Market Share of Retail Dollar Sales Volume, 1962-80

	1962-1965	1966-70	1971-75	1976-80	1976	1977	1978	1979	1980	Gain in Market Share 1962 & 1965 to 1976-80
	Percent of Retail Supermarket Sales in Category									
Jams										
Strawberry	36.7%	35.4%	39.3%	44.1%	43.1%	42.0%	44.7%	45.5%	45.2%	+ 7.4
Grape	11.7	11.2	12.7	13.3	13.0	13.0	11.4	15.7	13.1	+ 1.6
Raspberry	10.4	13.7	12.8	12.4	11.6	13.0	12.2	13.2	12.2	+ 2.0
Peach	8.4	7.6	8.2	4.4	5.5	4.6	4.1	4.1	3.6	- 4.0
Blackberry	6.6	7.2	4.8	3.6	4.1	3.8	4.1	3.3	2.9	- 3.0
All Other	26.2	24.9	22.2	22.2	22.6	23.7	23.6	18.2	23.0	- 4.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-
Jellies										
Grape	49.2%	66.8%	69.0%	72.1%	74.7%	73.5%	70.6%	70.6%	71.2%	+22.9
Apple	16.7	7.8	7.5	7.8	6.6	7.2	7.4	10.3	7.6	- 8.9
All Other	34.1	25.4	23.6	20.1	18.7	19.3	22.0	19.1	21.2	-14.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-

Source: "Chain Store Age Supermarket Sales Manual", various years.

FIGURE 10.
THE UNFERMENTED GRAPE PRODUCT CRUSH
IN THE SEVEN MAJOR CONCORD STATES. 1956-80



Market Shares in the Jelly/Jam Market

The market for fruit jams and preserves is dominated by strawberry jam which has continued to increase its market share during the 1970's. Grape jam has held approximately 13 percent of the retail market in recent years, a small gain over what it held in the 1960's. (See Table 25.) Raspberry jam is the only other product to have an upward trend in market share, while peach, blackberry, and "all other" have been losing market share. This is a favorable situation for grape jam since it is still a large enough factor in this market to ensure that most supermarkets will stock it on their shelves, which may not be the case for some of the less popular products which are losing market share. While this is not a fast-growing product category and grape jam does not hold a large position in it, it nonetheless provides a modestly growing market for Concord grapes.

Throughout the last two decades, grape jelly has gained market share at the expense of apple and "all other" jellies. There is some indication that grape jelly's market share has stabilized in recent years, however.

The continuing popularity of grape jelly and jams with American consumers is readily apparent from the preceding analysis. However, the overall market for jellies and jams has been relatively stagnant during the 1970's, and thus grape's popularity has not translated into a market for additional processing grapes. It must be remembered that jams and jellies do not require large tonnages of grapes the way juices/concentrates do, and thus the importance of grape spreads pales in comparison to grape juice products.

Production of Unfermented Grape Products

There are no publicly available, consistent data on U.S. production of unfermented grape products. Figure 10 shows the tonnages of grapes utilized for unfermented grape products in the major Concord-producing states of New York, Pennsylvania, Ohio, Michigan, Arkansas, Missouri, and Washington. There are three limitations to this data which must be recognized before meaningful conclusions can be drawn from it:

1) It does not account for unfermented juice produced in California which has become a major factor during the 1970's. This will be considered later in this chapter.

2) It accounts for grape utilization only at the primary level of utilization. Unfermented grape juice can be later utilized for wine production. Diversion of unfermented Concord grape juice was a very signficant factor during the Cold Duck "boom" of the late 1960's and early 1970's.

3) It obviously does not account for unfermented products individually, e.g. juice, concentrate, jelly, and jam.

As long as these limitations are recognized, the data in Figure 10 provides a good picture of what has occurred in unfermented grape product markets during the past twenty five years. Utilization during individual years has varied widely throughout this period due to varying crop sizes, but the three-year moving average reveals three distinct phases:

1) 1956-1967. Utilization for unfermented products trended upward throughout this period, gaining approximately 38 percent. This created a favorable climate for building consumer markets for grape products as both population and consumer incomes were growing during this period.

2) 1968-1975. Smaller grape crops and growing competition from winemakers combined to force unfermented product utilization lower. Total utilization averaged about the same at the beginning and the end of this period, but dipped by approximately 14 percent at the low points around 1970 and 1974. In reality, the dip during the early 1970's was probably more severe than shown as unfermented juice was diverted for Cold Duck sparkling wine production. This period was unfavorable for grape product marketers as prices rose and product shortages occurred. As will be seen shortly, orange juice products continued to rapidly grow in availability during this period.

3) 1976-1980. Utilization for unfermented products exploded due to much larger crops and falling utilization of Concords for wine production. The three-year moving average was at 249,000 tons in 1975 and at 351,000 tons in 1980, a 41 percent increase over the five year period. While on the surface, this ample supply at lower prices would seem ideal from a consumer marketing standpoint, it generated substantial uncertainty in this area. First, marketers had to overcome the "shortage" mentality of the previous period - to regain the confidence (and shelf space) of retailers and to induce consumers to buy more of the products. Second, at the beginning of this period, it was not obvious to marketers that they should change their shortage-oriented market planning and strategy to a surplus-oriented one. This led to hesitation and some serious miscalculations on the part of some marketers. Finally, the ample supply of grape juice at low prices led to substantial competition and price undercutting from private-label and generic products, to the detriment of established brand label products such as Welch's. Lower cash market prices and net proceeds to co-op growers combined with inflating production costs made this a very unfavorable period for grape growers and processor/marketers.

California was not traditionally a factor in the unfermented grape product market (aside from canned grapes) since it could not grow Concords. Most juices, concentrates, drinks, jams, and jellies were labeled as "100 percent Concord" until the early 1970's and it was generally accepted that such products had to be "100 percent Concord" to be accepted by the consumer. The breakdown of this school of thought and the rise of blending Concord with cheaper juice occurred during the Concord shortage years of the late 1960's and early 1970's. Aside from the shortages which forced acceptance of blending in a fairly short time, there are some important economic incentives for blending:

1) Extensive consumer taste tests done by Welch Foods have consistently found that consumers preferred certain blends over 100 percent pure Concord juice. This is especially true for the eastern states' Concord juice which tends to have a lower sugar/acid ratio, a characteristic that can be especially pronounced in some crop years. These same tests also established lower limits below which blending reduced the quality and consumer acceptance of grape juice products. Blending within this range to improve profitability and product uniformity, and thus consumer acceptance, has obvious benefits.

2) During the years in which Concord juice was in short supply, proprietary and cooperative packers were able to extend a limited supply of Concord juice and thus increase profits or grower returns per ton of Concords sold. In recent years of heavy Concord juice supplies and a diminished margin between the value of Concord and blending juice, there has been an incentive for cooperative packers to maximize the amount of Concord juice in their products within the acceptable range. Proprietary packers may still find it profitable to buy less Concords and continue heavy blending.

3) Certain packers have chosen to position themselves as a lower-priced alternative to premium grape juice products such as those of Welch Foods, even at the cost of providing a lower-quality product. This is a classic strategy for competing against a strong brand name and/or for generating higher sales volumes against a large competitor. These packers can accomplish this profitability by using a relatively high proportion of the cheaper blending juice in their grape products.

The adoption of blending California juice with traditional Concord products opened a new market for California which some of their processors were quick to exploit. It also coincided with several other developments in California. First, overplanting of grapes during the early 1970's led to excessive crops in the mid and late-1970's and juice/concentrate was one avenue for surplus diversion. Second, much of the overplanting was in red wine varieties which came into production when the demand was for white varieties. Some red wine grapes thus found a "home" in grape juice. Third, table grape production was rising throughout the 1970's and it was desirable to use those table grapes that did not grade U.S. #1 for juice/concentrate production.

The only data available regarding California's production of unfermented juice/concentrate is for the years 1974 through 1980. It must be remembered that much of this juice is used in wine production and does not end up as consumer packages of juice, concentrate, etc. This data shows a sharp uptrend in juice/concentrate production during this limited timespan, and it is this analyst's judgement that California's juice/concentrate production was much lower in the 1960's, and rising in the early 1970's. Put together with the data in Table 26, this implies a long-term trend towards increased juice/concentrate production in California. Again, most of this may ultimately be destined for wine production, but there is a rising gallonage available for diversion into cash market sales to unfermented product uses. This has had a significant impact on New York grape growers and their co-ops, and will continue to do so.

Table 26. California Production of Grape Concentrate and Juice, 1974-78

Year	Grape Concentrate	Grape Juice	Total Juice Equivalent	Total Grape Equivalent
	1,000 Gallons			Tons
1974	12,727	8,140	59,048	295,240
1975	10,115	11,308	51,768	258,840
1976	10,423	9,997	51,689	258,445
1977	12,162	20,056	68,704	343,520
1978	13,770	25,109	80,189	400,945
1979	N/A	N/A	N/A	N/A
1980	14,652	56,785	115,393	576,965
Percent Change				
1974-80	+15%	+598%	+95%	+95%

N/A = Not Available

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There has been a substantial shifting in the location of Concord grape production for use in unfermented products during the past twenty-five years. The single most important shift has been Washington's rapidly growing role in this market. Between 1956-60 and 1976-80, total utilization of grapes for unfermented products in the seven major Concord states increased by 108,000 tons and Washington alone contributed nearly 85,000 tons of this increase, or 79 percent of it. (See Table 27). Put another way, Washington supplied 20 percent of the grapes for unfermented product utilization during 1956-60, but steadily increased this to 40 percent of a much larger market in 1976-80. During this 25 year timespan when Washington tripled its unfermented product utilization (209% increase), New York increased its unfermented utilization by only 14 percent. As a result, New York's share of the seven state total eroded from 37 percent in 1956-60 to 29 percent in 1976-80. New York's actual tonnages and market shares peaked in the 1960's and have never returned to comparable levels on a sustained basis. Ohio and Michigan have actually decreased their production for this market to a modest extent, while Arkansas/Missouri have stayed about level. Pennsylvania has increased its utilization substantially, enough to maintain nearly the same share of the market. It is clear from these figures that if the market for unfermented grape products has been oversupplied in recent years, most of the cause would have to be attributed to Washington and very little could be attributed to New York. The past twenty-five years have seen a substantial shift from a market dominated by New York and the other Great Lakes States to the current structure where Washington has become the single largest producer for this market.

Table 27. Unfermented Grape Product Utilization by State, 1956-1980

	New York	Pennsylvania	Ohio	Michigan	Great Lakes	Arkansas/ Missouri	Washington	Total
	Tons of Grapes							
1956-60	75,124	25,041	10,551	42,543	153,259	6,622	40,412	200,293
1961-65	91,030	33,828	12,221	43,879	180,958	5,844	49,434	236,236
1966-70	91,548	32,922	8,813	32,274	165,557	7,068	61,655	234,280
1971-75	83,040	39,743	10,760	42,128	175,671	7,301	75,860	258,832
1976-80	85,850	40,004	9,310	41,139	176,303	7,357	124,980	308,640
1980	100,750	44,500	9,800	45,949	200,999	6,492	139,800	347,291
Percent Change								
1956-60 to 1976-80	+14%	+60%	-12%	- 3%	+15%	+11%	+209%	+54%
1966-70 to 1976-80	- 6%	+22%	+ 6%	+27%	+ 6%	+ 4%	+103%	+32%
	Percentage of Total Unfermented Utilization							
1956-60	37.5%	12.5%	5.3%	21.2%	76.5%	3.3%	20.2%	100.0%
1961-65	38.5	14.3	5.2	18.6	76.6	2.5	20.9	100.0
1966-70	39.1	14.0	3.8	13.8	70.7	3.0	26.3	100.0
1971-75	32.1	15.3	4.2	16.3	67.9	2.8	29.3	100.0
1976-80	27.8	13.0	3.0	13.3	57.1	2.4	40.5	100.0
1980	29.0	12.8	2.8	13.2	57.9	1.9	40.2	100.0
Change in Share (Number of Percentage Points)								
1956-60 to 1976-80	- 9.7	+ 0.5	- 2.3	- 7.9	-19.4	- 0.9	+20.3	-
1966-70 to 1976-80	-11.3	- 1.0	- 0.8	- 0.5	-13.6	- 0.6	+14.3	-

Source: "Noncitrus Fruits and Nuts - Annual Summary", Statistical Reporting Service, U.S. Department of Agriculture, various years. Some estimates by J. Putnam II.

Production of Orange Juice

Because orange juice so completely dominates the American fruit juice market, the trend in its production is very important to grape juice, especially so for the pricing of frozen grape concentrate. The annual pack of both frozen orange concentrate and chilled orange juice from Florida has trended sharply upward during the past sixteen years. (See Table 28). Comparing the four pack years at the end of the sixties (1965-66 to 1968-69) to the most recent four years:

- Florida's pack of frozen orange concentrate has increased by 87 percent and the supply of it (pack + carryover inventory + imports) has more than doubled (+120%). These compare to an eleven percent increase in U.S. population during the same period.

- During the same timespan, the pack of chilled orange juice increased by 126 percent and the supply increased by 123 percent.

- Both the annual pack and supply of canned orange juice increased modestly over the last sixteen years.

While this rapidly expanding production and supply of orange juice is one of great significance to the grape juice industry, the rapidly growing role of imports of frozen orange concentrate, almost entirely from Brazil, is also important. Florida's orange crop is vulnerable to periodic devastation from winter freezes as occurred in the 1967-68, 1976-77, and 1980-81 crop years. Since Florida produces most of this country's frozen orange concentrate within a relatively concentrated geographic area, this country's orange juice supply has traditionally been subject to periodic reduction which brought about price increases for orange juice products. This, of course, was good for grape growers and juice processors as it made grape juice more price-competitive. Brazilian imports of frozen concentrate have functioned as a relief valve in short crop-years during the late 1970's and thus modified the impact of Florida freezes. While imports contributed 1.9 percent of the U.S. supply of frozen orange concentrate in the four pack years of 1965-66 to 1968-69, this rose to 16.2 percent in the most recent four pack years. Imports contributed a record 23 percent of the U.S. supply of frozen orange concentrate last year. Most important to the grape industry, however, is the fact that the supply of frozen orange concentrate has been much more stable in the last five years than it had been previously because of Brazilian imports.

Inventories of Fruit Juice

No publicly available data exists which quantifies total inventories of unfermented grape juice in this country. Only the New York Crop Reporting Service collects monthly data on stocks of single-strength juice and concentrate. This data, converted to a single-strength basis, is presented in Figure 11. The solid line in Figure 11 shows the reported levels of grape juice which fluctuate widely on a seasonal basis as would be expected. The dashed line shows stocks on a seasonally adjusted basis, thus enabling an easier observation of the overall (nonseasonal) trends in New York grape juice stocks between 1973 and 1981. The gradual buildup of stocks through much of the 1973-81 period, interupted only by the short crop of 1977, is quite obvious from Figure 11. Stocks in the 1979-81 period clearly stand out as being higher

Table 28. Annual Pack and Season Supply of Florida and Imported Orange Juice Products

	Frozen Concentrate			Chilled Juice		Canned Juice	
	Pack	Imports	Supply*	Pack	Supply*	Pack	Supply*
	Million Pounds Single Strength Equivalent						
1965-66	2,002	23	2,594	668	693	336	373
1966-67	3,440	10	3,785	870	937	427	455
1967-68	2,185	97	2,991	855	958	291	354
1968-69	2,709	110	3,155	822	926	337	368
1969-70	3,260	39	3,753	939	1,049	332	391
1970-71	3,268	222	4,184	978	1,104	320	359
1971-72	3,503	305	4,398	1,018	1,146	324	363
1972-73	4,596	107	5,426	1,093	1,267	405	458
1973-74	4,484	120	5,841	1,177	1,337	322	408
1974-75	4,651	175	6,102	1,344	1,487	318	396
1975-76	4,862	450	6,636	1,521	1,667	315	375
1976-77	4,125	576	6,102	1,555	1,707	319	375
1977-78	4,207	1,024	5,891	1,609	1,747	345	407
1978-79	4,517	1,132	6,274	1,794	1,930	391	453
1979-80	6,036	506	7,518	2,042	2,179	411	488
1980-81	4,556	1,787	7,838	1,825	1,971	383	457
1965-66 to 1968-69	2,584	60	3,131	804	879	348	387
1969-70 to 1972-73	3,657	168	4,440	1,007	1,142	345	393
1973-74 to 1976-77	4,531	330	6,170	1,399	1,550	319	388
1977-78 to 1980-81	4,829	1,112	6,880	1,818	1,957	382	451

*Includes carryover inventory from previous season.

Source: "Fruit Situation", Economic Research Service, U.S. Department of Agriculture, various issues.

FIGURE 11.
NEW YORK STATE INVENTORIES OF GRAPE JUICE, 1973-81

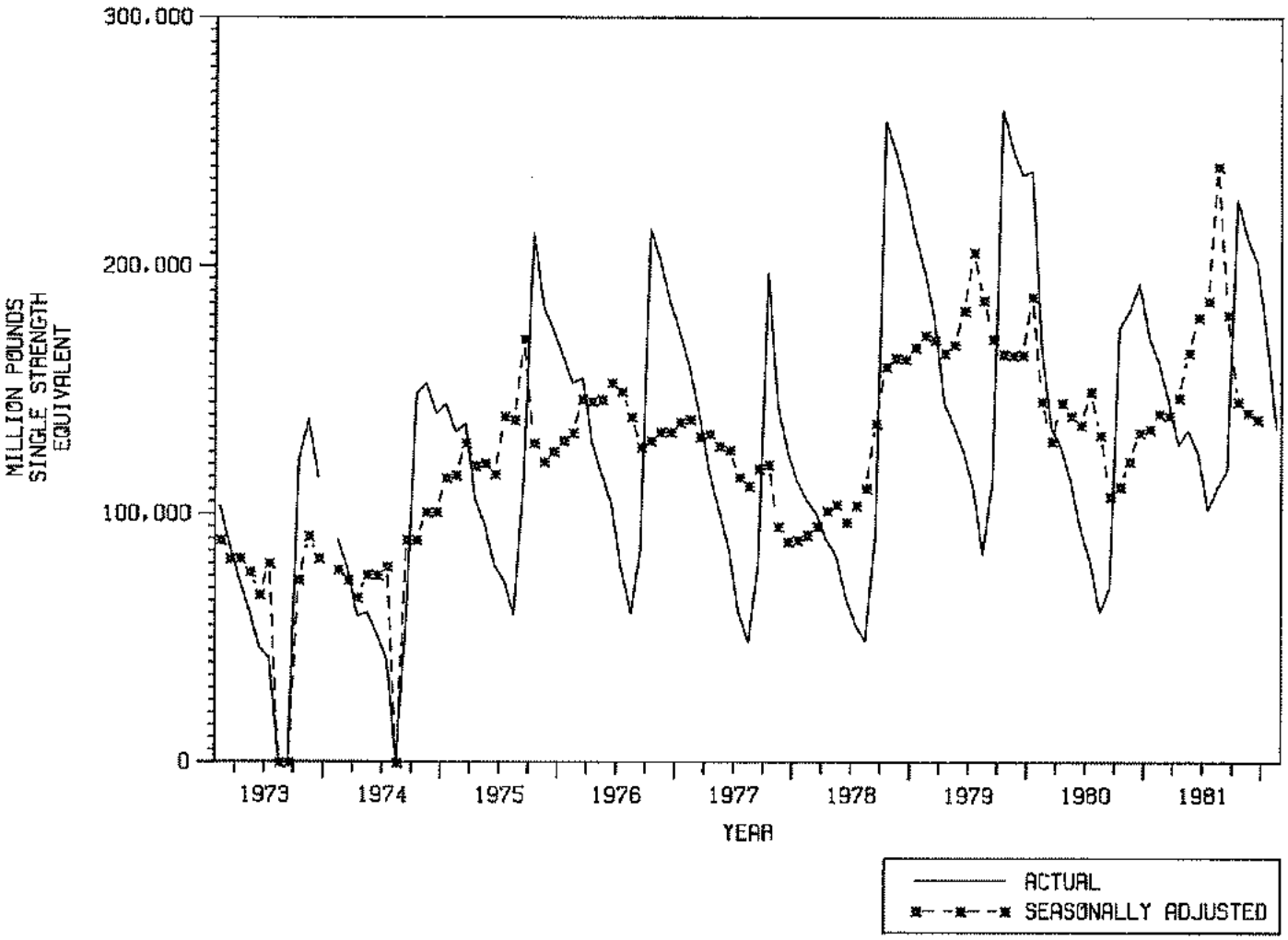


FIGURE 12.
INVENTORIES OF FLORIDA ORANGE JUICE. 1965-80

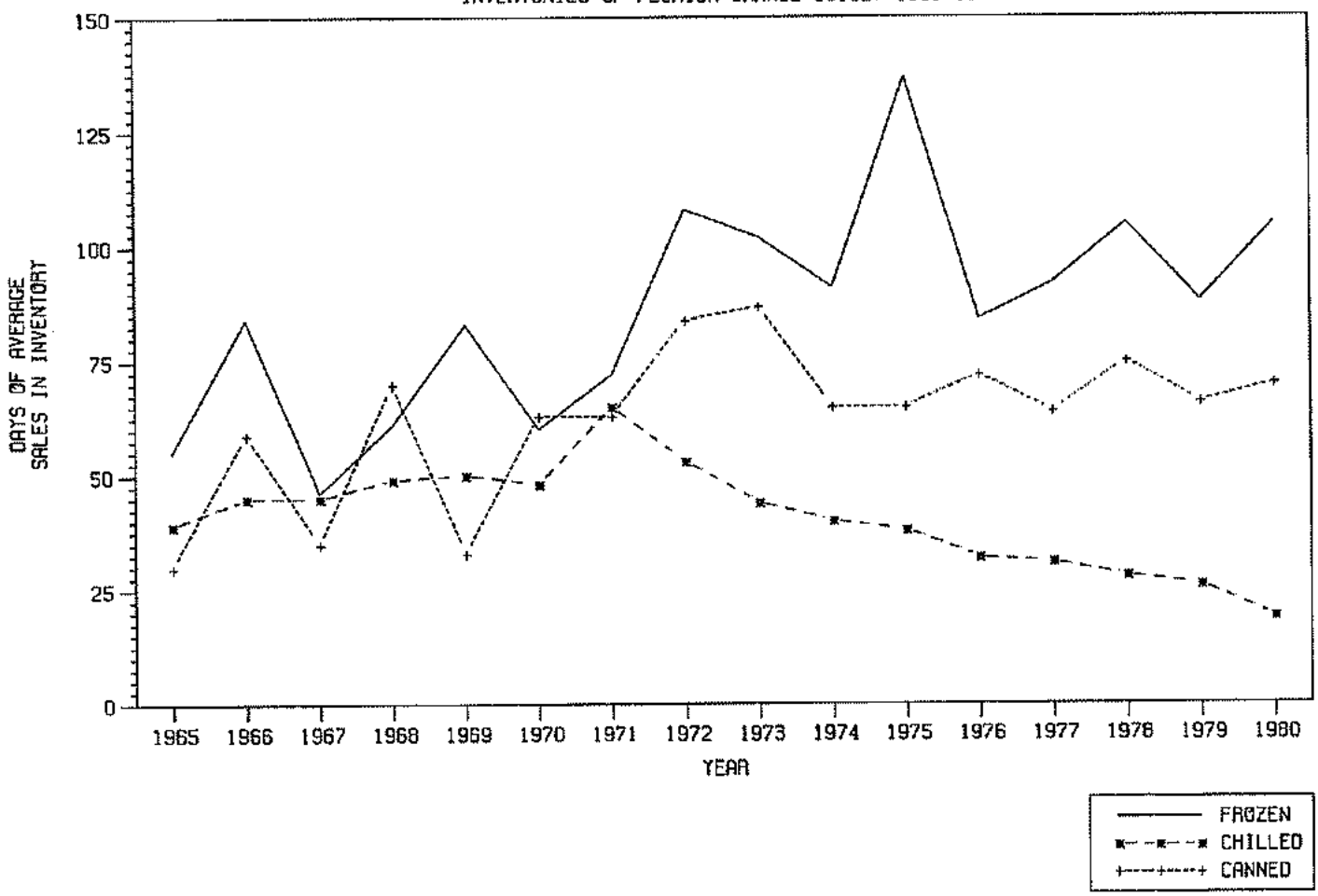
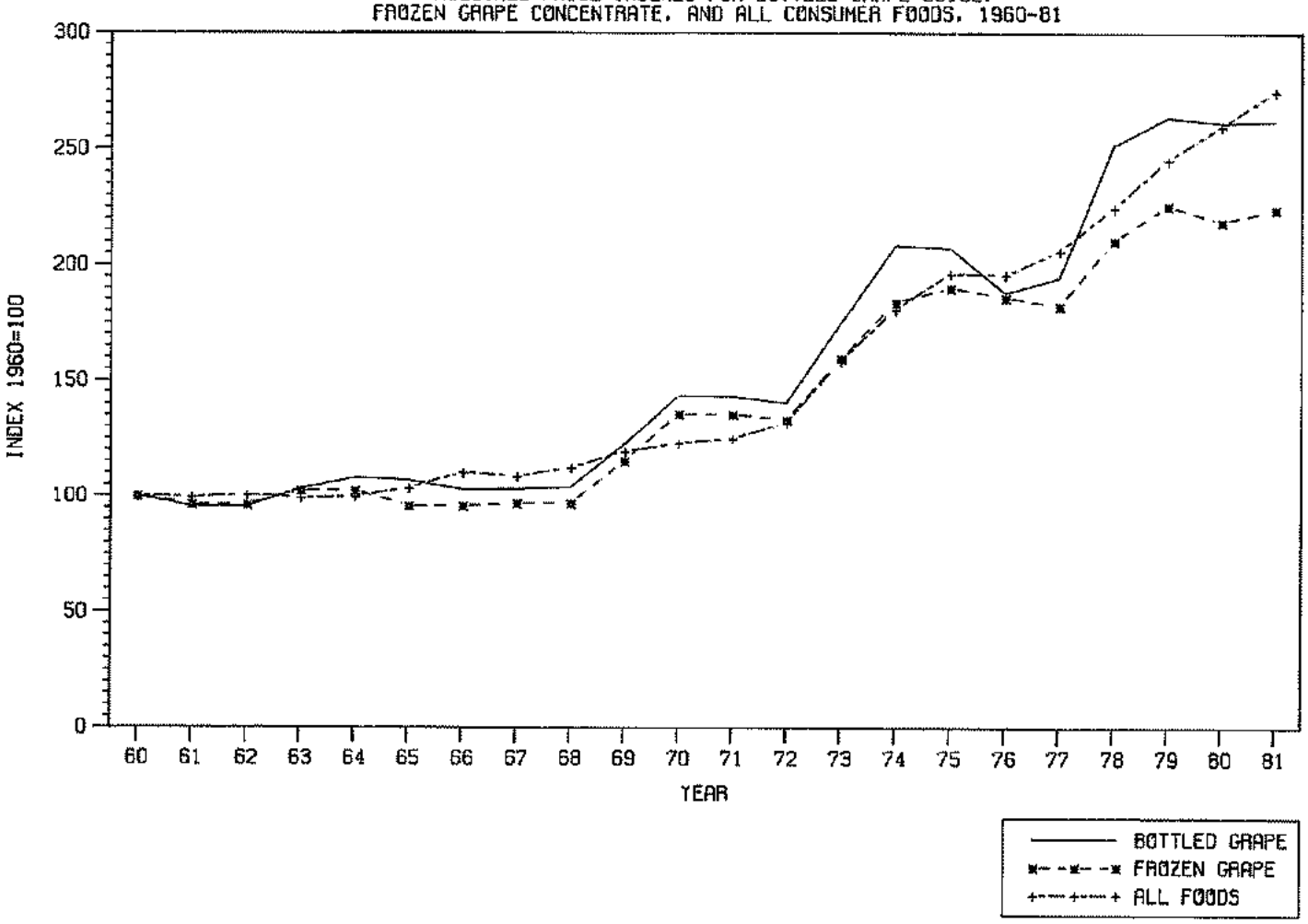


FIGURE 13.
WHOLESALE PRICE INDEXES FOR BOTTLED GRAPE JUICE,
FROZEN GRAPE CONCENTRATE, AND ALL CONSUMER FOODS, 1960-81



than in the earlier years and this is despite the fact that some proprietary processors have cut back the size of their unfermented grape product operations in New York State during the past several years. Average month-end stocks in 1981 were 70 percent above the level of 1973. While the data for the other major unfermented juice producing states is not available, it is this analyst's judgement that total U.S. stocks of grape juice have reached record levels in the 1979-81 period, similar to the pattern shown for New York State in Figure 11.

As would be expected, the level of orange juice inventories has grown along with the pack in order to support higher sales of these products. Figure 12 shows the relative level of inventories remaining at the end of each season based on average daily sales for the three orange juice products. Frozen orange concentrate inventories have been more volatile than those of chilled and canned products. They have also grown more rapidly than product sales -- they averaged 66 days of sales in the 1965-66 to 1969-70 period and 95 days of sales during the most recent five years. These higher levels are again reflective of the new role that imports have played in supplying this market as well as two periods of oversupply in this industry. Not surprisingly, higher inventory levels have a tendency to restrain orange juice prices and, in turn, grape juice prices.

Fruit Juice Prices

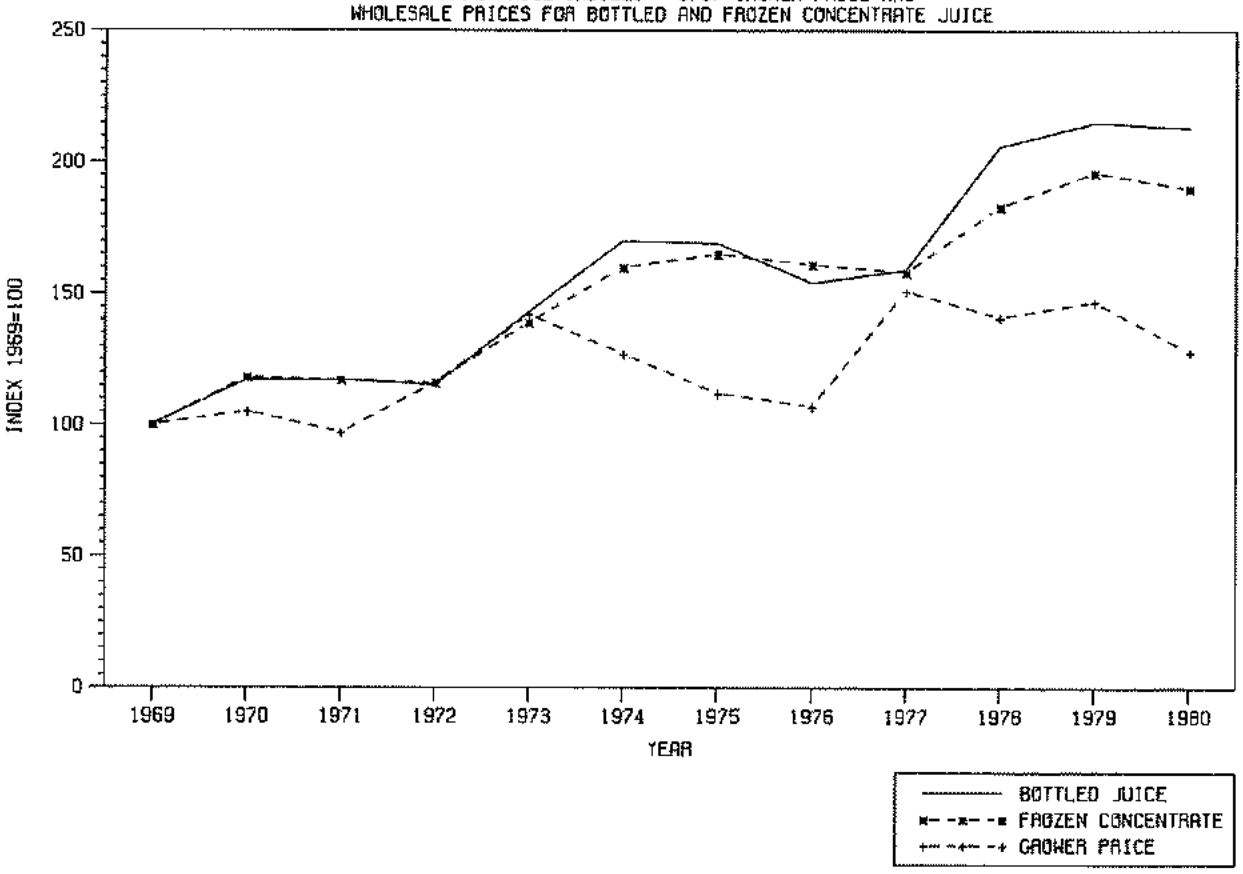
Like almost everything else, the prices of both frozen grape concentrate and bottled/canned grape juice have tended to increase with general inflation. Figure 13 illustrates that bottled grape juice closely tracked food prices until the late 1960's, then surged ahead until 1975 when food prices caught up again. Frozen grape concentrate prices tracked food prices closely until 1975, but has actually increased substantially slower since then. It is very significant that both products had price increases well above general food price levels between 1969 and 1976, the period of crop induced shortages and lower volumes of product marketed.

The national trend in prices paid for juice grapes is shown in Figure 14A, while the relative change in grower prices is compared to the relative change in juice prices in Figure 14B. Throughout the 1969-1980 period, the prices of both frozen concentrate and bottled grape juice have escalated more rapidly than the prices to growers. This implies that the share of the final product price going to the grower has been diminishing. This may reflect rapidly rising costs for glass, sugar, packaging, labor, fuel, and other goods and services used in processing. It cannot be proven from this analysis that proprietary processors have expanded their profit margin at the expense of growers, nor can this be ruled out either. Such data is not available to this analyst.

Throughout this section, I have stressed the crucial importance of orange juice as the price leader for the grape industry and its impact on the economic destiny of those growers who supply grapes for juice. Before looking at the actual price relationships between grape and orange juices, a basic understanding of orange juice price fundamentals is necessary. The following analysis of orange juice prices will be kept relatively superficial for the sake of time and space. As is true for juice grapes, there is considerable fluctuation in the price of processing oranges from year to year, based on the size of the crop and the level of inventory carried over from the previous

FIGURE 14A.
AVERAGE U.S. GROWER PRICE FOR JUICE GRAPES, 1969-80

FIGURE 14B.
GRAPE PRICE INDICES - U.S. GROWER PRICE AND WHOLESALE PRICES FOR BOTTLED AND FROZEN CONCENTRATE JUICE



year. Fortunately for the Florida orange industry, consumer demand for orange juice has been growing throughout the past two decades. Because of this, fluctuations in supply have been much more important to pricing than have changes on the consumer end. Also, it has meant that the orange industry could continually expand its sales without depressing the price of its product.

Figure 15B illustrates that orange prices to the grower have kept up with frozen concentrate and canned orange prices over the long-run, although there have been periods where this was not true in the short run because of supply imbalances. Between 1973 and 1977, product prices grew more rapidly than did grower prices due to large crops, growing imports, and higher inventories. This has reversed since then with grower prices outstripping those for the frozen orange concentrate products until 1980. Based on this record, it can be concluded that Florida orange growers have been successful in maintaining their share of the consumer dollar paid for orange juice products. Of course, this means that they have had a much better chance of keeping up with inflation of production costs than have grape juice growers.

In order to better understand some of the basic factors behind orange juice pricing, it is helpful to group the 1970's experience as follows:

	Frozen Orange Concentrate (FCOJ) Average Percent Change from Previous Crop Year			
	Average Daily Supply	Inventories at End of Year	Price to Florida Growers-Valencias	Wholesale Price Index-FCOJ
1972-73, 1975-76, & 1979-80	+17.2%	+39.2%	- 6.9%	- 1.6%
1971-72, 1973-74, 1974-75, & 1978-79	+ 5.9%	+ 4.4%	+ 5.6%	+ 5.9%
1976-77, 1977-78, & 1980-81	- 2.3%	- 5.6%	+36.1%	+28.3%

These have been deliberately grouped in terms of what happened to the wholesale price of frozen concentrate (FCOJ) during them:

- 1973, 1976, 1980. FCOJ prices either decreased or remained the same, averaging a 1.6 percent decline for the year. These years were characterized by very large increases in the average daily supply of FCOJ available, and by sharp buildups in the level of carryover inventories.

- 1972, 1974, 1975, 1979. Wholesale FCOJ prices increased by less than ten percent, for an average of a 5.9 percent increase for each of these four years. Average daily supply increased by an average of 5.9 percent and carryover inventory levels increased similarly by 4.4 percent.

- 1977, 1978, 1980. These years were dominated by freezes which decreased average daily supplies by 2.3 percent. Wholesale concentrate prices skyrocketed by 28.3 percent. Carryover inventories were drawn down by an average of 5.6 percent. Had there not been a large influx of Brazilian imports, the supply disruption would have been larger and the price increases would conceivably have been even greater.

FIGURE 15A.
AVERAGE PRICE FOR FLORIDA VALENCIA ORANGES
DELIVERED TO PROCESSING PLANT, 1965-81

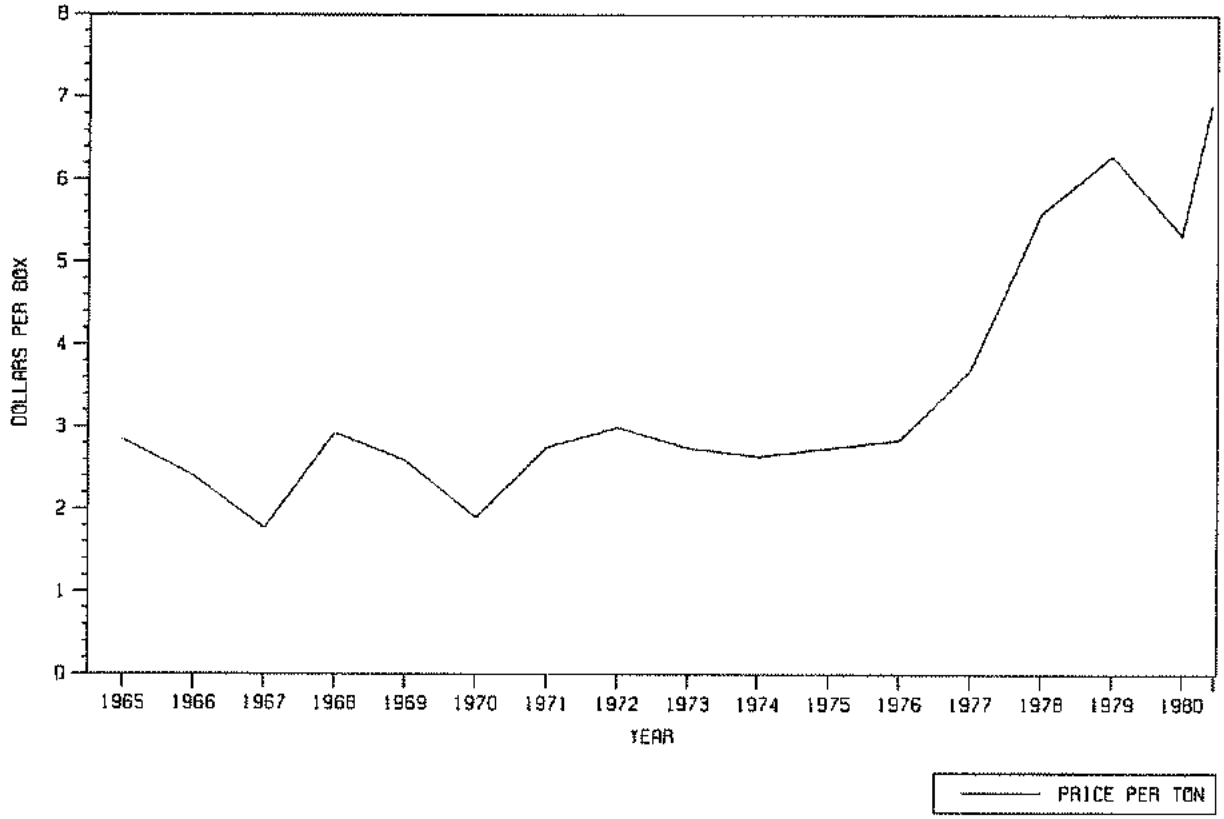
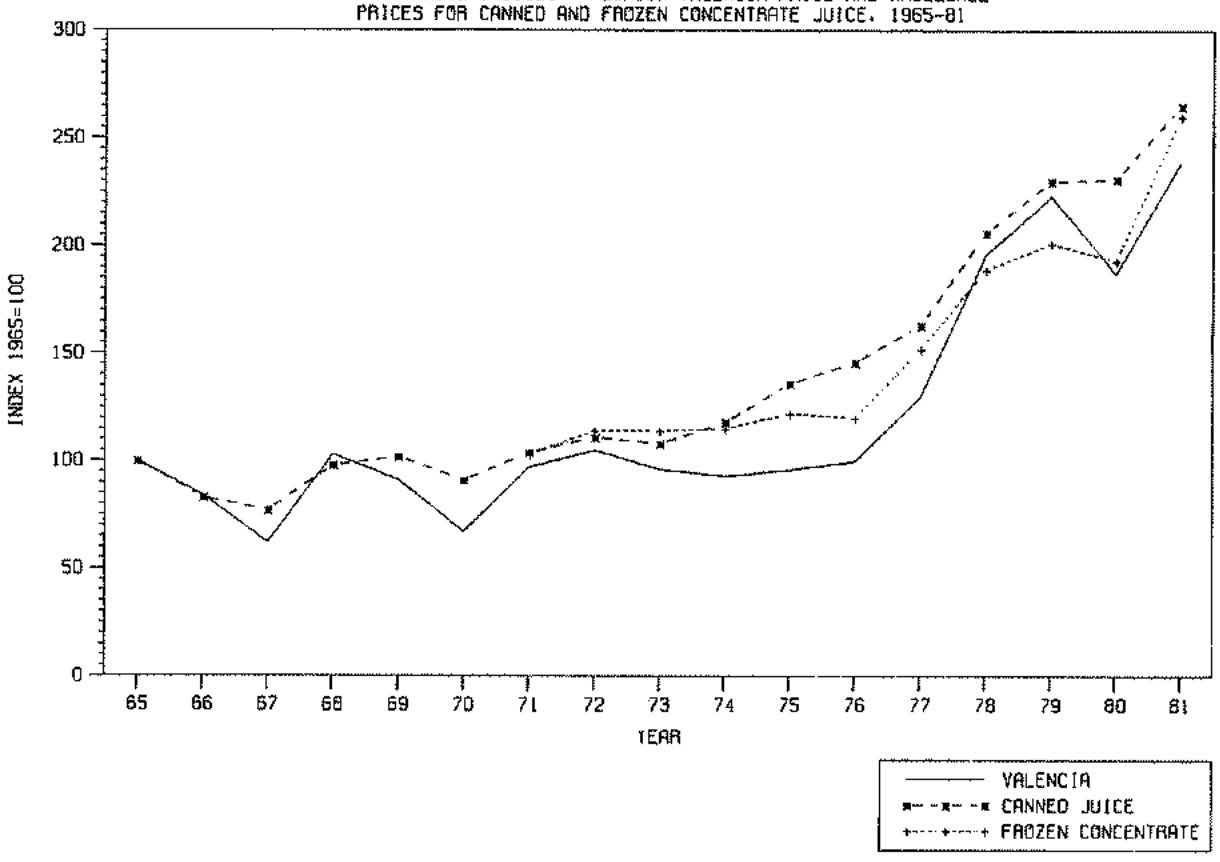


FIGURE 15B.
ORANGE PRICE INDICES - FLORIDA VALENCIA PRICE AND WHOLESALE
PRICES FOR CANNED AND FROZEN CONCENTRATE JUICE, 1965-81



Because of the growing demand for frozen orange juice, processors and marketers have been able to adjust prices upward in seven of the last ten years in order to cover inflating costs, including the price paid to the grower. They have been able to do so even in the four years when the average supply increased modestly. Nonetheless, the size of frozen orange concentrate price increases is very clearly related to the relative amount of change in FCOJ that is available. Those factors that tend to restrain orange juice supply, such as periodic freezes, create the most favorable climate for grape juice marketing. Factors such as large crops, overplanting, and imports which build large supplies of orange juice provide an unfavorable competitive climate for grape juice marketing.

During the past ten years, the wholesale price of private label frozen orange concentrate has averaged about half a cent less than frozen grape concentrate for an eight ounce serving. This has ranged from as much as a 2.2 cent margin for grape over orange to a one cent margin for orange over grape. While there is obviously a margin within which grape and orange juices operate relative to each other, Figure 16 shows how closely these prices move over the long run. This is true of canned/bottled juice also, except in this case, bottled grape juice usually averages about double the cost per serving of canned orange juice. Nonetheless, the prices of both canned products tend to move closely upward with each other. These relationships are the final and ultimate evidence as to the crucial nature of the orange juice market to the New York grape grower. Brazilian FCOJ imports may ultimately have as much impact on New York grape grower prices as rising grape production in Washington State.

While this report will not examine the issue of what level of price is required by Florida orange growers in order to profitably supply their crop, it is interesting to note the relationship between their price and that received by grape growers for juice grapes (U.S. average) shown in Figure 17. During the first half of the 1970's, grape prices increased faster than did orange prices to growers. Since 1977, orange prices have rapidly escalated while grape prices have fallen off. Comparing the 1969-70 period to the 1980-81 period, grower prices have increased by 159 percent for oranges and 34 percent for grapes. Clearly, the competitive position of grape juice growers has deteriorated relative to their Florida competitors growing oranges.

Grape Jelly/Jam Prices

While they account for only a minority of Concord grape utilization and are therefore not a major determinant of grower prices, it is interesting to pay passing notice to the price trends for these products. While no separate series of price data is available for grape jam, it is reasonable to state that its price closely follows that of grape jelly. The price of grape jelly has generally risen at the same rate as overall food price inflation. The only episode of volatility occurred in 1973-1975 when rapidly escalating sugar ingredient costs caused rapid increases in the price of grape jelly. The decline of sugar prices subsequent to those years allowed jelly processors to hold the line on cost increases for several years afterwards, however.

Grape jelly prices have increased at about the same rate, and at the same times, as the entire "jams, jellies, and preserves" category during most of the past twenty years. This would suggest that grape jelly has had no significant price advantage or disadvantage relative to its competitors. Its rising market share in the jelly category can be attributed, instead, to diminishing availability of other jelly types and strong consumer preference for the grape flavor and some of the grape jelly brands.

FIGURE 16.
WHOLESALE COST PER EIGHT OUNCE SERVING
OF ORANGE AND GRAPE JUICE, 1960-81

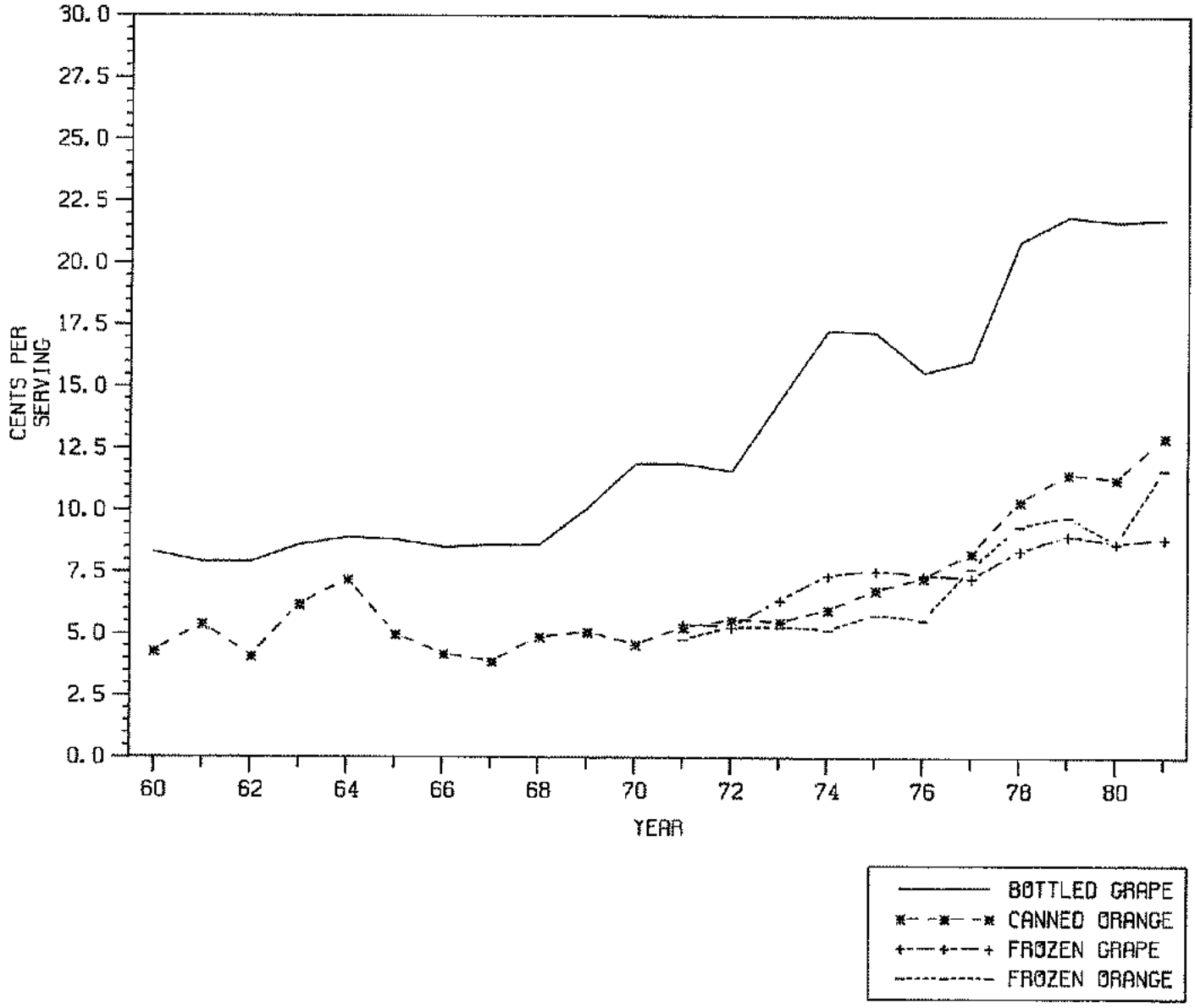


FIGURE 17A.
GROWER RETURNS PER TON - U.S. AVERAGE FOR JUICE GRAPES
AND FLORIDA AVERAGE FOR VALENCIA ORANGES, 1969-81

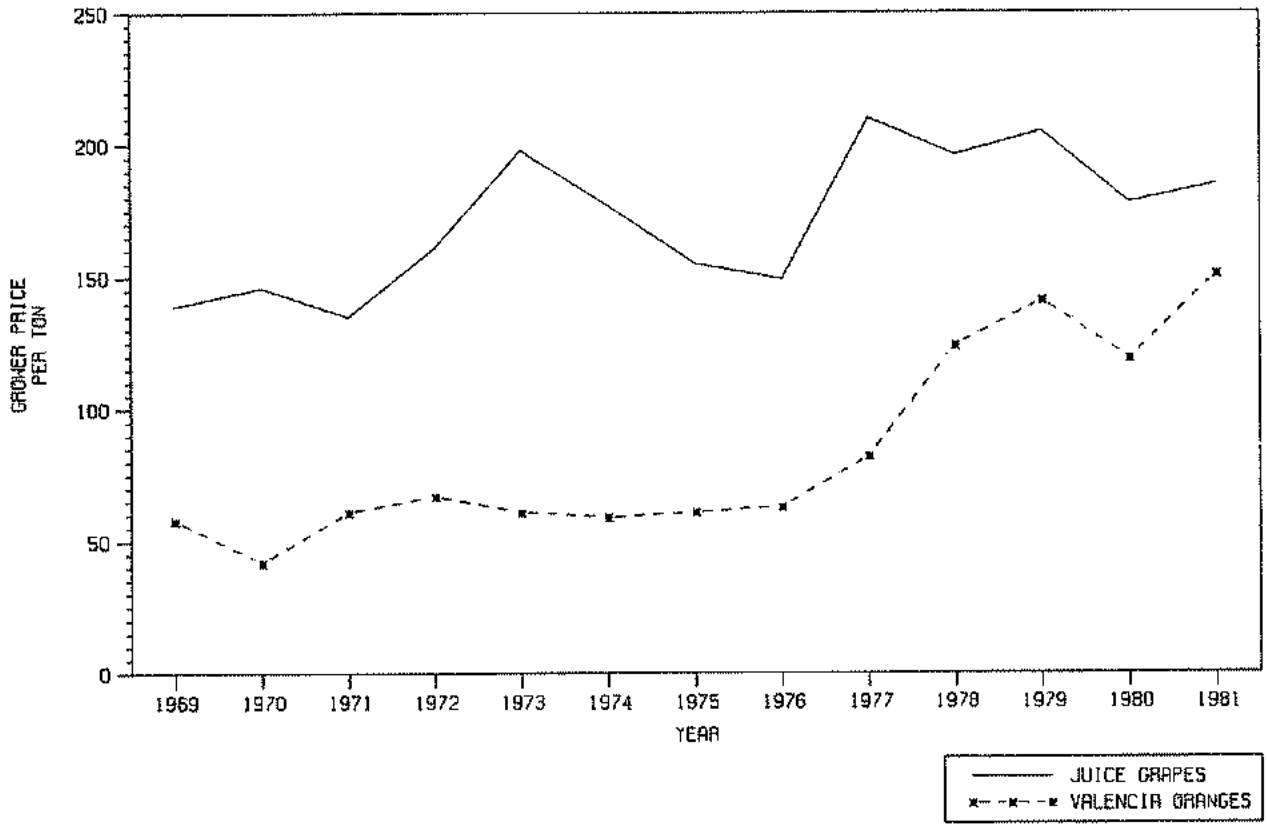


FIGURE 17B.
INDEX OF GROWER RETURNS - U.S. AVERAGE FOR JUICE GRAPES
AND FLORIDA AVERAGE FOR VALENCIA ORANGES, 1969-81

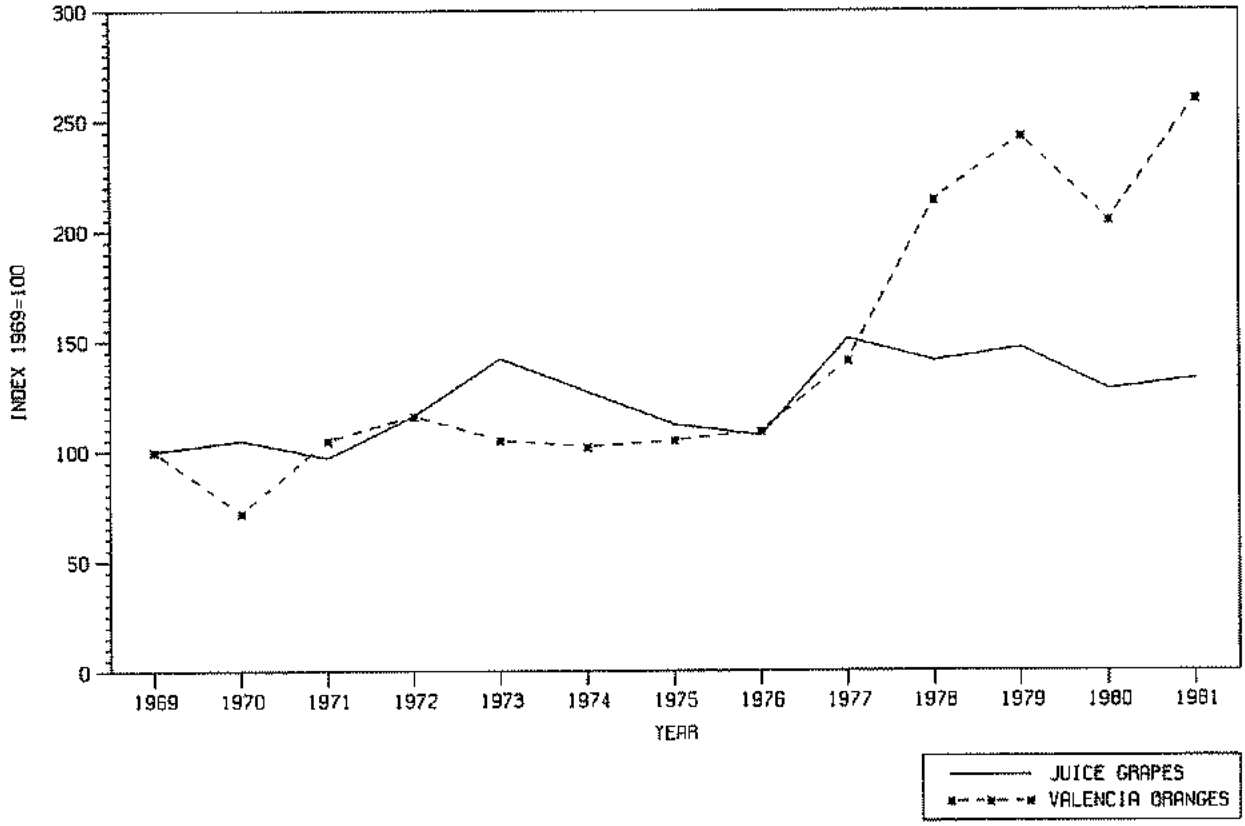


FIGURE 18A.
WHOLESALE PRICE INDICES FOR GRAPE JELLY:
ALL JAMS AND JELLIES: AND ALL FOODS, 1960-81

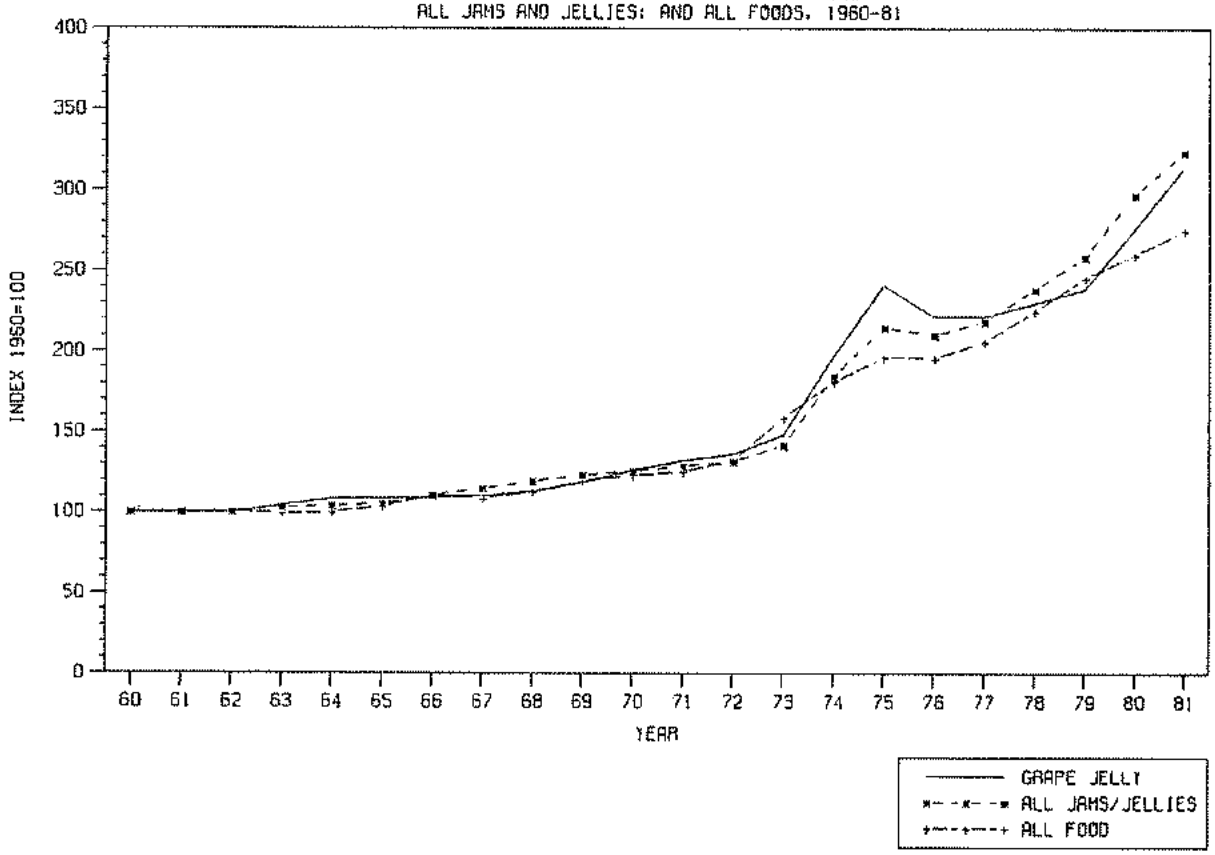
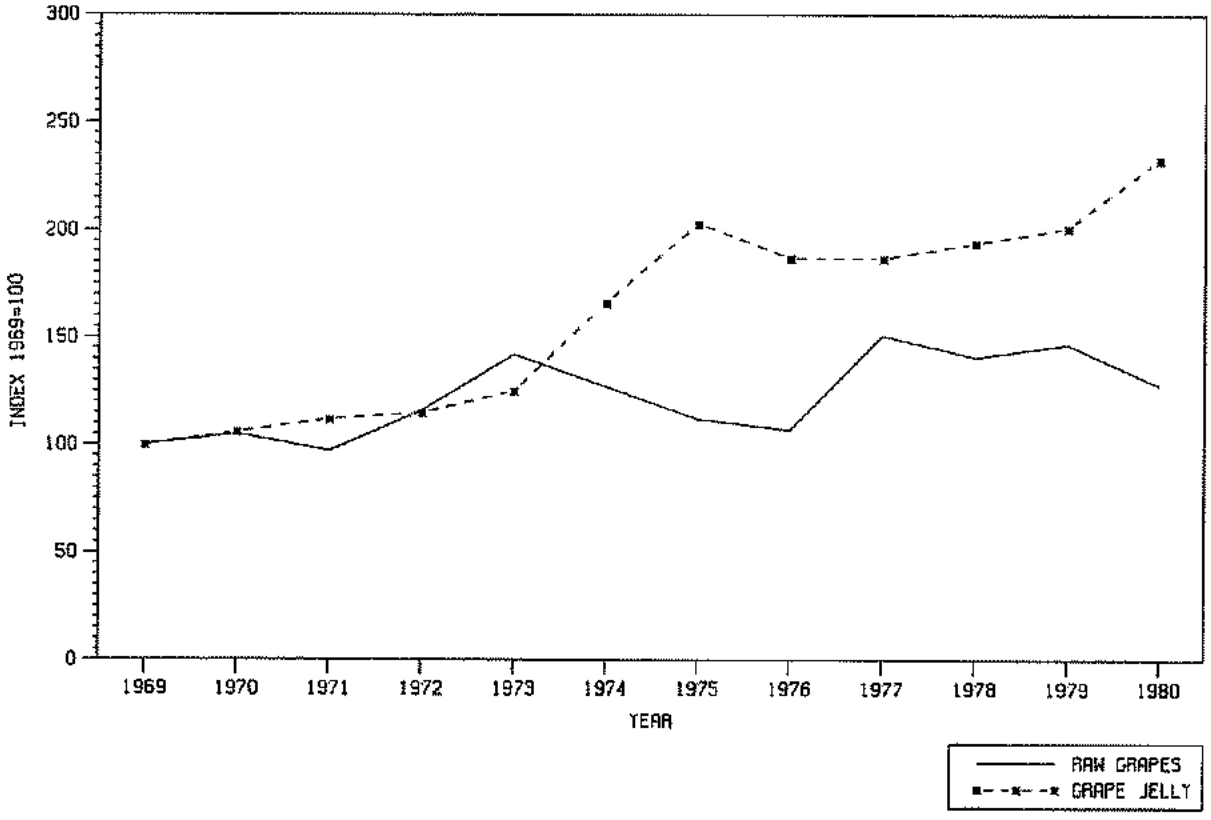
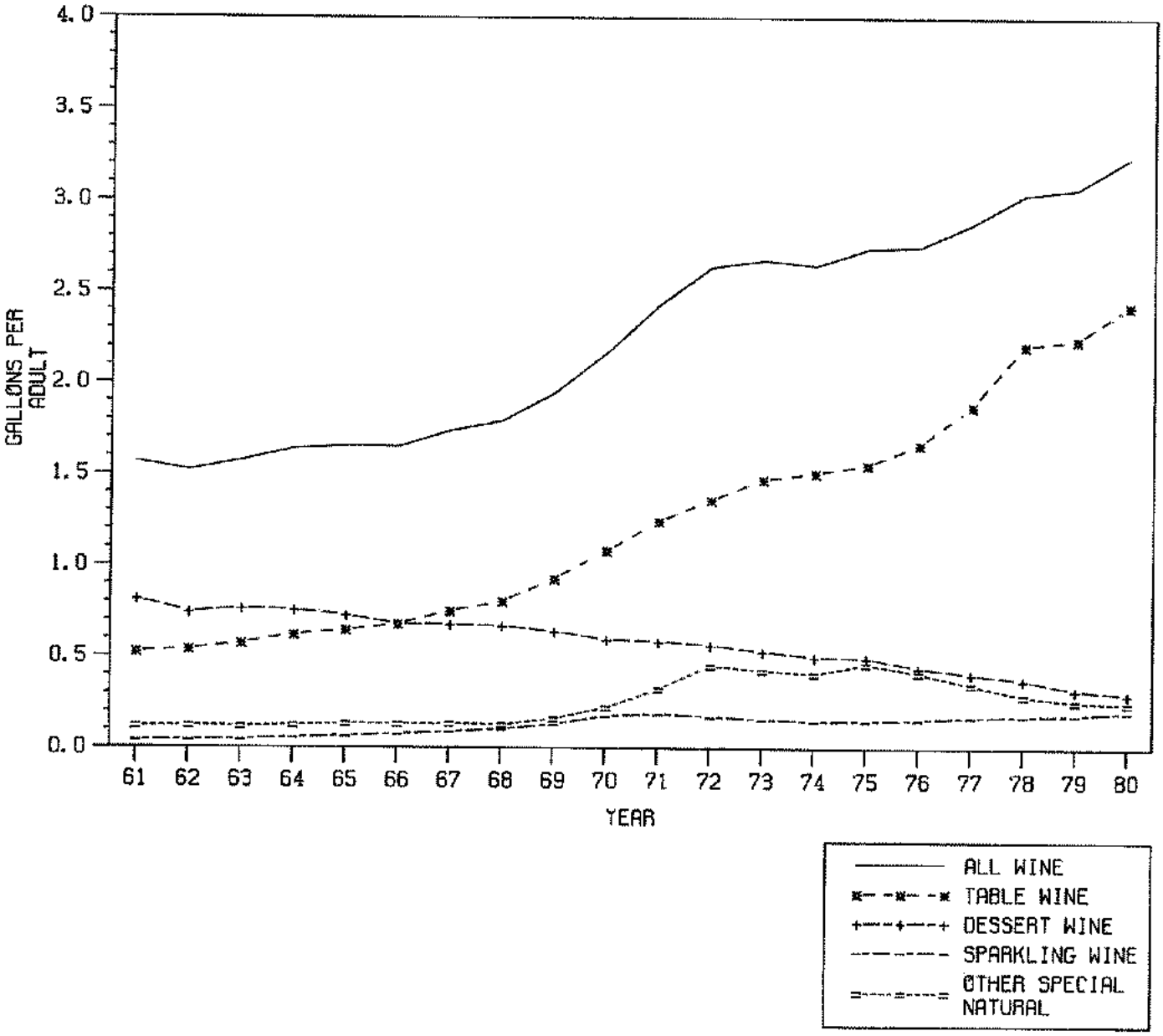


FIGURE 18B.
PRICE INDICES FOR RAW GRAPES
AND GRAPE JELLY, 1969-80



During the past decade, grape jelly prices have increased at nearly five times the rate that grower prices for grape juice have increased. (See Figure 18B). This is a result of depressed grower grape prices that have generally prevailed in the 1975-80 period. Grape growers' share of the wholesale dollar received for grape jelly has declined substantially.

FIGURE 19A.
WINE CONSUMPTION PER AMERICAN ADULT, 1961-80



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WINE - LONG-TERM TRENDS

Wine Consumption

Wines have not only found a rapidly growing place in Americans' liquid consumption, but there have also been marked shifts in Americans' preferences for various wine types which have had a marked impact on the New York State wine industry.

To begin, average wine consumption per person in the United States (adults and children) has grown from a level of .93 gallons in 1950 and .91 gallons in 1960, to 1.31 gallons in 1970 and 2.11 gallons in 1980. While the average annual rate of growth for the entire 1950-1980 period is a respectable 2.8 percent, it is more significant to note the acceleration of growth - from no growth in the 1950's, to 3.7 percent annually in the 1960's, to 4.9 percent annually during the past ten years. Such sustained levels of growth in product use have opened major market opportunities for wine marketers and producers.

Figures 19A and 19B show wine consumption per American adult (21 years and over) for the wine "boom" period of the past twenty years. Total wine consumption has increased nearly every year in the past twenty. Equally important is what has occurred in terms of the mix of wines consumed. Table wine use has grown much faster than the total wine category, while the other major category, dessert wines, has undergone dramatic declines. This is extremely important to New York State as it has traditionally been stronger in the dessert wine category than in table wines, especially in the premium-priced categories.

Sparkling wines have traditionally been one of New York's strong areas and this category has posted strong growth, although with a mixed history. Sparkling wine consumption boomed in the late 1960's and early 1970's when "Cold Duck" was a fad. As the fad wore off, average use fell until 1975. Since then, more traditional champagnes, especially the whites, have shared in the wine "boom" experienced by table wines and average 1980 use of sparkling wines reached a new high. "Other Special Natural" wines experienced a boom in the early 1970's as the "pop" wine fads of that period boosted consumption of apple wines, fruit flavored wines, and others in this category. Use has declined sharply since 1975, although it now shows signs of stabilizing. Vermouth, the smallest wine category, depends on the distilled spirits market and because of prevailing trends there, has undergone a steady erosion since 1968.

To reiterate these dramatic shifts, it is helpful to look at the share of wine consumed in the various categories:

	Table	Dessert	Sparkling	Vermouth	Other Special Natural	Total
1961	33%	52%	3%	4%	8%	100%
1970	50	28	8	4	10	100
1980	75	9	6	2	8	100

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This is a complete restructuring of the American wine market in less than twenty years and has created both opportunities and problems of adjustment for all involved in it. With table wine use per person growing at 8.4 percent annually during this period and dessert wine use declining at 5.1 percent annually, it was inevitable that there would be both winners and losers in this market.

Figure 19B shows one other important aspect of the changing American wine market, which is the complete switch in emphasis away from higher alcohol wines (primarily the dessert category) to lower alcohol ones (primarily the table category.) Wines with over 14 percent alcohol accounted for 64 percent of the average adult's wine use in 1961, 36 percent in 1970, and 13 percent in 1980. This trend to moderation in wine's alcohol content reflects trends in total American alcoholic beverage consumption; it accounts for much of the growth that wine has enjoyed; and it has brought about a whole new set of rules of the wine marketing game.

Table 29. Changes in American Preferences for Table Wine by Color, 1960-80

	Red	White	Rose	Total
	Percent of Total American Table Wine Use			
1960	74%	17%	9%	100%
1970	50	24	26	100
1975	44	32	24	100
1976	40	35	25	100
1977	37	39	23	100
1978	33	45	22	100
1979	29	50	21	100
1980	27	54	20	100

Source: "The IMPACT American Wine Market Review and Forecast." Copyright© by M. Shanken Communications, Inc., 1981. Used by permission.

Within the table wine segment, which has now become the dominant part of the total wine picture, there has been a dramatic shift in color preferences which has had a major impact on New York State. While it is often said that the swing towards white wine is a development of the mid-and-late 1970's and might therefore be a passing fad, there can be little doubt that the trend goes back to at least 1960. There are several reasons for this misconception:

1. Most wine marketers and industry analysts missed the trend towards white wine until the mid-1970's.

FIGURE 19B.
WINE CONSUMPTION PER AMERICAN ADULT
BY ALCOHOL CONTENT, 1961-80

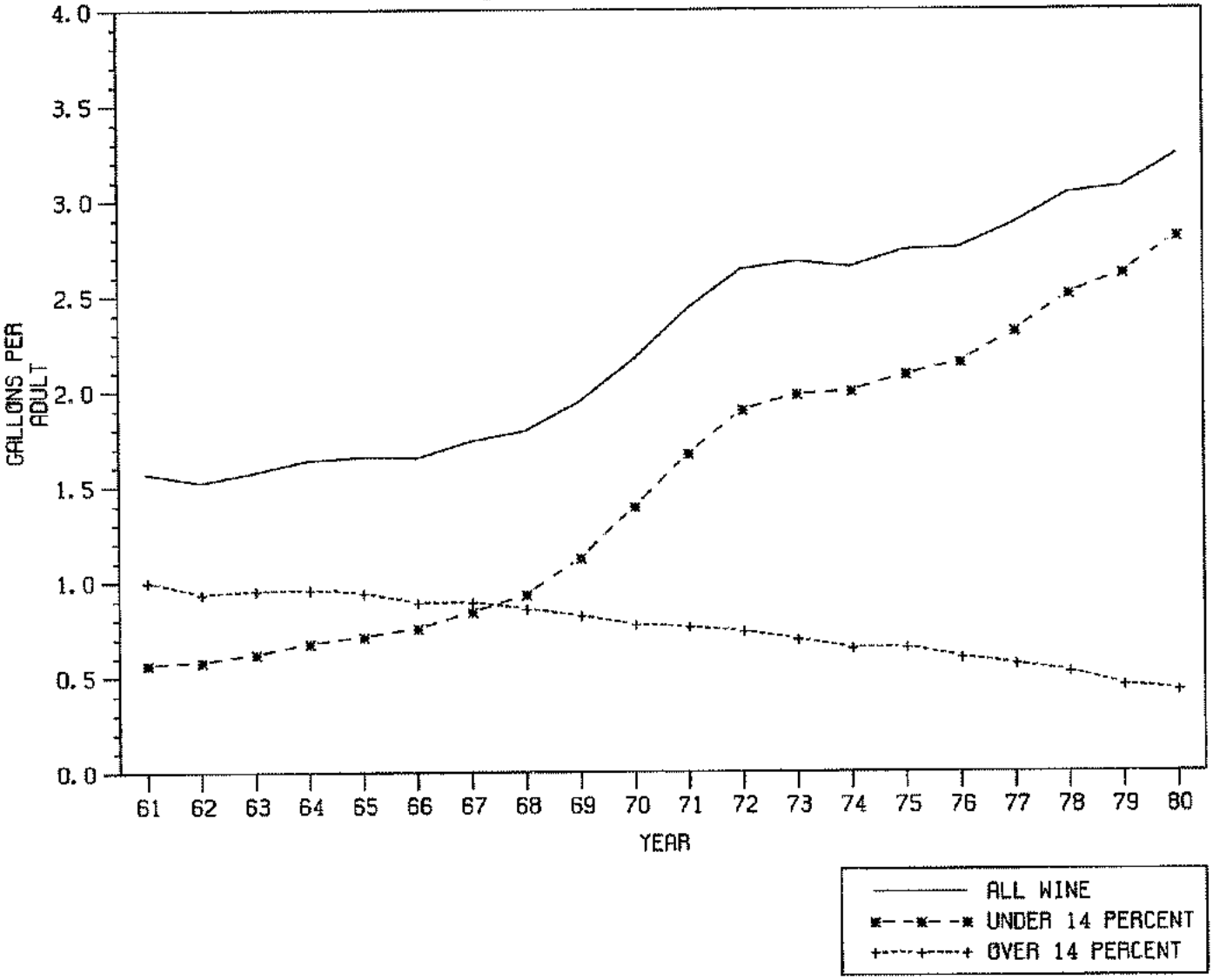

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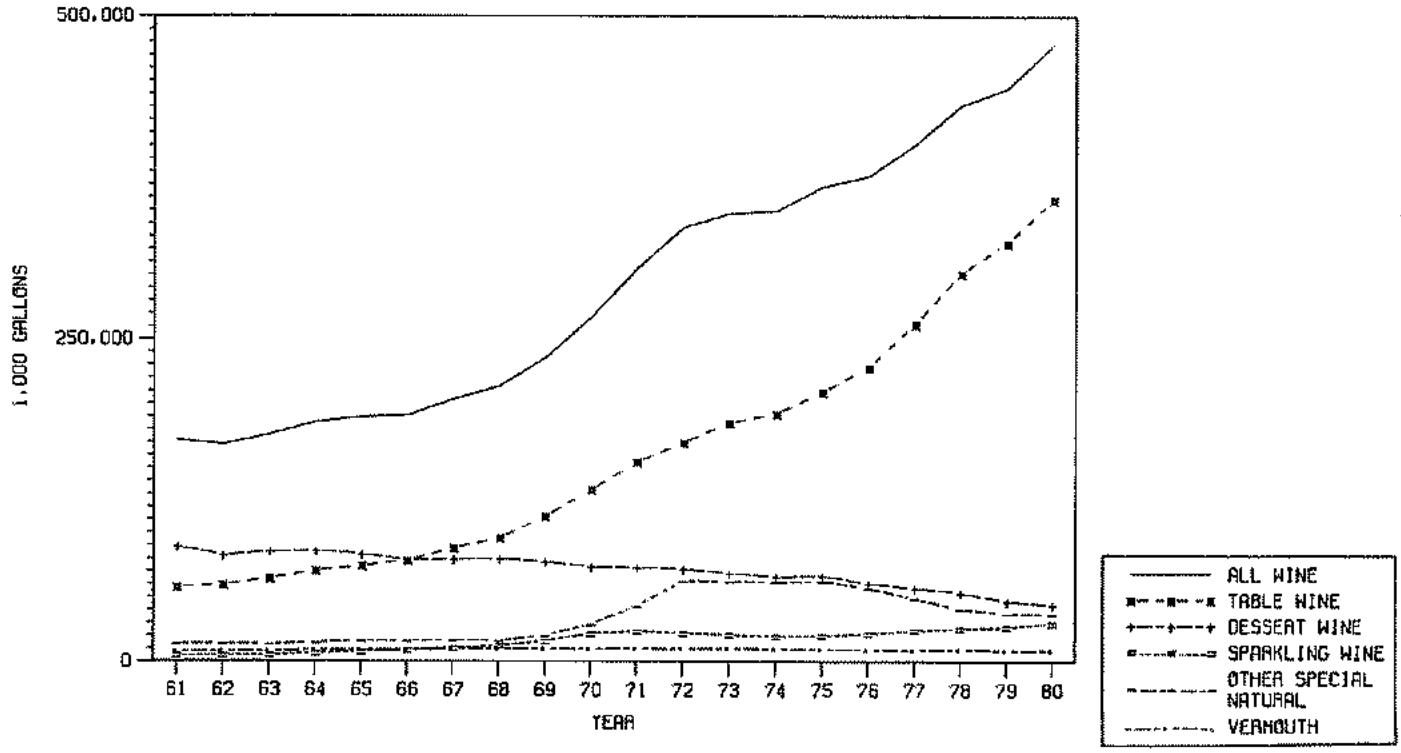
FIGURE 20.
WINE ENTERING COMMERCIAL DISTRIBUTION CHANNELS IN THE U.S., 1961-80



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2. White wine started from a relatively low base, 17 percent of the market in 1960, and thus its rapid growth was not especially conspicuous in light of total market growth. White wine gained 7 percentage points of share during the 1960's, 8 percentage points in the next five years (70-75), and 22 percentage points in the last five years (75-80).

3. White wine's relatively small base and share of the market meant that it did not have a dominant impact on the total wine market in the 1960's and early 1970's. This was no longer true after 1975 when white wine's share of table wines became so large that it created serious market dislocations.

The trend to white wines cannot be written off as a mere "fad". It is very important in understanding New York's experience of the last five years.

Total Wine Sales

Not only has wine benefited from rising use per person, but the expanding American population and the even more rapid growth in the number of adults (due to the post-World War II "baby boom" coming of age) has created an ideal climate for market expansion. Based on U.S. government figures, population growth has been:

	1960	1970	1979	Annual Rate of Growth 1960-1979	1970-79
	Million Persons				
Total Population	180.7	204.9	220.6	1.1%	0.7%
Population, 21 Years or Over	108.9	124.0	145.1	1.5%	1.6%
% of Total Population	60.3%	60.5%	65.8%	-	-

Both of these population trends have had a very favorable impact on wine sales - further compounding the growth of table wines where use per person was growing and offsetting some of the loss in the dessert wine category.

Figure 20 and Table 30 present data regarding the growth of the United States wine market during the past twenty years. It is these figures that are most crucial to the wine grape grower because they translate back to the wineries' grape tonnage needs, to the types of grapes needed, and to the comparative advantage among states and foreign sources. Again, tempered by population growth, these figures reinforce the conclusions previously drawn from the per capita consumption data:

1) Table wine sales have grown at a ten percent annual rate for twenty years and, to date, there are no signs of a slowing. In fact, the rate of growth for the past five years is significantly higher than for the previous fifteen years.

2) Population growth has not been large enough to offset declines in dessert wine consumption, and as a result, its total sales have declined by 3.6 percent annually. The deterioration of this market continues to accelerate and the rate of decline has been 7.9 percent annually for the last five years (1976-80).

Table 30. Commercially Produced Wine Entering U.S. Distribution Channels, 1961-1980

	Table	Dessert	Vermouth	Other Sparkling	Special Natural	Total*
			Million Gallons			
1961	57.4	89.0	7.6	4.6	13.7	172.3
1965	74.1	83.2	9.2	7.7	16.0	190.2
1970	133.6	73.6	10.2	22.1	29.1	268.6
1975	209.0	66.8	9.6	20.4	62.3	368.1
1980	358.5	44.1	8.8	29.9	36.6	477.9
Compound Annual Rate of Change						
1961-80	+ 10.1%	- 3.6%	+ 0.8%	+ 10.3%	+ 5.3%	+ 5.5%
1970-80	+ 10.4	- 5.0	- 1.5	+ 3.1	+ 2.3	+ 6.0
1975-80	+ 11.4	- 7.9	- 1.6	+ 8.0	- 10.1	+ 5.4

. . . . .

*Totals may show slight discrepancies due to statistical problems in earlier years.

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Table 31. Growth in Total Table Wine Sales by Color Category

Compound Annual Rate of Growth in Gallon Sales	Red	White	Rose
1960-80	+4.5%	+16.5%	+14.1%
1970-80	+3.9	+19.9	+ 7.8
1975-80	+1.3	+24.3	+ 7.4

Source: "The IMPACT American Wine Market Review and Forecast." Copyright © M. Shanken Communications, Inc., 1981. Used by permission.

3) Sparkling wine sales, an important market for New York State, have had a mixed record due to the surge created by the "Cold Duck" fad and the subsequent dropoff in sales. Despite this experience, sparkling wines have actually performed equally to table wines over the entire twenty year span. For the past five years, this category has recovered to a healthy eight percent annual rate of growth.

When all categories of wine are considered together, gallon sales have increased at a compound annual rate of 5.5 percent for twenty years. This rate of growth has changed very little in the past decade.

Population increases have also amplified white wine table sales and somewhat dampened the impact of declining red wine use per person, as illustrated by the figures in Table 31.

While red table wine sales have increased at a healthy annual rate of 4.5 percent between 1960-1980, nearly all of this growth occurred prior to 1975. Sales of white table wines, on the other hand, not only posted an impressive 16.5 percent annual rate of increase over the past twenty years, but have been increasing total sales at accelerating rates during the 1970's. The wide disparity in sales growth for the three different color categories has had a dramatic impact on wineries' demand for the various grape varieties, both in terms of the quantity purchased and the price paid for them.

Total Wine Production

Wine is produced in most states of the United States, but California accounted for 90 percent of this country's gross wine production in 1979, with New York producing six percent of it and Illinois producing one percent (see Table 32). All the remaining states accounted for slightly over two percent of the nation's total wine production. Nationally, wine production has grown at 4.7 percent annually over the past two decades, but there has been a marked deceleration in the rate of growth during the late 1970's - some of this may be a balancing of overproduction after the early 1970's. Because it accounts for so much of the American wine production, California has followed a similar pattern, although it has not slowed its production gains nearly as much in the late 1970's.

New York's total wine production has followed a much different pattern. For the entire 1959-79 period, it grew at 4.5 percent annually, about the same rate as for total U.S. wine production. However, nearly all of this growth occurred during the 1960's and early 1970's. New York's share of total U.S. wine production grew during this period - from 6.5 percent in 1959 to 9.7 percent in 1974. The 1974-79 period has seen New York production decrease, mostly in 1979, and a fall in its share of national production to 6.2 percent. The causes of this decline will be more thoroughly discussed later, but New York's heavy reliance on the declining dessert wine category, the stagnant red table wine market, and the stagnant Concord wine market are all major causes of the decline.

Illinois and all other states have shared in very little of the national industry's growth, and as a result their shares of national production have eroded to relatively insignificant levels. Despite all the media attention to new vineyards and wineries outside of California, total wine production in other states continues to lose ground to California.

FIGURE 21A.
TOTAL WINE SHIPMENTS
TO THE U.S. MARKET, 1961-80

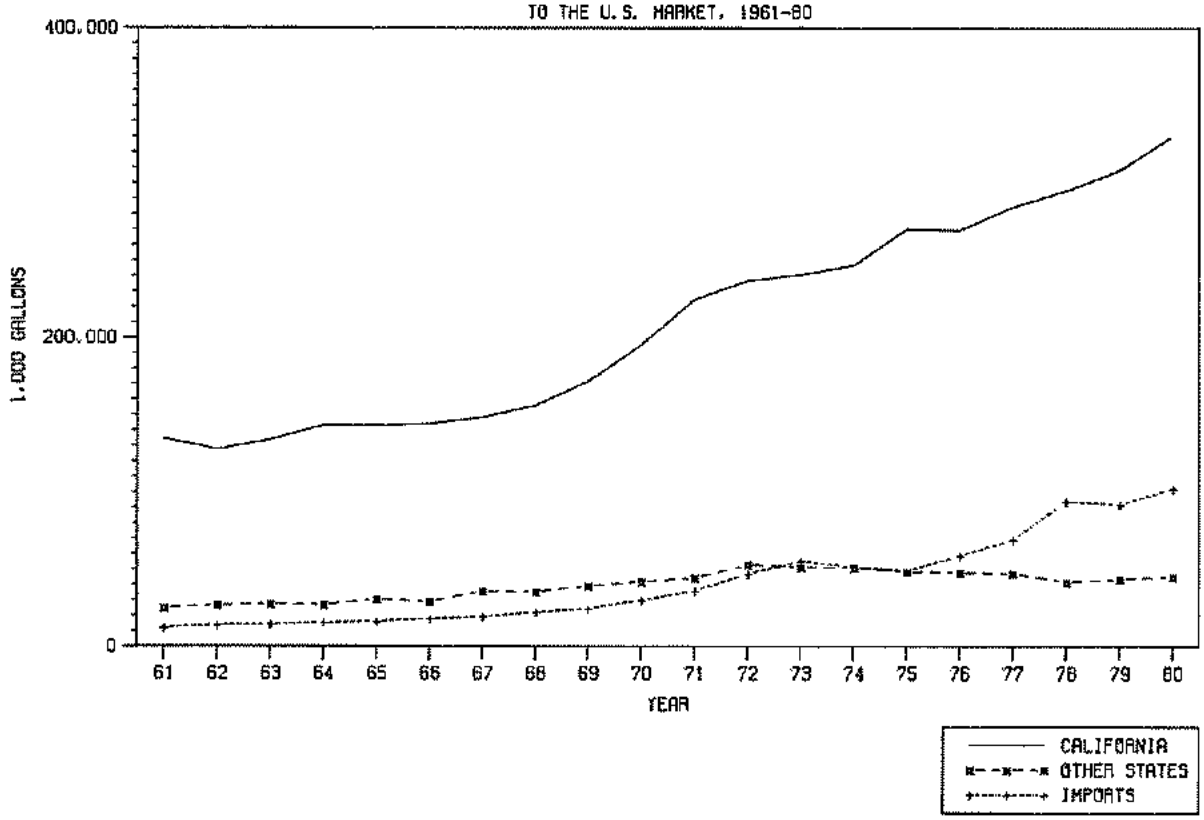
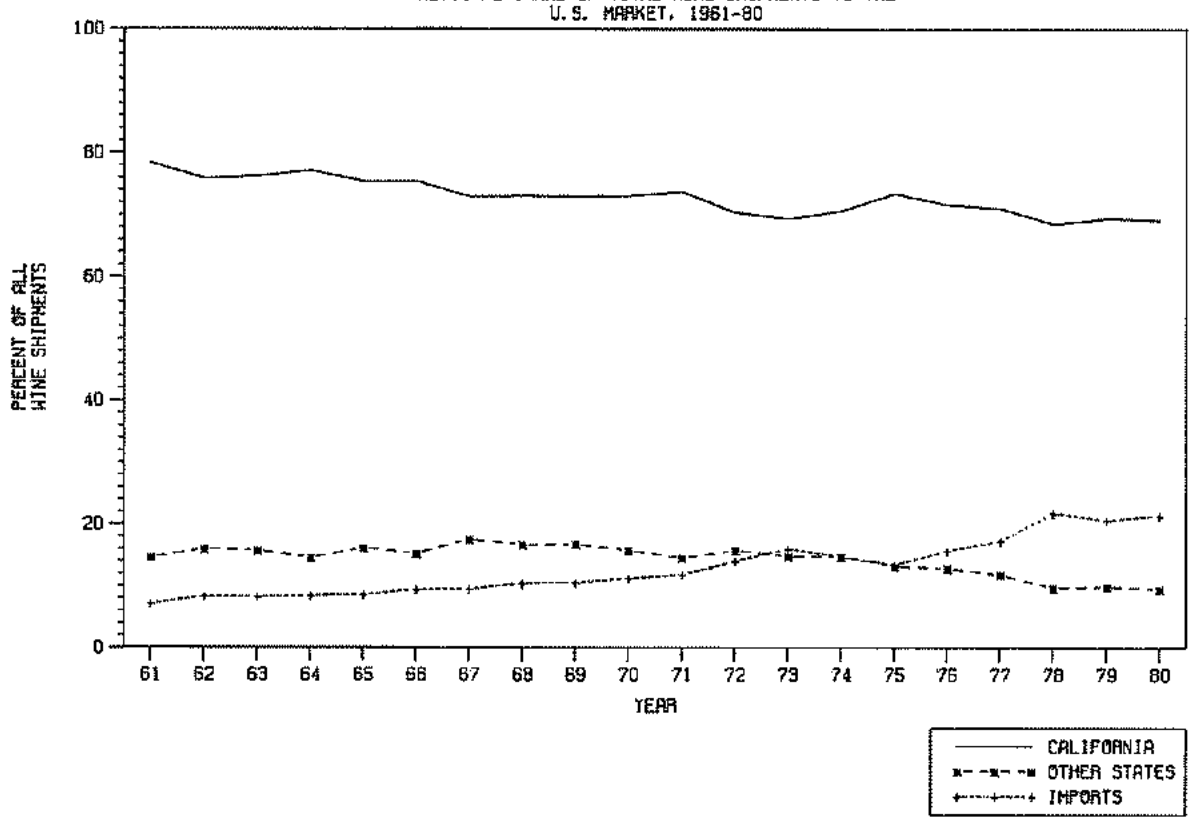


FIGURE 21B.
REGIONAL SHARE OF TOTAL WINE SHIPMENTS TO THE
U.S. MARKET, 1961-80



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Total Wine Sales by Category and Origin

Historical data regarding the volume of wine entering commercial distribution channels is available only for California, "Other States", the entire United States, and imports. However, the data for "Other States" is generally quite reflective of trends for New York State alone since New York comprises a relatively large share of gross wine production by "Other States":

New York's Percentage of "Other States" Wine Shipments

1959	1964	1969	1974	1979
43%	47%	52%	68%	64%

Shipments data is presented in Figure 21 and Table 33. The growth of California shipments at a 4.8 percent annual rate and imports at an 11.9 percent annual rate during the last twenty years are readily apparent. During the same period, "Other States" shipments grew at 3.2 percent annually, but almost all of this was in the 1960's and, unlike the other two areas, there has been a 1.4 percent annual rate of decline in shipments for the most recent five years. These differing rates of growth have had an important impact on market share - imports have tripled to 21 percent share in twenty years, California has lost nine percentage points in arriving at a 69 percent share in 1980, and "Other States" have lost 5 percentage points (a third of what they held in 1959) to arrive at a 10 percent market share in 1980. While imports have obviously reduced California's market share, their relative impact has been much more severe for "Other States", e.g. New York.

Table wines have been the focus of the "wine boom" in the United States during the past fifteen years. For the most recent twenty years, table wine shipments have averaged a 10.1 percent annual increase; this rate has actually further increased during the 1970's. California has nearly matched this overall rate of growth, but imports and "Other States" have had much different growth rates for the 1961-80 period:

1) California grew at a 10.3 percent annual rate enabling it to attain a small increase in its share of the American market for table wines.

2) Imported table wine sales increased much faster than did those of California or the U.S. market - at a 14.6 percent annual rate. As a result, imports' share of the market more than doubled from 11.7 percent in 1961 to 24.7 percent in 1980.

3) "Other States" table wine sales increased at a 3.0 percent annual rate, much slower than their major competitors. Table wine market share for "Other States" fell from 21.3 percent in 1961 to 6.0 percent in 1980.

As Americans' wine-drinking preferences have switched away from the predominantly higher-alcohol dessert wines in recent decades, total shipments of this type have significantly declined. The overall category has declined at an average annual rate of 3.6 percent during the past two decades because of a six percent annual decline for California shipments, which has not been offset by an average annual increases of 3.4 percent for "Other States" and five percent for imports. The net impact of these changes has been a dramatic rise in "Other States" market share of the category, from 10 percent in 1961 to 38 percent in 1980. It must be remembered that this has been an expanding share

Table 32. Gross Wine Production by State, 1959-79

	California	New York	Illinois	All Other	United States Except California	United States
Gross Gallons Produced (Million)						
1959	143.6	10.9	3.2	11.1	25.2	168.8
1964	161.8	14.6	3.4	13.2	31.2	193.0
1969	229.3	21.4	5.4	14.0	40.8	270.1
1974	322.2	36.7	7.4	9.9	54.0	376.2
1975	329.4	36.7	7.8	10.1	54.6	384.0
1976	330.4	32.9	7.4	8.8	49.1	379.5
1977	369.1	33.8	6.7	8.3	48.8	417.9
1978	373.4	35.8	6.3	11.3	53.4	426.8
1979	383.2	26.2	4.7	9.8	40.7	423.9
Compound Annual Rate of Growth (%)						
1959-79	+ 5.0%	+ 4.5%	+ 1.9%	- 0.6%	+ 2.4%	+ 4.7%
1969-79	+ 5.3	+ 2.0	- 1.4	- 3.5	-	+ 4.6
1974-79	+ 3.5	- 6.5	- 8.7	- 0.2	- 5.5	+ 2.4
Share of Gallons Produced						
1959	85.1%	6.5%	1.9%	6.6%	14.9%	100.0%
1964	83.8	7.6	1.8	6.8	16.2	100.0
1969	84.9	7.9	2.0	5.2	15.1	100.0
1974	85.6	9.7	2.0	2.6	14.4	100.0
1975	85.8	9.6	2.0	2.6	14.2	100.0
1976	87.1	8.7	1.9	2.3	12.9	100.0
1977	88.3	8.1	1.6	2.0	11.7	100.0
1978	87.5	8.4	1.5	2.6	12.5	100.0
1979	90.4	6.2	1.1	2.3	9.6	100.0

Note: Gross wine production includes volume gains from amelioration, sweetening, and addition of wine spirits. It does not include wine used for distillation.

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Table 33. Total Wine Sales by Geographical Origin and Category

	1961	1965	1970	1975	1980	Annual Rate of Change (%) 1961-80	1970-80	1975-80
TABLE WINES			Million Gallons					
California	38.5	52.5	95.2	152.0	248.6	+10.3%	+10.1%	+10.3%
Other States	12.2	12.6	17.5	21.6	21.3	+ 3.0	+ 2.0	- 0.3
U.S.	50.7	65.1	112.7	173.5	269.9	+ 9.2	+ 9.1	+ 9.2
Imports	6.7	9.0	20.8	35.5	88.6	+14.6	+15.6	+20.1
Total	57.4	74.1	133.6	209.0	358.5	+10.1	+10.4	+11.4
Share of Category								
California	67.0%	70.9%	71.2%	72.7%	69.3%	-	-	-
Other States	21.3	17.0	13.1	10.3	6.0	-	-	-
U.S.	88.3	87.9	84.4	83.0	75.3	-	-	-
Imports	11.7	12.1	15.6	17.0	24.7	-	-	-
DESSERT WINES			Million Gallons					
California	79.1	69.4	55.9	45.3	24.6	- 6.0%	- 7.9%	-11.5%
Other States	8.8	12.2	15.4	19.3	16.7	+ 3.4	+ 0.8	- 2.9
U.S.	87.9	81.6	71.3	64.6	41.3	- 3.9	- 5.3	- 8.6
Imports	1.1	1.6	2.3	2.1	2.8	+ 5.0	+ 2.0	+ 5.9
Total	89.0	83.2	73.6	66.7	44.1	- 3.6	- 5.0	- 7.9
Share of Category								
California	88.9%	83.4%	76.0%	67.9%	55.8%	-	-	-
Other States	9.9	14.7	20.9	29.0	37.9	-	-	-
U.S.	98.8	98.1	96.9	96.9	93.7	-	-	-
Imports	1.2	1.9	3.1	3.1	6.3	-	-	-
SPARKLING WINES			Million Gallons					
California	1.9	3.2	14.4	15.0	21.1	+13.5%	+ 3.9%	+ 7.1%
Other States	1.8	3.1	5.9	3.4	4.0	+ 4.3	- 3.8	+ 3.3
U.S.	3.7	6.3	20.3	18.4	25.1	+10.6	+ 2.2	+ 6.4
Imports	1.0	1.4	1.8	1.9	4.8	+ 8.6	+10.3	+20.4
Total	4.7	7.7	22.1	20.3	29.9	+10.2	+ 3.1	+ 8.1
Share of Category								
California	40.4%	41.5%	65.2%	73.9%	70.5%	-	-	-
Other States	38.3	40.3	26.7	16.7	13.4	-	-	-
U.S.	78.7	81.8	91.9	90.6	83.9	-	-	-
Imports	21.3	18.2	8.1	9.4	16.1	-	-	-
ALL WINES			Million Gallons					
California	134.4	142.9	195.3	270.2	330.2	+ 4.8%	+ 5.4%	+ 4.1%
Other States	25.0	30.5	42.0	48.5	45.2	+ 3.2	+ 0.7	- 1.4
U.S.	159.4	173.4	237.3	318.7	375.4	+ 4.6	+ 4.7	+ 3.3
Imports	12.2	16.3	30.0	49.3	102.5	+11.9	+13.1	+15.8
Total	171.6	189.7	267.3	368.0	477.9	+ 5.5	+ 6.0	+ 5.4
Share of Category								
California	78.3%	75.3%	73.1%	73.4%	69.1%	-	-	-
Other States	14.6	16.1	15.7	13.2	9.5	-	-	-
U.S.	92.9	91.4	88.8	86.6	78.6	-	-	-
Imports	7.1	8.6	11.2	13.4	21.4	-	-	-

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of a shrinking market, although "Other States" have also made modest volume increases. During the last five years, dessert wine shipments from "Other States" have also decreased.

Average annual growth of sparkling wine sales during the past twenty years has been 10.2 percent, and California has done well in capturing most of this growth. Imports have also done very well in this category, especially in the last five years. "Other States" have experienced modest growth, but at rates much lower than for California and imports, primarily because of large volume decreases during the decline of the "Cold Duck" fad in the early 1970's. Again, these widely divergent rates of growth have resulted in a radically altered market share structure. "Other States" decreased from 38 percent share in 1961 to 13 percent in 1980, imports shrunk from 21 percent in the same period to 16 percent, and California gained correspondingly to arrive at a 71 percent share in 1980.

All of these changes may be summed up as to what might be termed the "evolving structure of the American wine market". This changing structure and the ability of various wine supply areas to adapt to it have had a major impact upon wine grape growers. Table 34 documents this evolving structure and from it the following observations can be made:

1. The United States. Table wine has attained a dominant position in the wine product mix due to its dramatic sales growth. Once dominant, dessert wines now rank only slightly ahead of other special natural wines and sparkling wines.

2. Other States. What is remarkable about "Other States" (principally New York) is how little their overall wine product mix has changed, despite the revoluntionary change for the country as a whole. While dessert wines were always slightly behind table wines in the "Other States" product mix, these states have been unable to reduce their heavy reliance on the shrinking dessert wine category.

3. California. Not surprisingly because of its high share of the U.S. wine market, California's product mix has basically mirrored the evolving United States' product mix. By 1980, California depended upon the dessert wine market for only seven percent of its wine shipments.

4. Imports. This category started from a small base that was dominated by specialty items such as super-premium table wines and vermouth twenty years ago. Today, having taken advantage of American consumers' move towards table wines, it has both a substantially higher base and a dependence on table wines for 86 percent of its shipments.

The crucial conclusion for all of this is that while both California and foreign sources of wine have created and responded to an evolving wine product mix, "Other States" such as New York have been unable to do so and have thus been put in a position of heavy dependence on the declining dessert wine category.

Table 34. Share of Wine Entering Commercial Distribution Channels by Category

	Table	Dessert	Sparkling	Vermouth	Other Special Natural	Total
U.S.						
1961	32%	55%	2%	3%	8%	100%
1966	39	45	4	3	9	100
1971	48	27	8	2	15	100
1976	57	18	6	2	17	100
1980	72	11	7	1	9	100
Other States						
1961	49%	35%	7%	7%	2%	100%
1966	45	34	13	6	2	100
1971	47	33	13	4	3	100
1976	46	38	8	3	5	100
1980	47	37	9	2	5	100
California						
1961	29%	59%	1%	2%	10%	100%
1966	38	47	3	2	10	100
1971	49	25	7	1	18	100
1976	59	15	6	1	19	100
1980	75	7	6	2	9	100
Imports						
1961	53%	9%	8%	27%	3%	100%
1966	57	9	9	23	2	100
1971	68	7	5	14	6	100
1976	78	5	4	7	6	100
1980	86	3	5	3	3	100

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Imports and Exports - A Closer Look

There have been dramatic changes occurring in this country's foreign wine trade and the trends are quite clear that the U.S. is increasingly involved in an international wine market. To date the competition with foreign suppliers is occurring in our own domestic market, but there is a clear trend towards American wines being exported to other countries where they will compete with those countries' own domestic and other foreign suppliers of wine.

It has already been shown that wine imports have experienced dramatic growth in the American wine market and have increased their share of it in recent years. Table 35 shows the experience of the five leading countries in the U.S. wine market, all of whom have grown, but at sharply different rates. Italy has clearly been the big winner among the imports - it has consistently gained volume over the past twenty years and has made rapid gains in market share since the early 1970's. France, on the other hand, has missed the opportunity. While it increased the volume it ships to America, the increases have been much slower and as a result, France has lost over one-half the market share it once had. Both Spain and Portugal experienced tremendous growth in the early 1970's on the strength of wine fads, but have fallen off since then - Spain with its sangrias and Portugal with its "Mateus" rose. West Germany has been enjoying rapid growth in recent years based on the success of its "Blue Nun" wine riding on the American white wine boom.

Table 35. Trends in U.S. Wine Imports, 1961-80

	1961-65	1966-70	1971-75	1976-80	1979	1980	Percent Change 1961-65 to 1976-80
	1,000 Gallons						
Italy	5,682	7,199	13,293	41,048	48,402	59,545	622%
France	4,690	6,988	10,547	14,000	15,133	13,294	199
Spain	1,100	2,269	8,028	6,987	6,603	7,469	535
Portugal	631	2,517	7,174	6,005	6,059	5,798	852
West Germany	1,259	2,005	5,132	11,406	11,869	11,874	806
All Other	1,119	1,878	3,643	3,929	4,103	4,527	251
Total	14,481	22,856	47,817	83,375	92,169	102,507	476%
	Share of the U.S. Market for Imports						
Italy	39%	31%	28%	49%	53%	58%	+ 10%
France	32	31	22	17	16	13	- 15
Spain	8	10	17	8	7	7	-
Portugal	4	11	15	7	7	6	+ 3
West Germany	9	9	11	14	13	12	+ 5
All Other	8	8	7	5	4	4	- 3
Total	100%	100%	100%	100%	100%	100%	-

Source: Bureau of the Census, U.S. Department of Commerce. Compiled by "Wines and Vines". Copyright © The Hiaring Company, 1981. Used by permission.

One very important factor in foreign trade is the exchange rate of the U.S. dollar relative to the currencies of its trading partners. When the U.S. dollar gains value relative to another currency, the net effect is to encourage exports from that country into the U.S. and discourage U.S. exports to that country. In reverse, when the U.S. dollar loses value relative to another currency the opposite occurs -- exports to the U.S. market are discouraged and exports from the U.S. are encouraged.

During the past fifteen years, the U.S. dollar has generally gained in value relative to Italy's currency, the lira:

	1967-69	1970-72	1973-75	1976-78	1979-81	1981
Lira Per Dollar	625	609	626	853	921	1,131

Not entirely coincidentally, Italian wine imports into the U.S. market have boomed during the last six years when the dollar gained about half as much more value over the lira. In practical terms, this meant that an Italian wine exporter who sold a case of wine in New York City would have received:

	U.S. Price	Value in Lira
1973-75	$10	6260
1979-81	$10	9210
Percent Change	None	+47%

This favorable exchange rate situation for the Italian importer provided a tremendous opportunity to hold prices level in the U.S. market and still recover costs/profits in the native Italian currency.

Turning to exports which are still very small when compared to either U.S. production of wine or imports of foreign wine, there has been a gradual acceleration of growth culminating in an average increase of 45 percent annually over the past five years and a 53 percent increase in 1980. As our largest customer, Canada accounts for most of the growth, but the most dramatic and exciting growth is currently occurring in the northern Common Market countries of Great Britain, Belgium/Luxemburg, and West Germany - nearly on the home turf of the major southern Common Market wine giants, Italy and France. This growth has significant foreign trade policy implications and holds promise for the future of wine and wine grape marketing in this country.

Table 36. Trends in U.S. Wine Exports, 1961-80

Compound Annual Rate of Growth, All U.S. Wine Exports

1961-65	- 0.3%
1965-70	+ 8.2
1970-75	+23.7
1975-80	+45.1

Compound Annual Rate of Growth, 1975-1980, U.S. Wine Exports By Country

Canada	+ 58.5%
United Kingdom	+135.9
Bahamas	+ 19.1
Belgium & Luxemburg	+ 87.9
Netherlands Antilles	+ 14.8
Japan	+ 12.3
West Germany	+ 72.1
Bermuda	+ 35.4
All Other	+ 33.5

Source: Bureau of Census, U.S. Department of Commerce. Compiled by "Wines and Vines". Copyright © The Hiaring Company, 1981. Used by permission.

Inventories

Because most wines are capable of being stored for some period of time, wine inventories can play a role in smoothing out varying levels of wine production and sales, and can be an indicator of market tightness or surpluses. Of course, many of the better wines require extended periods of aging and for this reason, the "normal" level of inventories is different for the various wine categories and wine production regions. Figures 22A and 22B depict wine inventory levels for the 1969-80 period. The data is based on December 31 inventory levels (a seasonally high level) and average daily shipments for the preceding year.

California's table wine inventories have been remarkably stable through much of the 1969-80 period - average December 31 holdings have been 778 days of supply and eight of the 12 years have been within five percent of this level. The only time when serious imbalance occurred was in 1973-74 when a slowdown in sales and continued increases in production caused a buildup to levels approximately 14 percent above normal. In contrast, California dessert wine inventories have been more variable from year to year and show a substantial upward trend during the late 1970's and 1980. This is very likely due to the continued decline of sales in this category and the inability of dessert wine producers to adjust their production and inventories downward fast enough. Sparkling wine inventories have also been more variable from year-to-year.

FIGURE 22A.
CALIFORNIA WINE INVENTORIES
AS OF DECEMBER 31, 1969-80

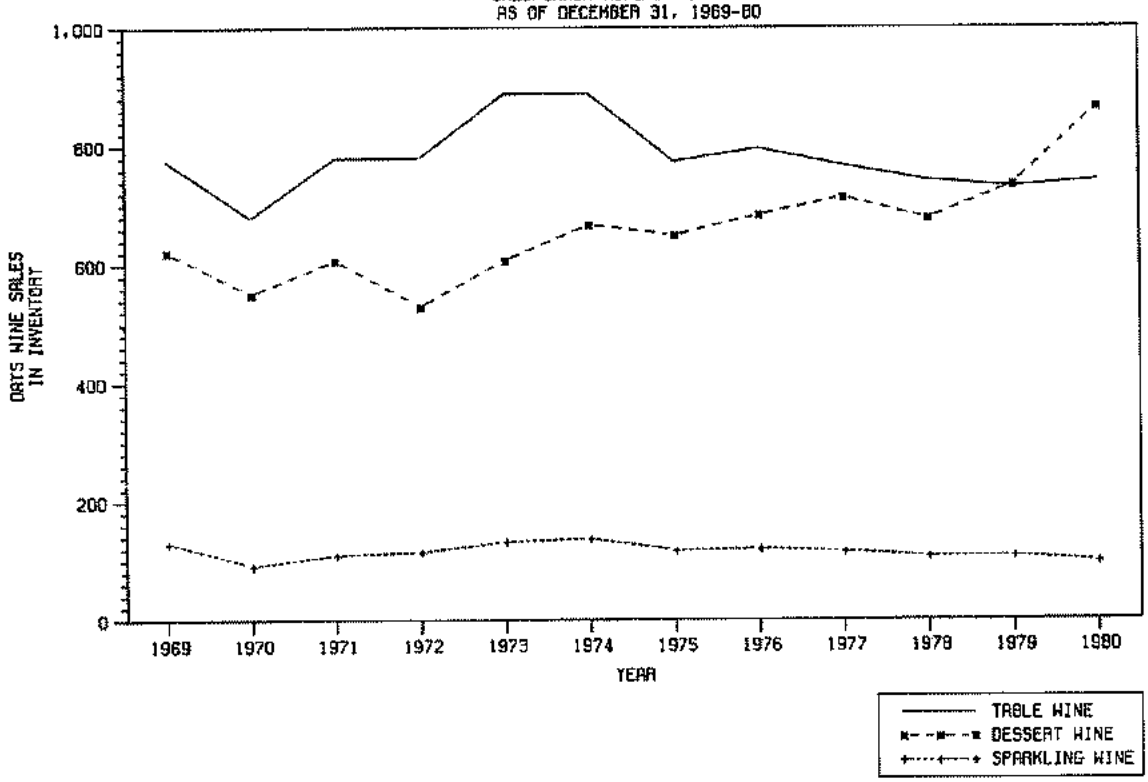
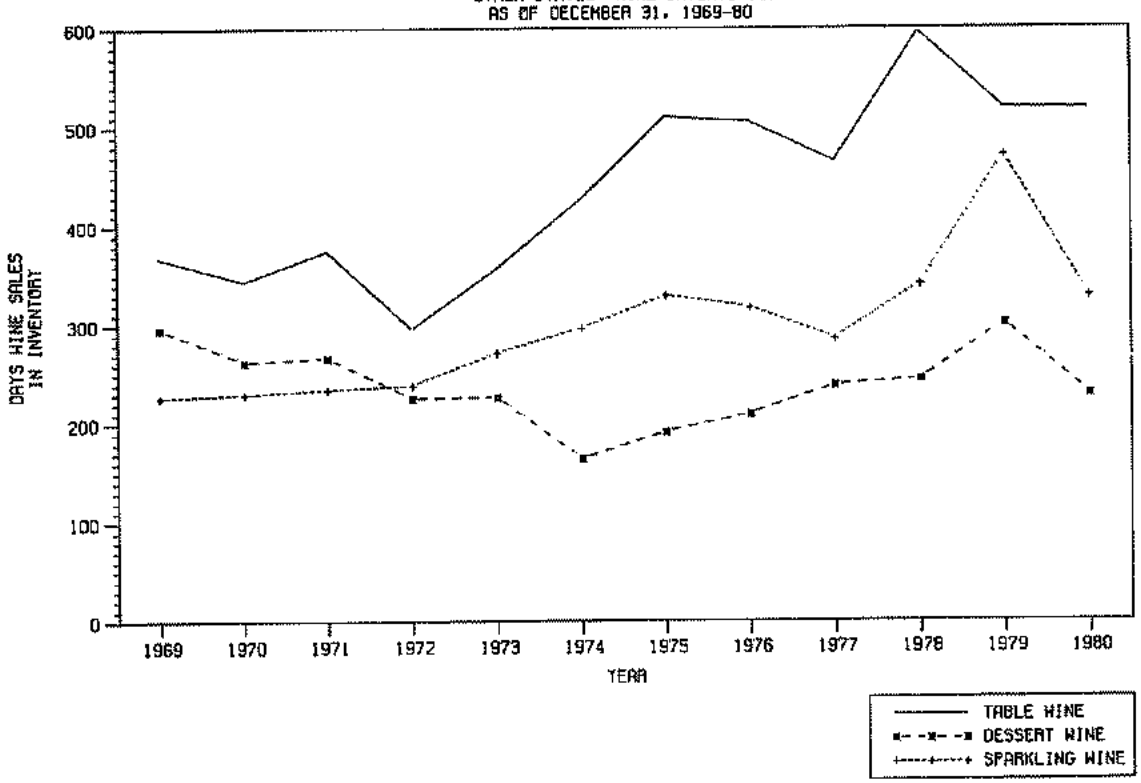


FIGURE 22B.
"OTHER STATES" WINE INVENTORIES
AS OF DECEMBER 31, 1969-80



Source: "Wines and Vines," Copyright © The Hiaring Company, 1981. Used by permission. Converted to "Days in Inventory" by the author.

There was a small buildup in the 1973-74 period, again due to the falling off of sales at that time. It appears that rapidly growing sales in this category have kept California's inventory levels at historically average levels for the past three years.

The levels, behavior, and trends of wine inventory levels in "Other States", of which New York is the majority, have been much different than for California. Table wine holdings have generally trended upward throughout the 1970's, finally peaking in 1978 and falling off somewhat in the last two years. These building inventory levels are due primarily to the poor sales of "Other States" table wines, although the good grape crops of recent years have also contributed. Inventories of dessert wines have similarly risen, peaking in 1979 and then falling off to a more normal level by the end of 1980. The same pattern holds true for sparkling wines as well. The implication from all three categories is that "Other States" wineries have not been able to adjust their wine production to lagging sales fast enough, and therefore inventories have risen. This has resulted in declining demand for many types of grapes and softer grower prices in New York and other wine-grape states.

Wine Prices

There are hundreds of different wine products and thousands of different offerings to the consumer in terms of wine type, package size, and brand. Thus there are thousands of different prices involved in this industry. Figures 23, 24, and 25 show several representative price indexes for wine. The implications of these graphs are:

1) While wine prices have risen along with almost every other item in the economy, they have increased more slowly than all consumer items or all food. This means that wine has been an increasingly good consumer buy compared to most items. (Figure 23A).

2) While sales growth has been dramatically different between the table and dessert wine categories, they have both had a remarkably similar price history. (Figure 24A).

3) Consumer wine prices have followed wholesale wine prices quite closely over time, suggesting that retailers follow a fairly consistent markup pattern. (Figure 24B).

4) Wine prices have increased somewhat faster than for all alcoholic beverage items. While not shown here, wine has also been the fastest growing alcoholic beverage in sales. This price relationship relative to other alcoholic beverages would normally be considered a negative factor in terms of increasing wine sales, but obviously it has not been. (Figure 23B).

FIGURE 23A.
CONSUMER PRICE INDICES
ALL CONSUMER ITEMS AND ALL WINES, 1963-81

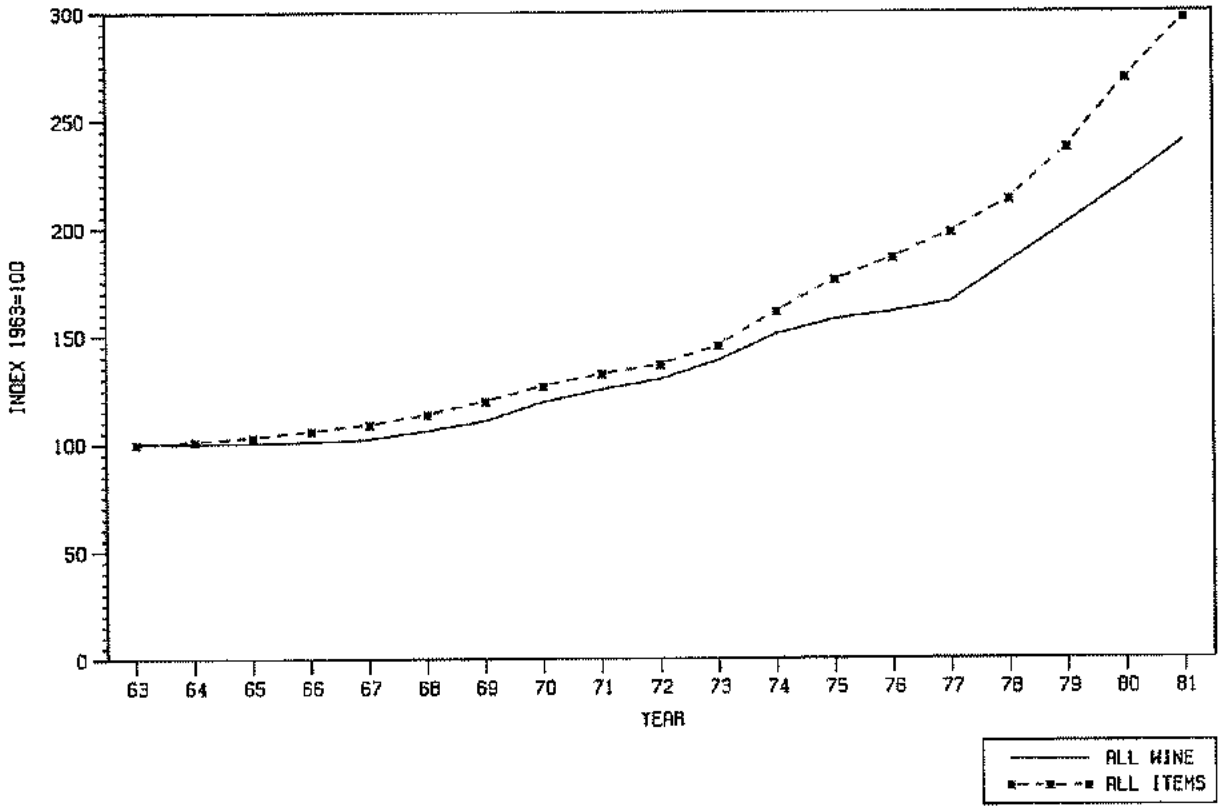


FIGURE 23B.
CONSUMER PRICE INDICES - ALL FOOD,
ALL ALCOHOLIC BEVERAGES, AND ALL WINES, 1967-81

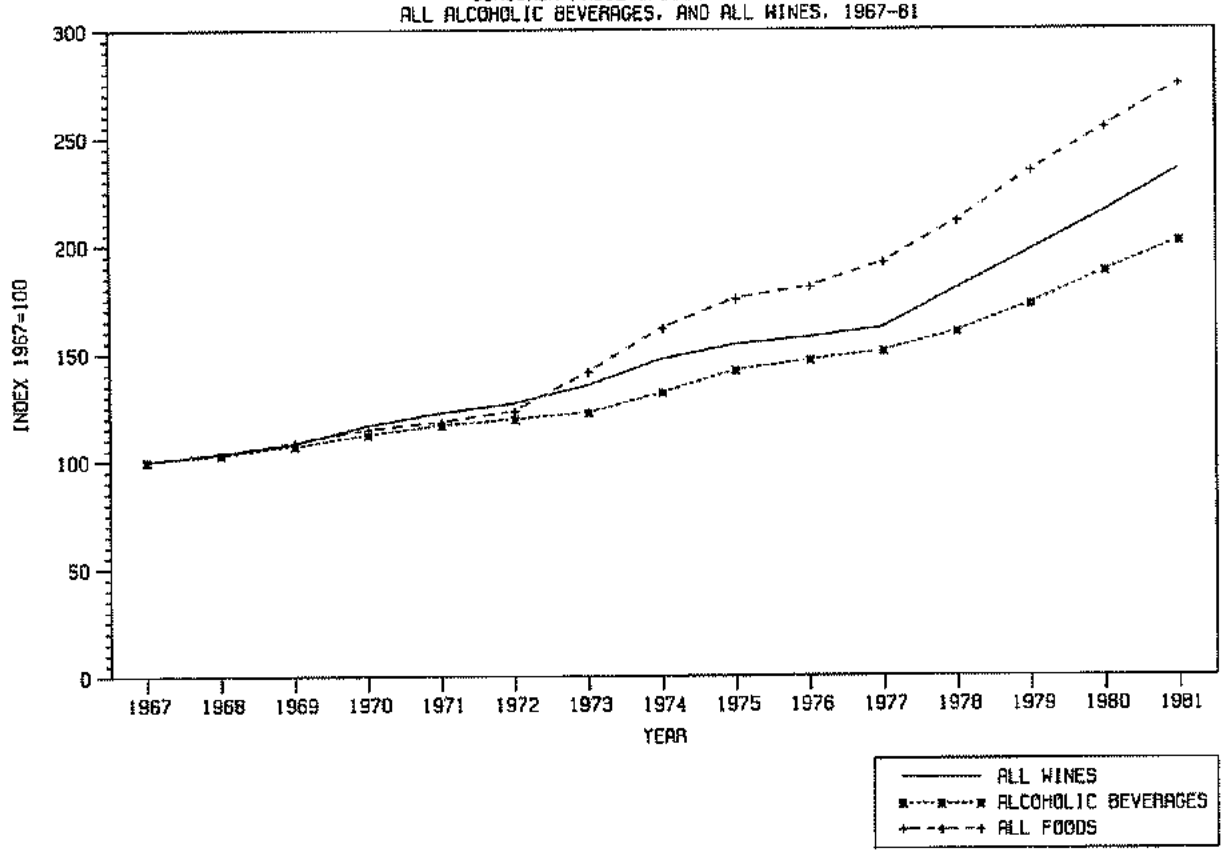


FIGURE 24A.
WHOLESALE PRICE INDICES
FOR TABLE AND DESSERT WINES, 1956-81

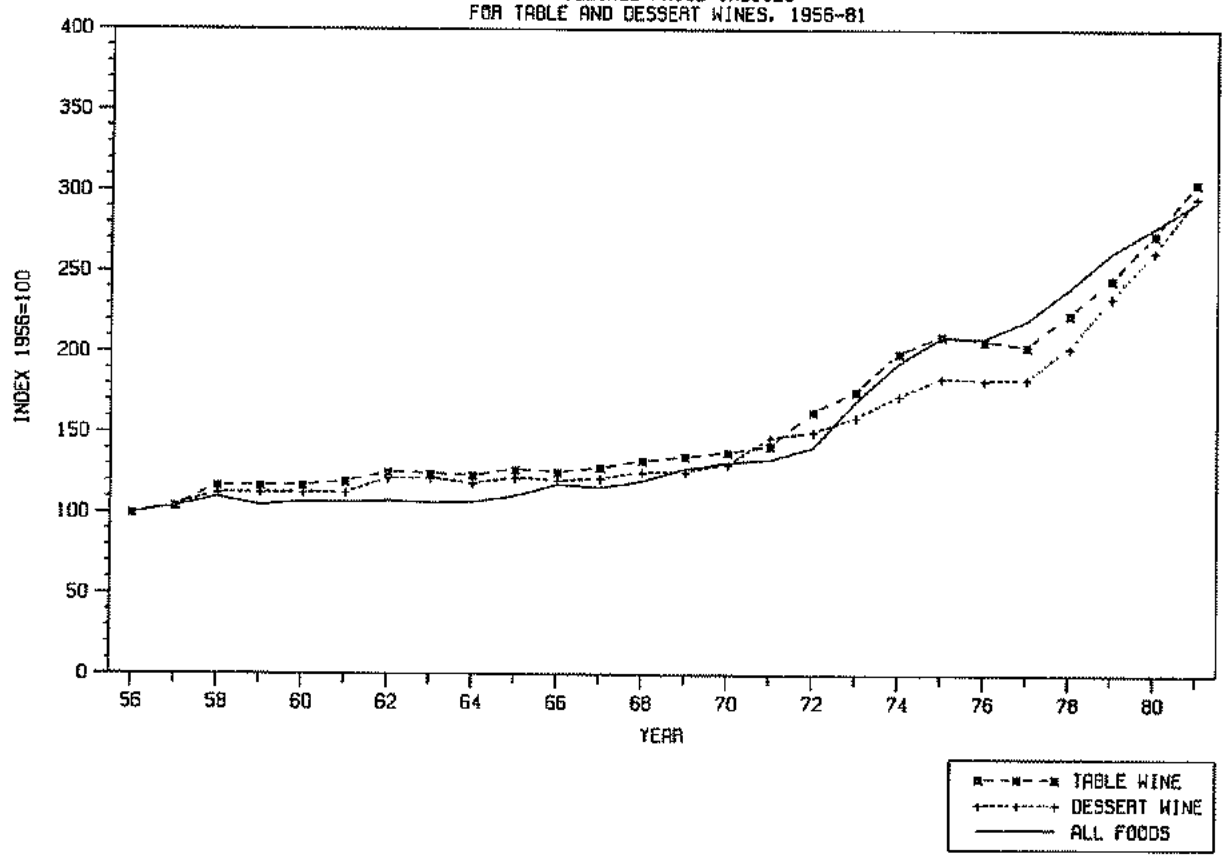


FIGURE 24B.
PRICE INDICES
FOR TABLE AND DESSERT WINES, 1963-81

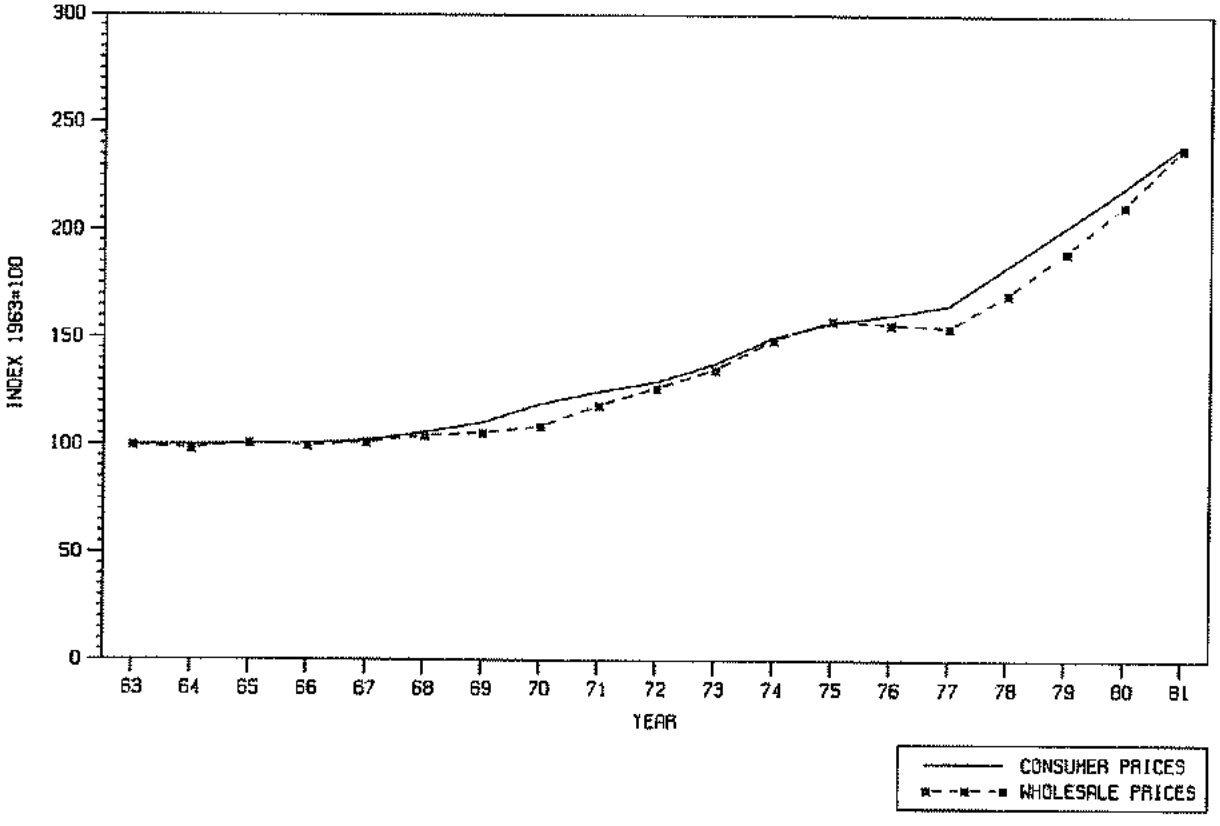


FIGURE 25A.
WHOLESALE PRICES AND INVENTORY LEVELS
OF DESSERT WINES, 1969-80

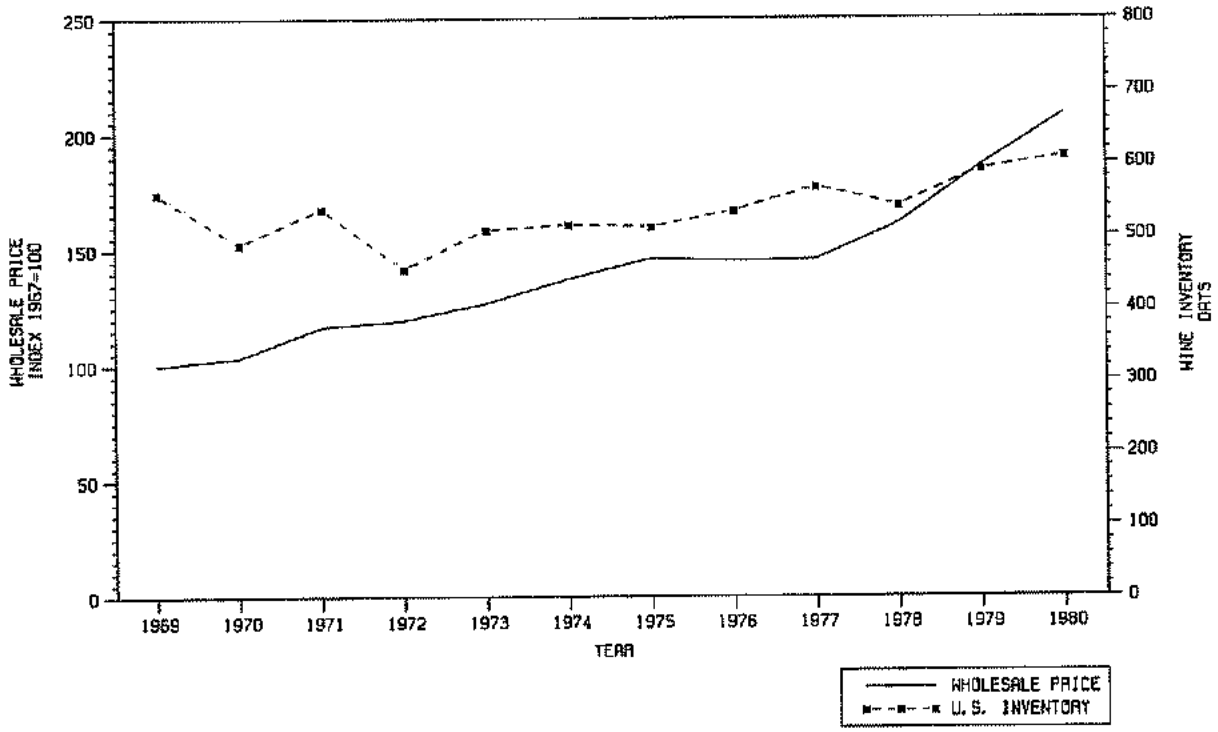
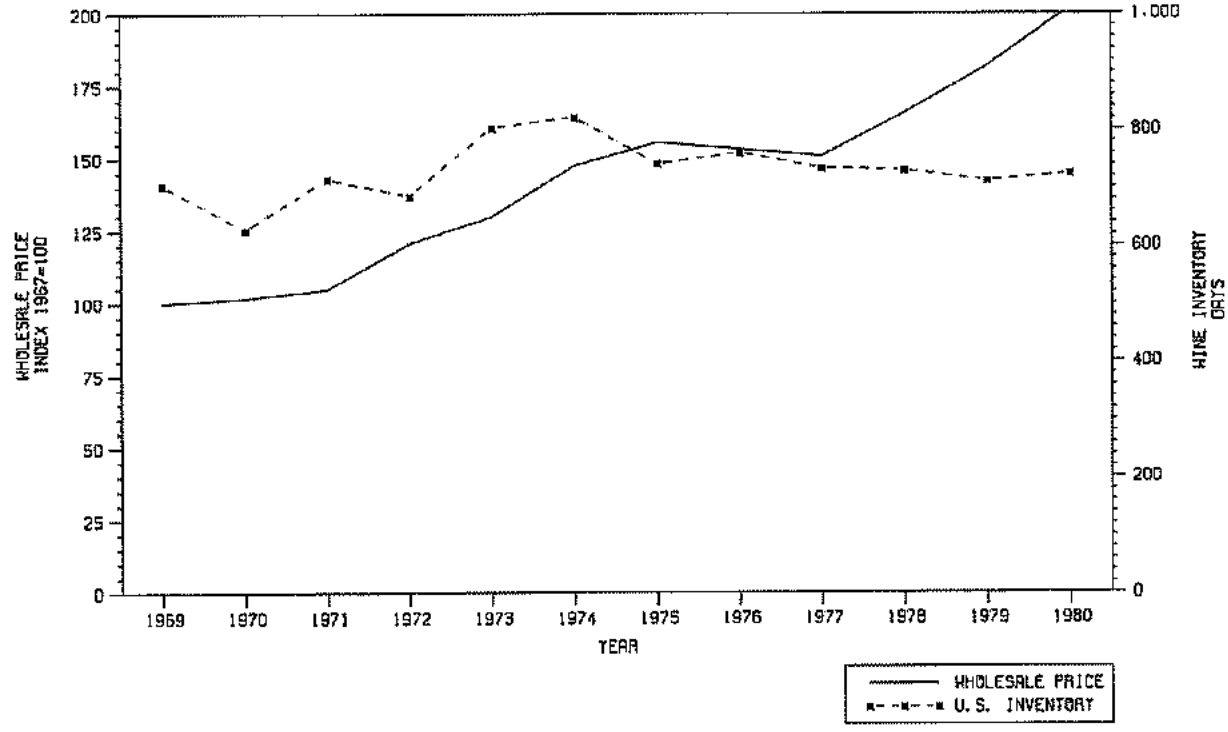


FIGURE 25B.
WHOLESALE PRICES AND INVENTORY LEVELS
OF TABLE WINES, 1969-80



Sources: Inventory data from "Wines and Vines," Copyright © The Hiaring Company, 1981. Used by permission.

Price indexes from "Wholesale Prices and Price Indexes," Bureau of Labor Statistics, U.S. Department of Labor, various years.

5) Wine prices have been relatively immune from downward movement or from sharp year-to-year fluctuations. Since 1954, there have been only three years when wine prices fell and these were all slight declines. As illustrated by Figure 25, changes in wine inventory levels appear to have had little impact on wine prices, even for the dessert wine category which has experienced significant increases in inventory levels and prices. This price behavior reflects the regulated nature of wine marketing, especially the "fair trade" minimum pricing laws that many states have had until recent years. This tendency towards year-to-year stability has contributed towards a favorable consumer climate for wine sales and has eliminated one potential source of volatility from the wine business.

THE UNITED STATES GRAPE INDUSTRY - LONG-TERM TRENDS

There has often been a tendency to think of different segments of the national grape industry as being isolated from each other. For example, the Concord producing States' predominantly juice/jelly market was considered to be relatively independent of California grape industry influence. While California wine might have an obvious impact on the New York wine business, raisins and table grapes were considered to be nearly irrelevant to New York. Even within the wine industry, New York was small enough, and with kosher Concord wines specialized enough, to be fairly independent of California. All of this has changed in the past ten years and New York and the other Concord States now find that events in the California grape industry have substantial impact on New York's traditional grape markets.

To begin, California produces about 91 percent of this country's grapes. While it has special varieties for wine, raisins, and table use, there is considerable overlap among these uses. For example, the Thompson Seedless variety accounted for 53 percent of California's total grape production in 1980. While it is considered to be a raisin variety, its utilization was 60% raisins, 29% wine, 9% fresh table, and 2% canned. Thompson growers cannot easily shift back and forth from table grape production for cultural reasons, but the shift between raisins and wine is relatively easy and commonly does occur. With about one-quarter of California's crush for wine being Thompsons, a shift in or out of raisins can have a significant impact upon the national wine supply and the price of bulk blending wine.

As discussed earlier, California grape juice and concentrate is crushed from raisin, table, and wine varieties, thus creating a link from these markets to the unfermented product market which really did not exist prior to the 1970's.

With these interrelationships in mind, the changes in grape production and utilization shown in Table 37 can be analyzed. For the purposes of making comparisons that are not unduly influenced by the size of a particular year's grape crop, all figures for the 1956-80 period are shown as five-year averages. During the past twenty-five years, the size of the national grape crop has increased by a total of 58 percent, or roughly a 2.3 percent rate of annual increase. Interestingly, California, New York, and "Other States" have increased production at approximately the same rate over the twenty-five year period.

Even larger changes have occurred in how the U.S. grape crop is used. The tonnage of grapes used for wine has nearly doubled in the last twenty-five years, while unfermented products and raisins have increased at about the same rate as the total grape crop. Use of grapes for the fresh table market has actually declined, although a substantial recovery in shipments has occurred in the last five years.

The impact of these shifts can be seen more readily in Table 38 which shows the share of the crop going to particular uses:

- At the national level, wine has taken a growing share of the total crop, while fresh table use has fallen substantially. Raisins' share of the crop has declined slightly while the share going into unfermented products has been remarkably stable.

Table 37. Utilization of the U.S. Grape Crop, 1956-80

	Unfermented Products*	Wine	Canned	Dried	Fresh	Total
	Thousand Tons					
U.S.**						
1956-60	199.0	1,363.4	37.0	810.2	526.1	2,935.7
1961-65	234.8	1,704.0	49.0	1,053.6	536.1	3,577.5
1966-70	232.6	1,677.0	60.0	976.1	498.2	3,443.9
1971-75	257.5	2,209.1	56.4	915.8	402.0	3,840.9
1976-80	306.6	2,614.1	56.0	1,175.3	479.7	4,631.7
% Change:						
1956-60 to 1976-80	+54%	+92%	+51%	+45%	-9%	+58%
California						
1956-60	2,691.3	1,332.2	37.0	810.2	511.9	2,694.0
1961-65	3,289.5	1,663.2	49.0	1,053.6	523.7	3,290.8
1966-70	-	1,616.8	60.0	976.1	486.5	3,139.4
1971-75	-	2,123.1	56.4	915.8	392.5	3,487.8
1976-80	-	2,521.2	56.0	1,175.3	471.9	4,224.4
% Change:						
1956-60 to 1976-80	-	+89%	+51%	+45%	-8%	+57%
States Other Than California***						
1956-60	244.4	31.2	-	-	14.2	245.2
1961-65	234.8	40.8	-	-	12.4	288.1
1965-70	232.6	60.2	-	-	11.7	304.5
1971-75	257.5	86.0	-	-	9.5	353.1
1976-80	306.6	92.9	-	-	7.8	407.3
% Change:						
1956-60 to 1976-80	+54%	+198%	-	-	-45%	+66%
New York						
1956-60	75.1	17.5	-	-	4.0	96.7
1961-65	91.0	24.4	-	-	3.4	118.8
1966-70	91.5	41.3	-	-	3.0	135.8
1971-75	83.0	67.2	-	-	1.9	152.2
1976-80	85.9	71.4	-	-	3.2	160.5
% Change:						
1956-60 to 1976-80	+14%	+308%	-	-	-20%	+66%

*No estimate of unfermented products in California, but it does produce them. Included with wine.

**Includes California, Washington, Arkansas, Michigan, Ohio, Pennsylvania, and New York. These states account for 99.4 percent of U.S. grape production.

***Includes Washington, Arkansas, Michigan, Ohio, Pennsylvania, and New York. These states account for 8.7 percent of national grape production and 99.1 percent of national Concord production. These states have 83 percent of their production in Concords.

Source: "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, Washington, D.C. Product breakdowns include some estimates by J. Putnam II.

Table 38. Shares of Grape Crop Used for Various Markets, 1956-80

	Unfermented Products*	Wine	Canned	Dried	Fresh
U.S.**					
1956-60	6.8%	46.4%	1.3%	27.6%	17.9%
1961-65	6.6	47.6	1.4	29.4	15.0
1966-70	6.8	48.7	1.7	28.3	14.5
1971-75	6.7	57.5	1.5	23.8	10.5
1976-80	6.6	56.4	1.2	25.4	10.4
California					
1956-60	-	49.5%	1.4%	30.1%	19.0%
1961-65	-	50.5	1.5	32.0	15.9
1966-70	-	51.5	1.9	31.1	15.5
1971-75	-	60.9	1.6	26.3	11.2
1976-80	-	59.7	1.3	27.8	11.2
States Other Than California***					
1956-60	81.2%	12.7%	-	-	5.8%
1961-65	81.5	14.2	-	-	4.3
1966-70	76.4	19.8	-	-	3.8
1971-75	72.9	24.4	-	-	2.7
1976-80	75.3	22.8	-	-	1.9
New York					
1956-60	77.7%	18.1%	-	-	4.2%
1961-65	76.6	20.5	-	-	2.9
1966-70	67.4	30.4	-	-	2.2
1971-75	54.5	44.2	-	-	1.3
1976-80	53.5	44.5	-	-	2.0

*No estimate of unfermented products in California, but it does produce them. Is included with wine.

**Includes California, Washington, Arkansas, Michigan, Ohio, Pennsylvania, and New York. These states account for 99.4 percent of U.S. grape production.

***Includes Washington, Arkansas, Michigan, Ohio, Pennsulvania, and New York. These states account for 8.7 percent of national grape production and 99.1 percent of national Concord production. These states have 83 percent of their production in Concords.

Source: "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, Washington, D.C. Product breakdowns include some estimates by J. Putnam II.

- Because of its large and stable share of the national crop, California's market utilization of its grape crop mirrors that of the U.S. total.

- The major Concord states, as a group, decreased unfermented product utilization between 1956 and 1975, but have put a larger share (75.3 percent) of their crop back into the unfermented products market during the past five years. The wine crush has accounted for the balance, nearly doubling its share of the crop's use.

- New York has made a significant switch in crop utilization over the past twenty-five years - dropping the share of its crop going to unfermented products by 24 percentage points and increasing the share crushed for wine by 26 percentage points.

In addition to these fundamental shifts in grape crop marketing and the growth of the total grape crop, it is very significant that while an additional 108,000 tons of grapes per year are now going into unfermented products compared to twenty-five years ago, only 11,000 of these tons are from New York State. New York has been gradually shifting its market mix to the high-growth wine market, most likely to the advantage of the unfermented products market, but to the current detriment of its local wine grape market. The current surplus of grapes for unfermented products is clearly the result of sharp industry expansion in Washington which has contributed a net increase of 85,000 tons of grapes for unfermented utilization over the 1956-60 level - this is 78 percent of the total increase in grapes going to this market category.

To set the stage for this entire report, the second chapter discussed New York grape farm profitability. Four specific phases of profitability were identified that cover the past twenty-five years:

1) Early 1950's to 1965. This was a period of stability and improving profitability in the industry.

2) 1966 to 1968. There was a dip in profitability as production costs began to increase and several years of lower prices occurred.

3) 1969 to 1971. Increasing prices and strong yield levels led to another period of improving profitability.

4) 1972 to the Present. Profitability levels declined sharply, reaching the very low level of the recent past (1977-80).

Having established the national trends that were impacting upon the grape industry, it is now time to examine the trends in New York itself and to develop a perspective on how the New York grape industry arrived at its current position. It is this analyst's conclusion that the fortunes of the unfermented product and wine industries are closely intertwined in New York State, and therefore this chapter will consider the entire grape industry and the components where it is helpful to do so.

Figure 26 shows the trend in New York grape production and how the crop has been utilized. Because crop sizes have fluctuated so much from year-to-year, it may also be helpful to examine the trend in production as follows:

Period	1956-60	1961-65	1966-70	1971-75	1976-80
Tons	96,660	118,824	135,800	152,200	160,500
Percent Change from Previous Period	-	+22.9%	+14.3%	+12.1%	+5.4%

While New York's grape crop has been growing larger during the last twenty-five years, the rate of growth has been slowing. The rapid rise in the wine grape market's importance to New York is clearly evident in Figure 26, as well as the corresponding decline in both the share and volume of grapes going for unfermented use. These basic trends were healthy ones for New York State as an industry since they meant that marketing was becoming more diversified into the higher sales growth area, e.g. wine. Much of the distress in New York grape markets in the last four years can be related back to the reversal of these basic trends since the mid-1970's:

1) For the 1978, 1979, and 1980 seasons, the New York grape crop was 24 percent larger than during the three previous years.

FIGURE 26A.
NEW YORK GRAPE CROP UTILIZATION, 1956-81

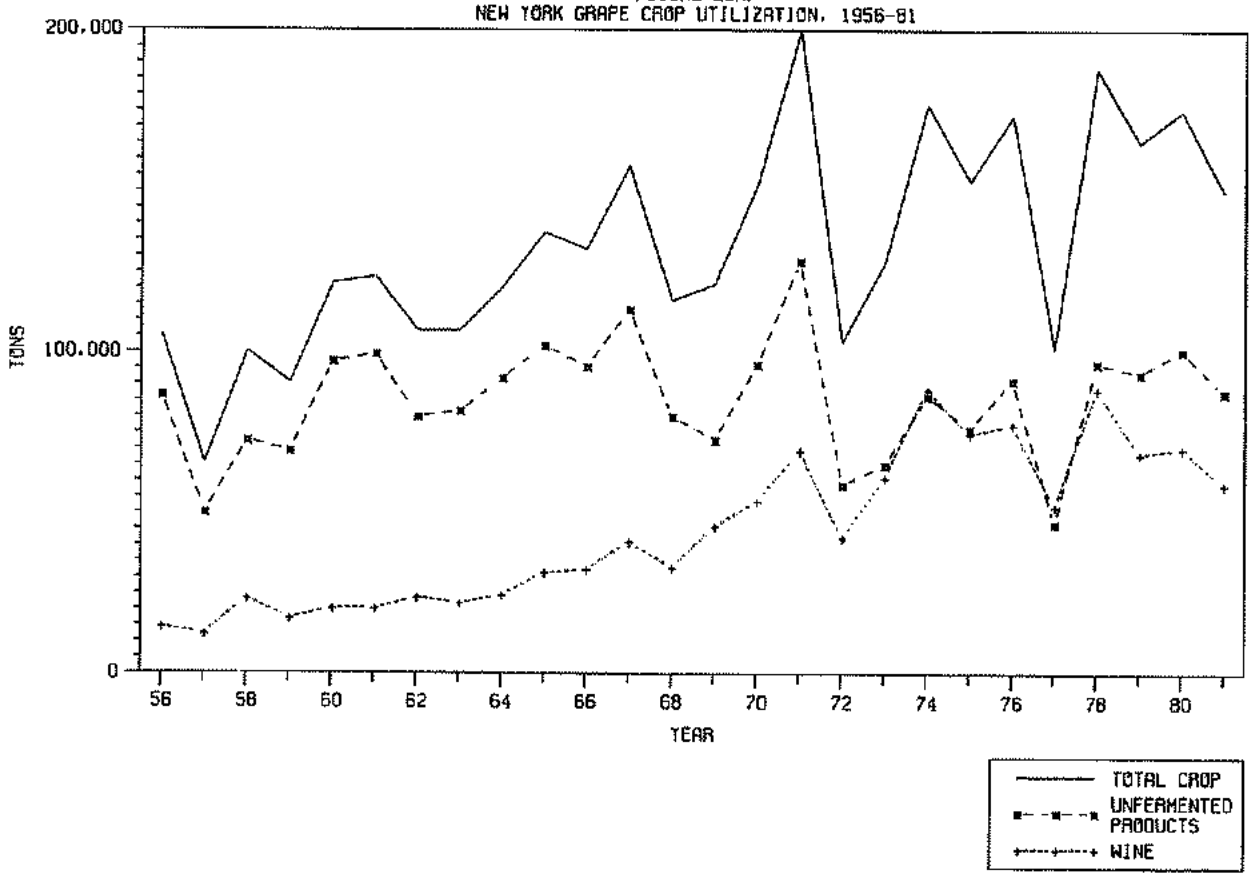
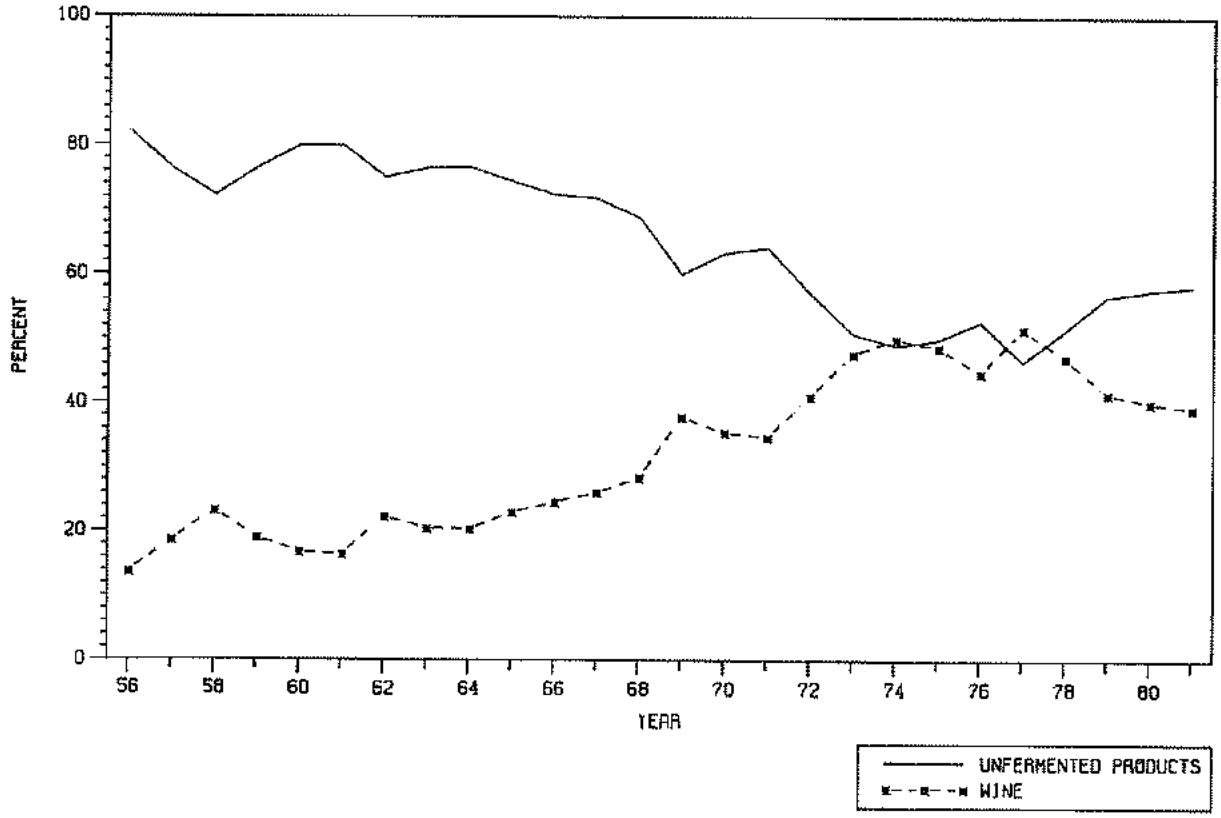


FIGURE 26B.
THE NEW YORK GRAPE CROP - SHARE UTILIZED
BY UNFERMENTED PRODUCTS AND WINE, 1956-81



2) Wineries reduced their utilization of grapes and their share of grape crop usage declined. This forced grapes back into the cash market for unfermented product utilization where there really was not a good home for them. This obviously depressed cash market prices for growers. Just as significantly, it contributed to a burdensome supply of bulk grape juice that depressed grape juice prices, which filtered back to co-op growers as well as further depressing the cash market in subsequent years.

This reversal of the trend towards increased wine utilization is a key factor in understanding distressed grape markets and depressed grower profitability in recent years.

To understand why New York's grape crop has increased during the past twenty-five years, it is helpful to consider two distinct phases. During the late 1950's and early 1960's, there were dramatic yield increases due to the adoption of improved viticultural techniques. Acreage remained almost level during this period. In the following ten years there were substantial increases in acreage and yields reached a plateau. One reason for the declining profitability since 1972 has been level yields. The problem has been further aggravated by grapes from additional acres coming into the market.

Table 39. Changes in New York Grape Production, 1956-80

	1956-60	1961-65	1966-70	1971-75	1976-80
	Percent Change From Previous Five Years				
Yield Per Acre	+32.8%	+21.6%	+ 5.8%	- 1.4%	-4.1%
Acreage	- 1.1	+ 0.6	+ 7.8	+13.7	+9.9
Production	+31.2	+22.5	+14.1	+12.1	+5.5

Sources: Production is from New York Crop Reporting Service. Acreage is from U.S. Census of Agriculture, New York Crop Reporting Service, and estimates by J. Putnam II. Yield Per Acre is based on production and acreage.

Variety Mix

Table 40 shows the changing mix of New York State grape production, while Table 41 shows this separately for the Lake Erie Grape Belt and the Finger Lakes Region. Every major variety of New York grapes has increased in tonnage over the past twenty-five years. French Hybrids were nearly unheard of in the 1950's, but now they account for about nine percent of New York grape production. Other big gainers have been Niagara, Catawba, and Dutchess. Increases in Concord production have been the slowest of any major variety.

Table 40. The Changing Variety Mix of New York State Grape Production, 1956-1980

	1956-60	1961-65	1966-70	1971-75	1976-80	1980	Percent Change 1956-60 to 1976-80
Tons of Grapes Produced							
Concord	80,212	94,597	89,193	112,870	110,900	118,696	+ 38%
Niagara	1,939	3,681	6,146	8,079	7,725	8,044	+298
Catawba	2,804	3,599	5,436	8,927	10,783	11,075	+285
Delaware	1,766	2,544	4,131	5,313	4,438	4,903	+151
Elvira	1,107	1,455	1,728	1,763	2,063	2,262	+ 86
Ives	573	892	1,236	1,480	1,345	1,843	+135
Dutchess	145	177	312	461	698	928	+381
French Hybrids	335	1,178	3,454	8,719	14,126	15,296	LARGE
All Other Varieties	1,471	1,854	1,517	1,662	1,679	3,158	+ 14
Total	90,352	109,977	113,153	149,274	153,757	166,205	70%
Percentage of Grapes Produced by Variety							
Concord	88.8%	86.0%	78.7%	75.8%	72.1%	71.4%	-16.7%
Niagara	2.1	3.3	5.5	5.4	5.0	4.8	+ 2.9
Catawba	3.1	3.3	4.8	5.9	7.1	6.7	+ 4.0
Delaware	2.0	2.3	3.7	3.5	2.9	2.9	+ 0.9
Elvira	1.2	1.3	1.5	1.2	1.3	1.4	+ 0.1
Ives	0.6	0.8	1.1	1.0	0.9	1.1	+ 0.3
Dutchess	0.2	0.2	0.3	0.3	0.5	0.6	+ 0.3
French Hybrids	0.4	1.1	3.1	5.9	9.2	9.2	+ 8.8
All Other Varieties	1.6	1.7	1.3	1.0	1.0	1.9	- 0.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-

Source: "Survey of Wineries and Grape Processing Plants - New York," New York Crop Reporting Service, various years.

Because of their overwhelming position to begin with and the fact that they continued to slowly increase, more than seven of every ten tons of New York grapes produced are still Concords. What these changes reflect is a gradual, long-term "retooling" of New York grape production for wine purposes and to a lesser extent, white juice.

There is a substantial difference between the change in variety mix for the Grape Belt and the Finger Lakes. While the Grape Belt has made relatively large increases in production of major non-Concord varieties, all were from very small bases. This area's fondness for the Concord grape is still evident with 91 percent of its production in Concords.

The Finger Lakes region has increased total grape production somewhat faster than the Grape Belt. The biggest change in the Finger Lakes is clearly the rise of the French Hybrids which now account for nearly one-quarter of their total production. On a smaller scale, Niagaras and Catawbas have also had significant growth. Concords were increasing production up until the early 1970's, but have fallen quite substantially since then. With 40 percent of Finger Lakes production, Concords are still very important to this region. However, the Finger Lakes region appears to have been much more responsive to changing markets, even though some of the changes have not been particularly successful. Of course much of this change was natural given that more of the new acreage and the wineries themselves were in the Finger Lakes area.

Plantings of Grapes in New York

The planting of new grape vines reflects the degree of optimism, the prevailing thinking about future markets, the current financial health of the grower, and processor activity such as new contracts. For this reason, it is helpful to review the changes in plantings that have occurred in New York State.

Figures 27A and 27B show the trend in grape plantings for the Finger Lakes region. Of most significance is the steady increase of planting activity throughout the 1955-75 period followed by the sharp drop-off since then. The earlier period reflects both the expansion of the Finger Lakes grape industry and efforts to reorient towards a wine market variety mix. The 1976-80 decline in plantings reflects the lack of new market, poor profitability, and grower pessimism about the future. In terms of individual varieties or categories:

1) Concords constituted the bulk of plantings in the late 1950's and early 1960's, but plantings fell way off in the mid-1960's and have been relatively minor since then.

2) Catawba plantings increased throughout the early and mid-1960's, and then peaked in the late 1960's and early 1970's. Many of these were planted for Gold Seal who used them for both champagne and a varietal wine. The varietal wine's popularity peaked in the late 1960's. New Catawba plantings have been quite small in the last five years.

3) Delaware plantings peaked in the mid-1960's, but there have never been major plantings of them throughout the period shown.

FIGURE 27A.
APPROXIMATE GRAPE PLANTINGS IN THE FINGER LAKES REGION, 1955-80

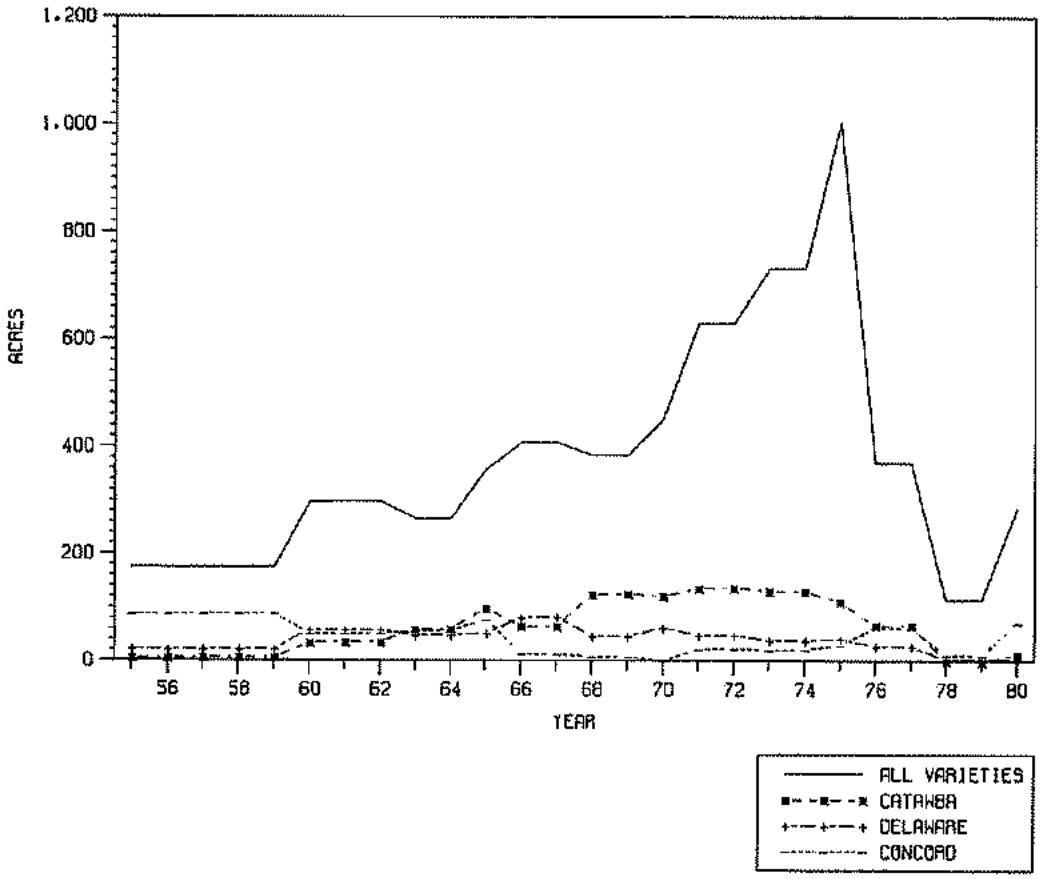


FIGURE 27B.
APPROXIMATE GRAPE PLANTINGS IN THE FINGER LAKES REGION, 1955-80

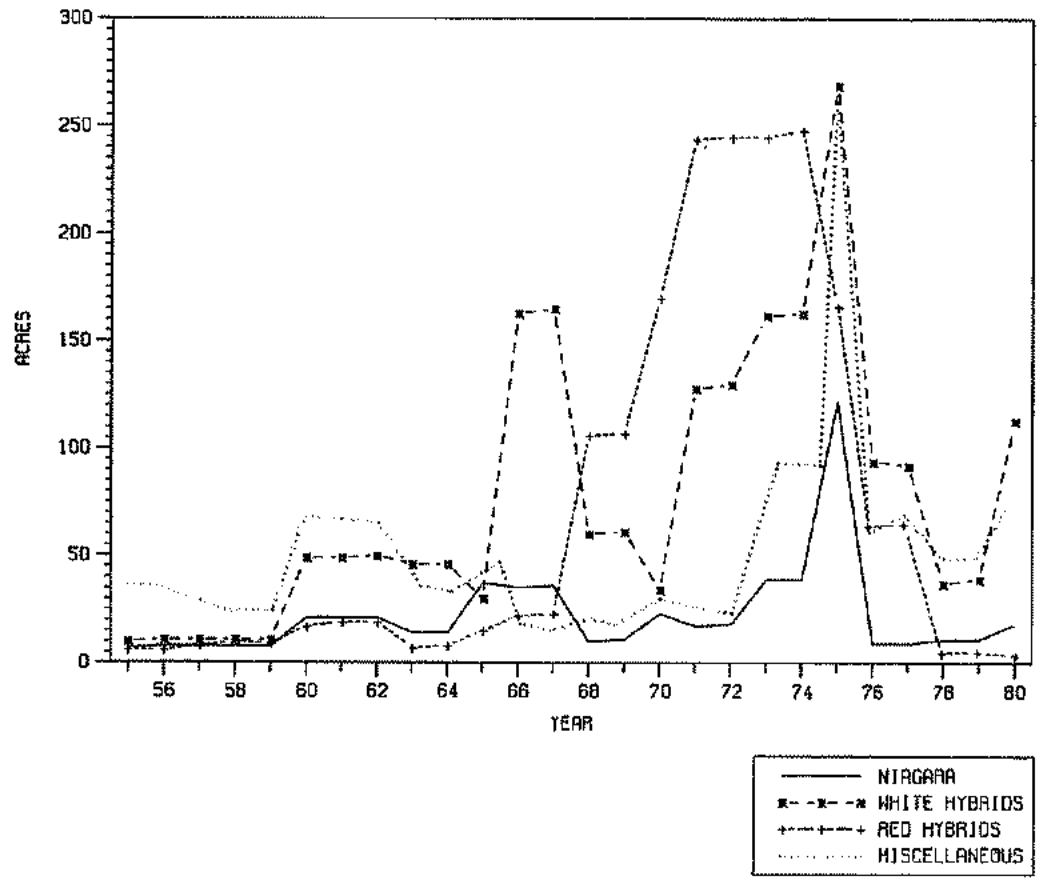


FIGURE 28A.
APPROXIMATE GRAPE PLANTINGS IN THE CHAUTAUQUA REGION, 1955-80

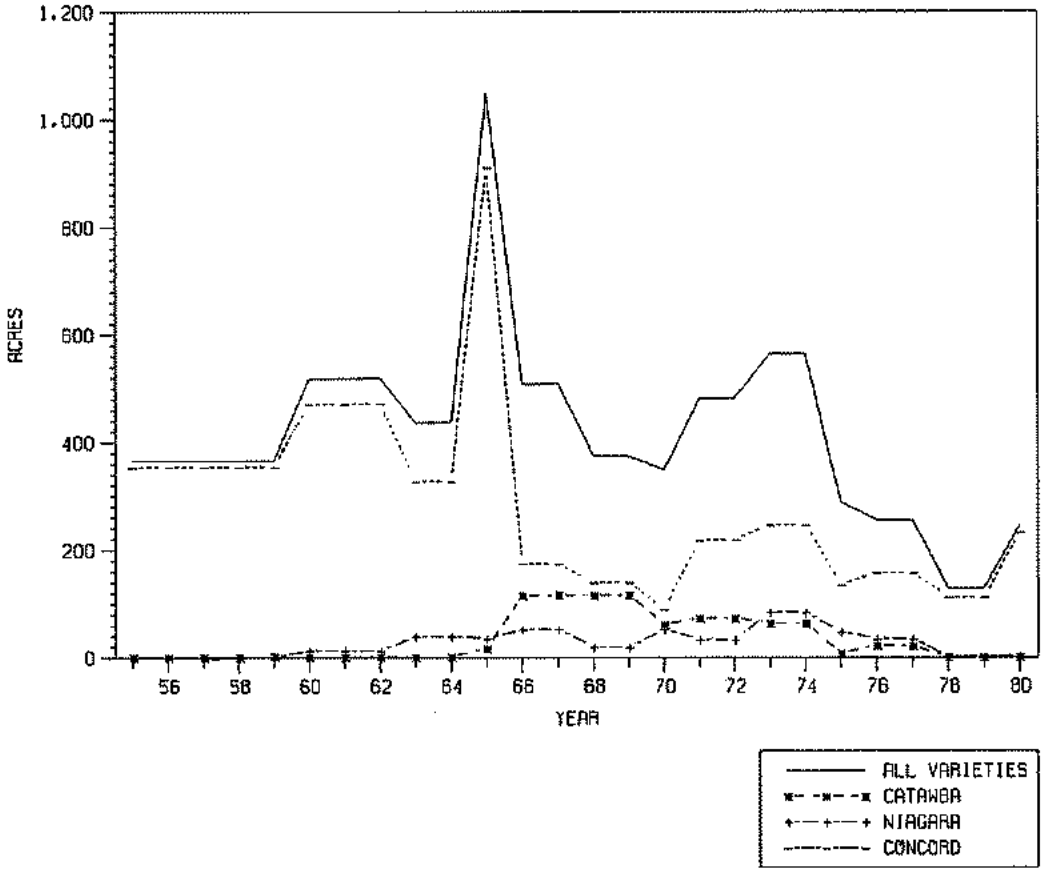
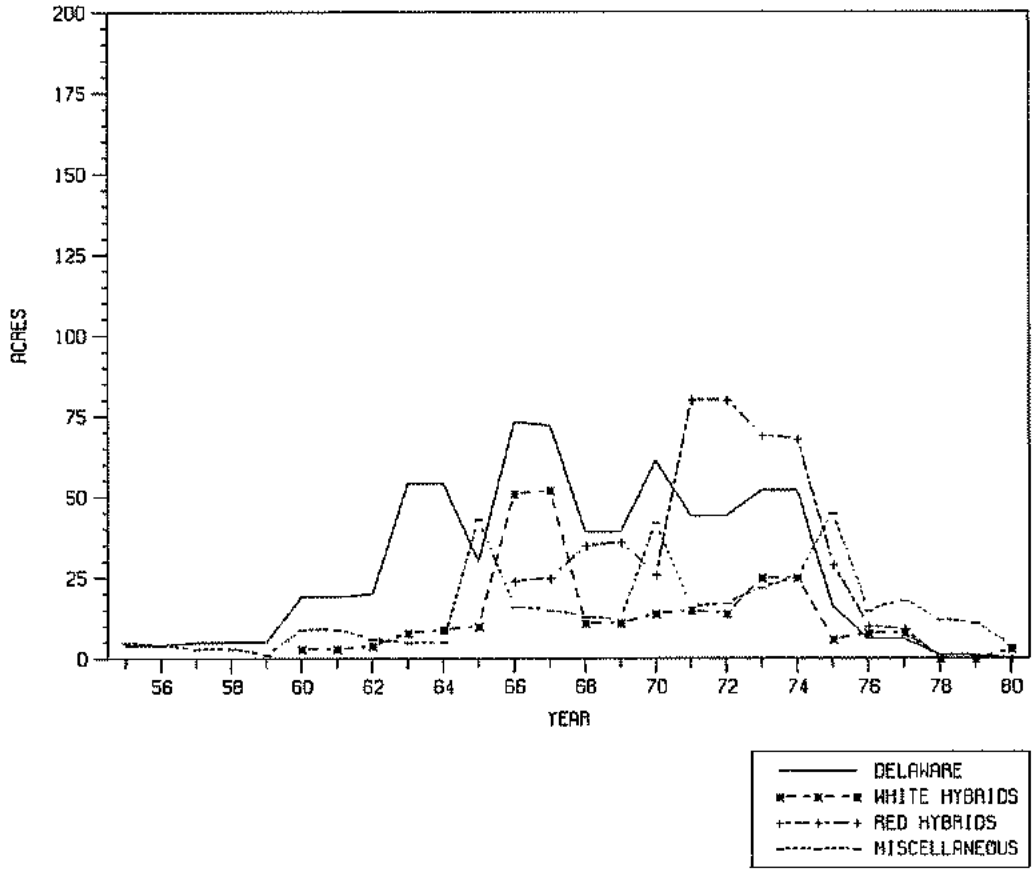


FIGURE 28B.
APPROXIMATE GRAPE PLANTINGS IN THE CHAUTAUQUA REGION, 1955-80



4) Niagara plantings were relatively minor throughout most of the twenty-five years, although it is interesting to note the large plantings in 1975 when the popularity of white table wines and the potential for white grape juice products became apparent. However, plantings quickly fell off in 1976 and more recent years.

5) Red French Hybrids were planted experimentally throughout the late 1950's and early 1960's. Starting in 1968, there were substantial plantings which increased in size before finally starting to decline in 1975. Most of these plantings were made under contract to the Taylor Wine Company.

6) White French Hybrids, primarily the Aurore, received earlier attention than the reds. Significant plantings were made early in the 1960's, and then substantial plantings were made in the mid-1960's. Planting activity then declined until the early 1970's when they began to accelerate again, and Seyval Blanc as well Aurora was included in the mix. In 1975, plantings swung upward substantially, again in response to the emerging white wine boom. Most of these white hybrids were also under contract to Taylor. There was some evidence of an increase in new plantings of these varieties in 1980.

These plantings reflect the common wisdom in the wine industry at the time they were made. Of course it turned out that the common wisdom of planting grapes for red table wine in the early 1970's matured into the mid and late-1970's surplus of red wine grapes. The continually larger plantings in nearly every year until 1975 reflects both the growth of the Finger Lakes wine industry and the desire of many growers to increase their grape acreage in that era.

The planting history in the Chautaugua-Erie Grape Belt was substantially different. (See Figure 28.) There have been cycles in new vineyard acreage, with the peak activity in the mid-1960's. To understand these cycles, it is best to discuss them individually:

1) 1955-1964. New plantings slowly increased during this period and were almost entirely Concord.

2) 1965. The good profitability of previous years sparked a dramatic increase in Concord plantings, much of it uncommitted to any processor.

3) 1966-1970. The level of plantings declined somewhat from the levels of the early 1960's. Concord plantings fell significantly, and plantings of Catawbas (for Gold Seal primarily) increased, as did plantings of Niagaras, Delawares, and White French Hybrids on a smaller scale.

4) 1971-1974. Total plantings again trended upward as processors and growers reacted to the shortages of the late 1960's and early 1970's. Concords were a substantial amount of this increase, while Niagaras and red French Hybrids also shared in it. Plantings of white Hybrids were very low.

5) 1975-1980. Grape plantings declined sharply to the lowest level of the last twenty-five years in response to depressed profitability and grower pessimism about the future.

Table 41. The Changing Variety Mix in the Lake Erie Grape Belt and Finger Lakes, 1956-80

	1956-60	1961-65	1966-70	1971-75	1976-80	1980	Percent Change 1956-60 to 1976-80
				Chautauqua/Erie Grape Belt			
Tons of Grapes Produced							
Concord	55,478	67,867	63,995	83,000	86,058	95,773	+ 55%
Niagara	222	870	1,485	2,252	2,211	2,679	+896
Catawba	3	15	311	1,715	2,127	1,755	LARGE
Delaware	233	467	1,081	1,665	1,636	1,480	+602
French Hybrids	2	14	171	1,033	1,416	1,558	LARGE
All Others	951	1,320	859	775	709	784	- 25
Total	56,889	70,553	67,902	90,440	94,157	104,029	+ 65%
Percentage of Grapes Produced by Variety							
Concord	97.5%	96.2%	94.2%	91.8%	91.4%	92.1%	
Niagara	.4	1.2	2.2	2.5	2.3	2.6	
Catawba	a	a	.5	1.9	2.3	1.7	
Delaware	.4	.7	1.6	1.8	1.7	1.4	
French Hybrids	-	a	.2	1.1	1.5	1.5	
All Others	1.7	1.9	1.3	0.9	0.8	.7	
				Finger Lakes			
Tons of Grapes Produced							
Concord	17,910	19,920	20,211	23,936	19,778	18,324	+ 10%
Niagara	858	1,313	2,221	2,821	3,083	3,672	+259
Catawba	2,697	3,445	4,779	6,488	7,653	8,667	+184
Delaware	1,462	2,017	2,936	3,590	2,733	3,423	+ 87
French Hybrids	332	1,152	3,051	7,116	11,483	12,761	LARGE
All Others	2,313	3,017	3,797	4,133	4,132	5,128	+ 79
Total	25,572	30,864	36,995	48,084	48,862	51,975	+ 91
Percentage of Grapes Produced by Variety							
Concord	70.0%	64.5%	54.6%	49.8%	40.5%	35.2%	
Niagara	3.4	4.3	6.0	5.9	6.3	7.1	
Catawba	10.5	11.2	12.9	13.5	15.7	16.7	
Delaware	5.7	6.5	7.9	7.4	5.6	6.6	
French Hybrids	1.3	3.7	8.3	14.8	23.5	24.5	
All Others	9.1	9.8	10.3	8.6	8.4	9.9	

a. Less than .05 percent

Source: "Survey of Wineries and Grape Processing Plants - New York," New York Crop Reporting Service, various years.

These varied experiences reflect the Grape Belt's continued heavy reliance on its established juice industry and its more established nature. Its experience with Catawbas for wine was discouraging as many of them came into full production only to find that the anticipated home (Gold Seal) no longer needed them. Changes in overall Concord plantings reflect growers' optimism regarding the future of the Concord industry - that optimism peaked in 1965, enjoyed a brief resurgence in the early 1970's, and has been on the downslide since then. Ironically, Concord continues to be the major variety planted right up to the current time.

The Changing Variety Mix for the New York Wine Industry

The unfermented grape industry has always been, and to this day, is centered around the Concord grape. In recent years, the introduction of white juice products has created a home for some Niagaras in the unfermented product industry, but the mix still remains Concords with 97 percent and Niagaras with one percent of New York's unfermented product utilization in 1980.

The New York State wine industry has made some significant shifts in terms of its variety mix processed:

	Percent of Grapes Crushed for Wine by New York Wineries				
	1956-60	1961-65	1966-70	1971-75	1976-80
Concord	46.9%	46.1%	43.8%	52.7%	45.1%
Niagara	10.1	12.2	15.9	8.8	9.0
Catawba	15.8	14.2	13.4	12.4	14.4
Delaware	10.8	9.6	8.8	6.9	5.6
Elvira, Ives & Dutchess	10.4	10.8	5.3	3.0	4.5
French Hybrids	1.9	4.7	7.8	12.3	18.0
Other Varieties	4.2	2.4	4.9	3.9	3.4
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: "Survey of Wineries and Grape Processing Plants - New York," New York Crop Reporting Service, various years.

. . . . .

Perhaps what is most significant, however, is that Concords have not changed that much in terms of their relative importance. They enjoyed a surge in the early 1970's due to their popularity for Cold Duck production, but have fallen off since the Cold Duck fad passed away. New York Concords are used primarily for kosher Concord table wines and related specialty wines, ports, and sherries. The "comers" in New York wine production have been the French Hybrids, used primarily for generic and varietal table wines, which have grown to 18 percent of the New York wine industry's variety mix. Elvira, Ives, and Dutchess (blending and/or varietal table wines) have fallen in importance as has Delaware (champagne and table wines). Both Niagara (white table wines) and Catawba (champagne and table wines) have retained approximately the same relative position. Again, these trends have bearing on the difficulties of recent years.

Concord is still the dominant grape in New York production, but the wines for which it is used are either no-growth or declining categories. The champagnes in which Catawba and Delaware figure so prominently went through a period of slow-growth in the mid-1970's, although the last several years have seen a renewal of growth. White table wines have been the "boom" market, but Niagaras have been in short supply with the unfermented product industry also demanding them.

French Hybrids have also had their problems in the late 1970's. The basic premise behind the heavy plantings of French Hybrids in the late 1960's and early 1970's was sound: it was to produce grapes from which could be vinted quality table wines with the subtle character of European and California wines. Three things upset the success of these French Hybrid plantings:

1) They produced more heavily, especially the red wine varieties, than had been anticipated. New York processors who had contracted for them found that they had more grapes than they could successfully market as wine.

2) At about the same time as New York was planting French Hybrids, California was engaged in a massive overplanting of grapes, especially red varieties. Their overplantings began bearing at about the same time as New York's French Hybrids did. New York wineries were faced with the task of marketing more of a relatively new product, French American Hybrid table wines, when California was flooding the market with an attractively priced product that was more familiar to the consumer.

3) As was seen earlier, the trend towards white wines extends clearly back to the early 1960's. Few people in the American wine industry recognized it until white wine actually surpassed red wine consumption in the mid-1970's. The New York processors who contracted for and/or encouraged the planting of French Hybrids clearly missed the trend, but almost all of their California counterparts did also. Again, New York vineyards came into production with unfamiliar red hybrids that produced more heavily than anticipated in the midst of a red wine glut and a white wine boom in the mid-1970's. The mix of white versus red French Hybrids was:

Percent of New York's French Hybrid Tonnage Utilized

	1974	1975	1976	1977	1978	1979	1980	1981
Red	46%	52%	52%	59%	46%	49%	47%	39%
White	54	48	48	41	54	51	53	61

Source: "Survey of Wineries and Grape Processing Plants - New York," New York Crop Reporting Service, various years.

. . . . .

Based on the wine market of the late 1960's, this was a good mix. By the mid-1970's, it was clearly not sychronized with what the American consumer was buying.

Changes in the New York Wine Industry

The 1960's and early 1970's were periods of rapid change and growth for most of New York State's wineries, as has been shown in several places earlier in this report. The period since 1974 has basically been one of stagnation as many of these wineries' basic wine products encountered either level or declining sales which left the wineries with excess production capacity and excessive inventories. Winery storage capacity is one indication of processors' degree of optimism and plans for the future, and the trends shown in Table 42 document the changes in processor optimism over the past fifteen years.

The late 1960's were clearly a period of winery expansion and optimism, but the early 1970's were even more so. During this period (1970-75), every major winery increased capacity and the largest of all, Taylor/Great Western doubled its capacity. It is clear that the wineries built capacity to handle the grapes that they were encouraging or contracting with growers to plant during this period. The stagnation of the last five years is also readily apparent with only one major expansion at Canandaigua and only one other, relatively modest, at Taylor. Most of these wineries today have excess capacity, some of which may be occupied by excess inventory.

Table 42. Changes in Wine Storage Capacity at Major New York State Wineries, 1965-1980

	Storage Capacity (1,000 Gallons)				Percent Increase		
	1965	1970	1975	1980	1965-70	1970-75	1975-80
Canandaigua	3,000	5,000	6,500	12,000	+ 67%	+ 30%	+85%
Hammondsport	-	400	500	500	-	+ 20	-
Taylor/Great Western	8,782	13,929	28,100	31,300	+ 59	+102	+11
Gold Seal	1,000	2,500	3,000	3,000	+150	+ 20	-
Widmers	2,500	2,500	4,000	4,000	-	+ 60	-
Total Above	15,282	24,329	42,100	50,800	+ 59%	+ 73%	+21%
Fredonia Products	1,500	1,500	4,750	4,750	-	+216%	-
Monarch (Manischevitz)	3,000	3,000	3,500	3,500	-	+ 17	-
Total - All of Above	19,782	28,829	50,350	59,050	+ 46%	+ 75%	+17%

Source: "Wines and Vines Annual Directory." Copyright © The Hiaring Company, 1981. Used by permission.

A Chronology of Events, 1965 to 1980

The numbers and trends reflect changes over time, but obviously do not capture the events, thoughts, and decisions that created the changes. For this reason, it is helpful to look at some of these in order to better understand how the New York grape industry arrived at today's position. To a certain extent, such analysis is "Monday morning quarterbacking," but it is helpful in understanding the past, present, and hopefully the future of the New York grape industry.

1965

The average New York grape grower was in the midst of a profitable era as gross income per acre was rising due to both rising prices and improving yields. The 1965 crop itself was a record-setter despite some harvest problems in the Grape Belt. National Grape had owned Welch for ten years. Their annual report noted the need for greater advertising and promotion expenditures due to a highly competitive market for grape juices and drinks. In a talk at the New York State Horticultural Meeting, Philip Wagner made the following points:

1) "The biggest potential is in dry red, white and rose table wines."

2) The New York State wine industry "ought to reduce their (wines') New York character somewhat if it is to increase its share of the mass market."

3) He quotes one winery man as telling him, "I do not recommend the planting of Concord grapes for wine or juice now. They were in over-supply a few years ago and will be again in over-supply when Florida oranges are back to normal."

4) He advises that, "there is a need for small-scale producers to pace the big commercial wineries, and I can assure you that the big fellows would welcome them."

1966

Another good crop was harvested with outstanding quality Concord juice. Welch noted keen competition in the marketplace for their products and the introduction of new products at low prices by their competitors. Grower profitability sagged as grape prices dipped and inflation increased costs.

1967

New York set another record for crop size, despite harvest problems in the Grape Belt. Grower profitability again declined. At the New York State Horticultural Society, S. E. Keech of National Grape warned:

> "Beginning in 1963, it became apparent that Concord grape plantings were increasing, and in 1964, substantial new plantings were made, especially in New York, Pennsylvania, and Washington. By 1965 it was obvious that plantings had far exceeded processing requirements and 1966 saw still more new vineyards established."

"It is disturbing to note that a considerable acreage of the new plantings made during the past 3 year period are not under processor contract and, therefore, can be considered as speculative undertakings."

"With a potential of 50 to 60 thousand additional tons of Concord grapes available in the next 3 to 5 year period, we can only conclude that a serious surplus situation is imminent unless substantial new markets are found."

In its annual report, Welch reported lower returns for its products caused by reduced prices on fruit drinks and bottled juice, reduced frozen concentrate sales, and other factors.

1968

Dramatically smaller crops in all of the eastern Concord states reduced the crush for unfermented products to the lowest level since 1959. In New York State itself, the unfermented crush was down by 30 percent from the previous year.

There were the beginnings of a "Cold Duck" fad nationally. Concord juice was highly prized by winemakers for vinting this sparkling wine product.

Assistant Commissioner Daniel M. Dalrymple of the New York State Department of Agriculture and Markets reviewed "bearish" factors in the New York State grape industry and possible solutions in an address to the New York State Horticultural Society. He noted that, "by the fall of 1967 it was clear to anyone that trouble was here and accelerating. It was certainly apparent to the grape industry." He discussed the pros and cons of a number of possible solutions including establishment of a minimum brix level, establishment of a marketing order for promotion by the non-cooperative portion of the industry, and establishment of a national marketing order for supply management. He concluded with a call for a national study committee of Concord growers to develop proposals for national industry action.

At the same meeting, Thomas Chadwick of the Taylor Wine Company projected that the use of Concords for wine would continue to increase, but at a rate much slower than for most other wine varieties. He noted the close supply/demand balance for most wine grape varieties and implored growers to plant only in coordination with a processor.

1969

The unfermented product grape crush dipped even lower than the previous year due to poor crops along the Lake Erie Grape Belt. Because of the short 1968 crop, Welch allocated (restricted) bottled grape juice to its customers for the first time in its history. Their frozen concentrate sales continued to be strong.

The Cold Duck boom continued to take off. Nationally, the consumption of the "champagne and sparkling wine category" (which includes Cold Duck) increased by 24 percent over a year earlier.

A Cornell University study projected that between a base period of 1963-1967 and 1985:

1) New York grape production would increase 86 percent or 3.15 percent annually.

2) Its grape acreage would increase 11 percent or 0.52 percent annually.

3) Its grape yield per acre would increase 67 percent or 2.60 percent annually.

4) New York's grape crush would increase 89 percent or 3.23 percent annually.

In a speech to the New York State Horticulture Society, William J. Kuhrt (retired Chief Deputy Director of the California Department of Agriculture) observed that "with the acreage of Concords and other Eastern types now planted, given two or three seasons of good production and with present consumption, you would have an oversupply sufficient to demoralize grower prices and leave unmanageable surpluses." As had Dalrymple a year earlier, Kuhrt called for a national marketing order for research and promotion and reiterated the call for a national committee to study this. He also called for a cooperative bargaining association of non-cooperative growers to negotiate prices with proprietary processors.

1970

Nationwide, the crop recovered to levels typical of the mid-1960's. Because of the second poor crop in a row in 1969, Welch continued its retailer allocations of single-strength grape juice.

The consumer fad for Cold Duck hit its peak - total consumption in the sparkling wine category increased 35 percent over the previous year. New York wineries' demand for Concords reflected this - in 1969 their tonnage processed increased by 47 percent over 1968, and in 1970 it increased another 20 percent to a level better than double that of the mid-1960's. In Washington, National Grape Cooperative entered into a 13-year contract with Allied Grape Cooperative of California for National's Washington members to plant Concords for delivery to United Vintners of California. E. and J. Gallo Winery of California entered into a similar Concord supply arrangement with another Washington grape cooperative.

At the New York State Horticulture Society meeting, Professor B. A. Dominick of Cornell again sounded notes of caution regarding Concords. He noted the slow market growth for sweet Concord juice, the heavy competition from other fruit juices, the high retail prices of Concord juice, the expanding production of Concords in New York State, and the need for expanding all Concord markets.

Gilbert Smith, Cooperative Extension Grape Industry Specialist for the Finger Lakes region, commented on the outlook for wine grapes at the same meeting. Some key points were:

1) "All of the major wineries in the Finger Lakes area have expansion plans under way. Each of them plans to press more grapes and produce more wine in the future than the current local supply of grapes and their present facilities permit. The pressure to expand is coming from their sales department who report growing markets for New York State wines."

2) The need for new plantings to be made, "only on the basis of a firm committment by and to a reliable processor."

3) " . . . there is no need for new plantings of Concords to meet their (wineries') future needs."

4) "Dry red wines are reported to be one of the most rapidly growing segments of the New York State wine industry."

5) "Processors are interested in limited plantings of a wide number of varieties. These include: Foch, Baco #1 (Baco Noir), Seibel 1000 (Rosette), Siebel 5279 (Aurora), Siebel 10878 (Chelois) and Siebel 13053 (Cascade). Siebel 9549 (De Chaunac) has become an important red wine variety in the province of Ontario and processors are now interested in having some planted here. You will note that most of the French Hybrids I have mentioned are red wine varieties."

1971

The crush of grapes for unfermented products jumped 35 percent from the previous year as New York, Washington, Pennsylvania, and Michigan harvested record crops. Welch processed its largest crop ever and had ample supplies of all its products throughout the year. The Cold Duck boom neared collapse with only an eight percent increase in the consumption of sparkling wines.

1972

The size of the unfermented product grape crush returned to 1968-69 levels as New York had a disastrous crop and Washington, Pennsylvania, and Michigan all had substantial declines. Welch processed its smallest crop in 15 years.

The Cold Duck boom had now become a collapse as consumers went on to other wines. Concord juice that had found a home in the wine industry during the past four years now had to find a new home. Consumption of sparkling wines declined until 1974 as Cold Duck sales collapsed.

Sales of Welch products were hurt by competitive pressures in the marketplace - other processors had ample supplies from the 1971 crop bought at relatively low cash prices. National Grape Cooperative announced a 30,000 ton Concord planting program to be completed by 1973, equivalent to a 22 percent increase over Welch's 1969-71 tonnages.

At the New York State Horticulture Society meeting, Professor J. P. Tompkins of Cornell stated:

> "I agreed 100% with the comments by Mr. Keech (at the 1966 meeting), but fate played a strange trick on our prediction. There was a marked increase in use of Concord in a new product called Cold Duck. We had several short crops of Concords and now I am of the opinion that our Concord industry was hurt by low production and low supply prior to 1971."

He also noted the pressure for expanded grape acreage:

> "Grape growers in New York State during the past twenty years have made more money and made it easier than any other segment of our fruit industry." "A major explosion in grape planting could occur, and I believe it is most likely to occur in Washington with the Concord variety."

He concluded on some pessimistic notes:

> "The competition for the Concord grower will be very strong during the next 10 years." "The extensive speculation and over-planting could have a real depressing effect on Concord prices throughout the nation."

1973

The unfermented grape product crush declined still further to the lowest level since 1957 due to poor crops in the Lake Erie Grape Belt and a crop disaster in Michigan.

National Grape/Welch was faced with a two-sided squeeze. Welch was strained to make sufficient products available to its customers. In March, some 2,100 acres of National Grape contracts were cancelled by National growers, much of it in New York State. In the midst of its second supply shortage in six years, National Grape initiated a planting program for 4,500 acres of Concords in the East, 1,000 acres of Niagaras in the East, and 1,000 acres of Niagaras in Washington. Its goal was to increase from 29,500 bearing acres contracted in 1973 to 37,000 acres by 1975, a twenty-five percent increase.

1974

The pendulum swung once more and the national crush for sweet juice products returned to a more typical level.

Product shortages forced Welch sales down substantially in 1974. As a further refinement of the planting program, National members in the East were offered the opportunity to plant or place under contract additional Concords and Niagaras. Washington members were allowed to plant 1,000 acres of Concords and 1,700 acres of Niagaras. National also encouraged its members to convert to the Geneva Double Curtain system of cane training in order to increase yield per acre.

New York's plantings of French Hybrids during the early 1970's, much of it in red varieties, began to make itself felt. There was a 52 percent increase in French Hybrids crushed over the prior year.

1975

Another good-sized crop of grapes for sweet juice production was harvested. Welch processed its second-largest crop ever. After the first quarter of the year, Welch was able to take several products off allocation to its customers. Case sales of Welch products increased substantially over the prior year.

The U.S. wine industry discovered itself to be in the midst of a wine glut, especially of red table wines. The French Hybrid crush continued to increase, posting a 24 percent gain over the prior year. Ominously, Taylor changed its grower contracts to permit allocation of its needs - it was no longer obligated to take all of the grapes that grew on the contracted acreage.

1976

For the third year, there was a larger supply of grapes to be crushed for unfermented products. Welch set a record for sales of grape concentrate and increased its sales of bottled grape juice. In their annual report they warned that, "with a 1976 harvest of 140,000 tons of Concord grapes and indications of larger crops in future years, we are entering a period in which the Concord industry will be faced with excess tonnage."

While the French Hybrid crop leveled off, Taylor exercised its allocation option for the first time, pushing previously contracted grapes into the cash market.

That fall, it was announced that Taylor/Great Western would be merged into Coca-Cola, Inc. of Atlanta, Georgia. This actually occurred the following January.

1977

A drastic decline in the size of the grape crop and the unfermented crush occurred due to weather problems in the Lake Erie Grape Belt. Welch increased sales of all of its juice products, including bottled juice, frozen concentrate, and chilled juice.

Production of wine varieties, including French Hybrids, was down substantially and thus the pressure was off the wine industry - temporarily.

Under new Wine Spectrum ownership, a stepped-up advertising program was introduced for Taylor wines.

1978

Outstanding crops in nearly all of the Concord states pushed the crush of grapes for unfermented products to a new record, 18 percent above the previous record in 1971 and 86 percent above the 1977 crush. Of special note is Washington's record crop which increased its crush by 77,000 tons or 77 percent over 1977, itself a relatively normal crop year for Washington.

Welch processed a record crop in 1978, and for the first time since 1971, its storage tanks were full at the conclusion of the 1978 crush.

New York's French Hybrid production set a new record, with the crush of these grapes up 45 percent from the previous record in 1975.

1979

A severe winter freeze drastically reduced Washington's Concord crop (by 44 percent), but other major Concord states continued to produce at levels close to those of 1978. While the crush for unfermented products fell by 22 percent, it was still the third highest ever and came on the heels of the highest ever.

Welch sales increased modestly overall due to competitive pressures in the marketplace. National's eastern acreage was quickly increased by 10 percent or 3,050 acres through bringing existing acreage under contract and new plantings. Nonmember patron agreements for additional grape deliveries during crop years 1979-81 were also approved. Finally, Welch purchased the 1979 Concord crop under Taylor contract in Chautaugua and Niagara Counties.

Taylor exercised its allocation option on red varieties, turning away an estimated 40 percent of the red French Hybrids and 50 percent of the Concords that it had under contract - aside from the Concords diverted to Welch.

1980

For an unprecedented third year in a row, the U.S. crush of grapes for unfermented products was of record proportion - the second largest crush ever. Previously burdensome inventories became even more glutted.

Welch increased its sales of all product categories, but noted in its annual report, "substantial extra expense was incurred to move additional patron tons, as competition from private label and generic products required the use of increased promotional allowances."

Early in the year, Taylor dropped some growers from their contracts, especially in Niagara County. According to Taylor, those dropped were vineyards that were of marginal quality or marginally managed. It also picked up new acreage, primarily white wine varieties from better growers in the Finger Lakes region, that had previously been contracted to Gold Seal and Widmers. In the summer, it announced that all red wine varieties and Concords would continue under contract allocation.

. . . . .

In retrospect, it appears that several knowledgeable and influential people had the foresight to forecast today's problems as much as fifteen years ago. Unfortunately, the lean crop years of the late 1960's and the early 1970's, as well as the Cold Duck fad, temporarily reversed the Concord industry's long-term trend towards oversupply. It is easy for the "Monday morning quarterback" to conclude that the major New York processors overreacted to the market fundamentals during the early 1970's. Of course they were aided by New York growers who were eager to expand grape acreage. Beyond this, however, are circumstances that must be kept in mind when judging these issues:

1) Between 1969 and 1974, Welch had four years in which product shortages were a problem. For a consumer marketing firm in an extremely competitive market (fruit juices), this type of situation is extremely detrimental as it quickly undoes long-term efforts to secure retail shelf space and build consumer and retailer loyalty. In this context, it is not surprising that Welch responded with a grape acquisition program and that a "shortage mentality" pervaded its corporate thinking until very recently.

2) Taylor and other upstate wineries may have misjudged the market demand for red table wines in the early 1970's and missed the emerging trend towards white wines. The rest of the United States wine industry made the same mistake, but the impact was especially hard on Taylor and its growers as they were trying to market what was essentially a new product, red wines from French Hybrids, in a glutted market of products familiar to the consumer. To make a bad situation worse, the red Hybrids yielded far better than had been anticipated. The original judgement to lead New York into the dry table wine area was basically sound, but the decision on table wine color did not turn out to be.

The Message in Grape Prices

If the markets are functioning smoothly, changes in grape prices for different varieties over a period of years should be providing a message to growers as to the desirability of different varieties from a marketing standpoint. This is a big "if" in the New York grape industry as two firms dominate the pricing structure:

1) National Grape/Welch members' grapes are never priced in the open market and are paid on a "net proceeds" basis over a period of time. Welch is the largest processor of Concords nationally and in New York State. In a much smaller way, the same consideration holds for other grape cooperatives in New York, Washington, and Pennsylvania.

2) For many of the wine grape varieties, the Taylor Wine Company buys a very large proportion of New York's total production and thus they virtually determine the state price for them. Historically, they have paid better than other processors with greater stability in their pricing structure. Taylor buys approximately a quarter of the New York State grape crop and probably more than one-half of the non-Concord varieties.

Despite these considerations, the price trends shown in Table 43 provide some interesting comparisons. If the 25-year trend is considered (1956-80), there is very little difference among the varieties, the range being an average annual increase of 3.3 percent for the French Hybrids to 4.5 percent for Ives. The ten-year trend is far more revealing (1970-80) - processors have obviously favored Delaware (+5.5 percent average annual increase), French Hybrids (+4.2 percent), and Dutchess (+4.0 percent). At the other end of the spectrum, a pessimistic price message is being sent for Ives (+1.5 percent), Catawba (+1.7 percent), and Concord (+1.7 percent). By comparison to price increases for other varieties, increases in the cost of production, or the rate of inflation in the economy, these varieties have done very poorly over the past ten years. This reflects the poor demand/supply relationships for Concord, while the Catawba situation reflects the lingering impact of overplanting in the late 1960's.

Table 43. Prices Paid by Grape Variety by New York Grape Processors, 1956-1980

	Concord	Niagara	Catawba	Delaware	Elvira	Ives	Dutchess	French Hybrids
Average Price Per Ton								
1956	$ 74	$ 88	$137	$175	$ 93	$150	$180	$157
1960	102	110	157	179	116	175	190	166
1965	103	124	165	198	129	200	200	172
1970	156	179	239	245	173	370	305	227
1975	171	198	271	330	199	397	424	309
1980	185	248	282	417	221	430	453	342
Average Annual Rate of Change								
1956-1960	+8.3%	+5.7%	+3.5%	+0.6%	+5.7%	+ 3.9%	+1.4%	+1.4%
1960-1965	+0.2	+2.4	+1.0	+2.0	+2.1	+ 2.7	+1.0	+0.7
1965-1970	+8.7	+7.6	+7.7	+4.4	+6.0	+13.1	+8.8	+5.7
1970-1975	+1.9	+2.0	+2.5	+6.1	+2.8	+ 1.4	+6.8	+6.4
1975-1980	+1.6	+4.6	+0.8	+4.8	+2.1	+ 1.6	+1.3	+2.0
1956-1980	+3.9%	+4.4%	+3.6%	+3.7%	+3.7%	+ 4.5%	+3.9%	+3.3%
1965-1980	+4.0	+4.7	+3.6	+5.1	+3.7	+ 5.2	+5.6	+4.7
1970-1980	+1.7	+3.3	+1.7	+5.5	+2.5	+ 1.5	+4.0	+4.2

Source: "Survey of Wineries and Grape Processing Plants - New York," New York Crop Reporting Service, various years.

Considering the trend for only the most recent five years, (1975-80) a somewhat different pattern emerges. Delawares and now Niagaras stand out as receiving the largest price increases. Catawba, Dutchess, Ives, and Concord have received the smallest price increases. French Hybrids as a category received the fourth largest increase, 2.0 percent annually which is also a discouraging rate given that it is only slightly higher than Concord, substantially less than Delaware and Niagara, and substantially lower than increases in the cost of production. (See Table 1 on Page 6.) However, this average obscures two very important signals. During the past five years, average annual price increases for the two major white French Hybrids (Aurora and Seyval Blanc) have averaged 5.6 percent, higher than even Delaware and Niagara. At the same time, prices for the seven major red French Hybrids (Baco Noir, Cascade, Chelois, De Chaunac, Foch, Rougeon, and Rosette) declined by an average of one percent annually.

It is also interesting to note that the last major era of favorable Concord price increases was the short crop/Cold Duck era of 1965-70. The lingering price effects of overplanting to a particular variety can be seen in the case of Catawba which saw its last major era of strong price increases in the late 1960's.

A good case could be developed that in the absence of the unique pricing situations that apply to National Grape/Welch members and Taylor growers, the price signals would have been even stronger, especially the negative signal on Concords. Nonetheless, the price signals that do emerge correspond to the market fundamentals that are applicable to the New York grape industry.

THE NEW YORK GRAPE GROWER

The New York grape industry is characterized by two distinct groups of grape growers - the commercial growers who depend on grapes and sometimes other crops for a full-time living and the part-time growers who grow small acreages as a supplemental income or as a hobby. The 1975 "New York Orchard and Vineyard Census" reported 2,153 grape growers throughout New York State with 55 percent in the Lake Erie Grape Belt and 29 percent in the Finger Lakes region. Of the state total, there were 1,512 farms with less than 20 acres of grapes which would primarily be the part-time segment. This group accounts for 70 percent of the farms and 26 percent of the grape acreage, and it has an average of 7.3 acres of grapes per farm. The commercial group, with 20 acres or more, has 641 farms in it. It accounts for 30 percent of the farms with grapes, but 74 percent of the grape acreage. Average grape acreage for this group was 49.3 acres.

The full-time grape farmer group has generally been quicker to adopt new viticultural techniques and, on average, is thought to have higher yields than the part-time group. This group is largely responsible for new grape plantings in the mid-1960's and the early 1970's. Because of the relatively good grape farm profitability of the 1950's and 1960's, the full-time growers were able to operate with relatively lower levels of debt, a factor which has enabled many of them to withstand the economic stress of recent years better than might otherwise have been true. Several other factors have helped to avoid the need for any large exit of growers or acreage from this group during the last five years:

1) A number of the larger commercial operators have operated mechanical harvestors on a custom basis for supplemental income.

2) Some growers have "tightened their belts" and achieved greater cost efficiencies during this period.

3) Some growers have had significant sources of off-farm income other than as custom operators.

4) Some growers have "spent equity" by financing operating losses.

Knowledgeable personnel in this industry feel that some growers have made some economically unjustified cost-cutting measures in recent years - overcropping, reducing spray applications, poorer pruning, less trellis maintenance, etc. Overall grape yield data, to be discussed later, would suggest that this could be true. Some of this cost-cutting is also the early phases of abandonment of unprofitable vineyards for whatever reason.

The part-time grape grower group is characterized by small grape acreages and being primarily dependent on off-farm income, often from jobs in nearby metropolitan areas such as Buffalo and Rochester. Many of these vineyards have been inherited and are operated for supplemental income or as a hobby. This group of growers is less vulnerable and responsive to poor grape industry markets than are the full-time grape growers. Part-time grape growers have generally not had much interaction with the full-time growers, although many of the part-timers do market through one of the co-ops. Many full-time growers express the following frustrations with part-time growers in general:

1) They feel that commercial growers can produce grapes at a significantly lower cost per ton than the part-timers, but that most of the part-timers are immune or unresponsive to the poor economics of their situation. A five acre grower who has a full-time job elsewhere can endure a $100 loss per acre far longer than can a 50 acre full-time grower.

2) Part-time growers have been disinclined to join industry organizations or to work on industry problems. This has been a major factor in the lack of grape industry unity.

Few people "blame" part-time growers for these attitudes, but the part-time grower element must be recognized as an important noneconomic factor in this industry.

Grape Yields

Figure 29 shows New York grape acreages and yields for the 1950-1981 period. For twenty years from 1950 to 1970, New York State grape yields made steady upward progress as improved viticultural knowledge became available to and was adopted by New York growers. The Geneva Experiment Station was at the forefront of this improved knowledge, although the practical research and observation of local Extension grape specialists and processor field staffs such as Taylor, National Grape, and others was also very important. It is quite obvious that Extension and the processor fieldmen were successful in getting the knowledge through to many growers.

During the 1970's, New York State's average grape yield fell off somewhat and stagnated. It is interesting to note that the year-to-year fluctuation in yields was much sharper in the 1970's than in the previous two decades. To be fair, it should be noted that there were two disaster years in the 1970's that severely reduced grape yields - Hurricane Agnes in 1972 and the prolonged wet period in the fall of 1977. Even without these disasters, New York would still have had stagnant yields during the past ten years as illustrated by the following:

Period	Average Yield Per Acre (Tons)		
	Actual	Adjusted	
1962-66	4.04	4.04	
1967-71	4.50	4.50	
1972-76	3.91	4.17	1972 excluded
1977-81	3.85	4.17	1977 excluded

Several factors are probably responsible for this stagnation in yields:

1) Expanded acreage during the late 1960's and the 1970's was often on more marginal sites since the better sites were already occupied by grapes.

2) Most of the expansion was in the Finger Lakes which generally has lower yield potentials than the Lake Erie Grape Belt.

FIGURE 29A.
NEW YORK STATE
BEARING GRAPE ACREAGE, 1950-81

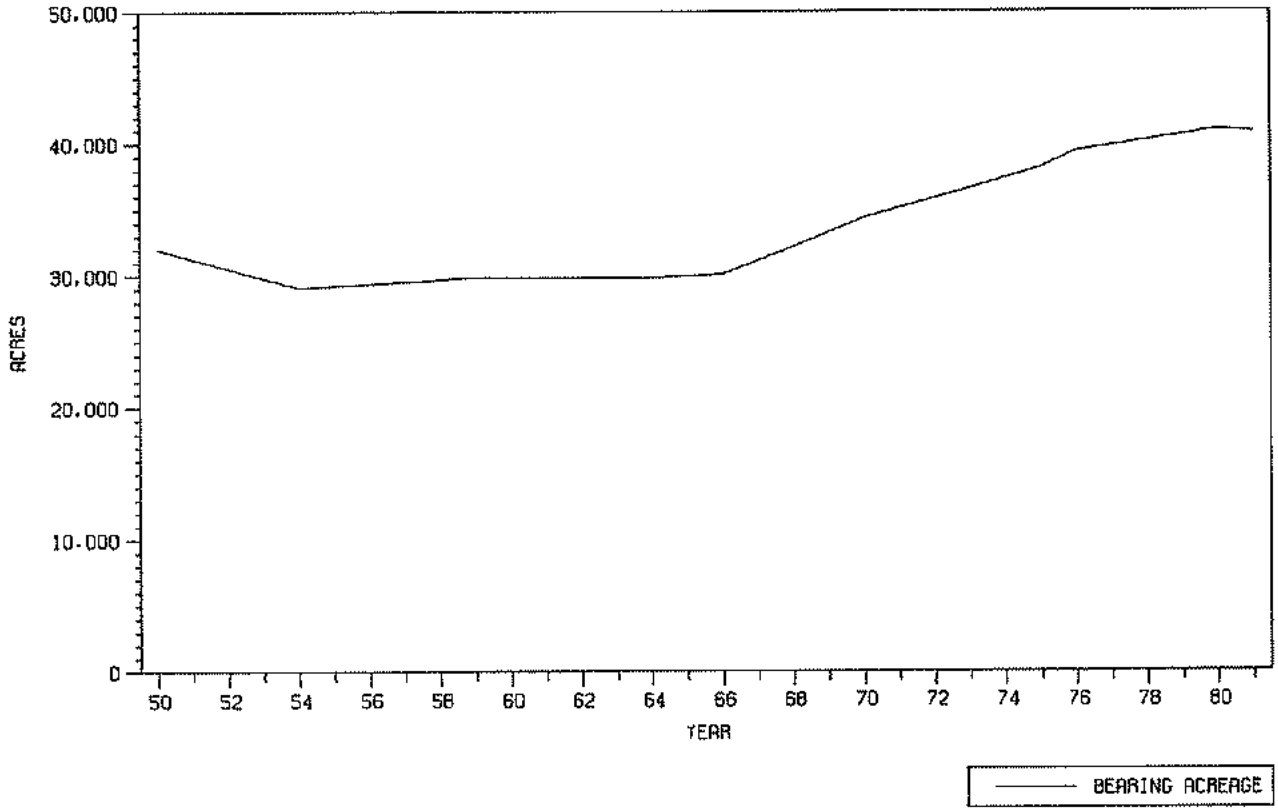
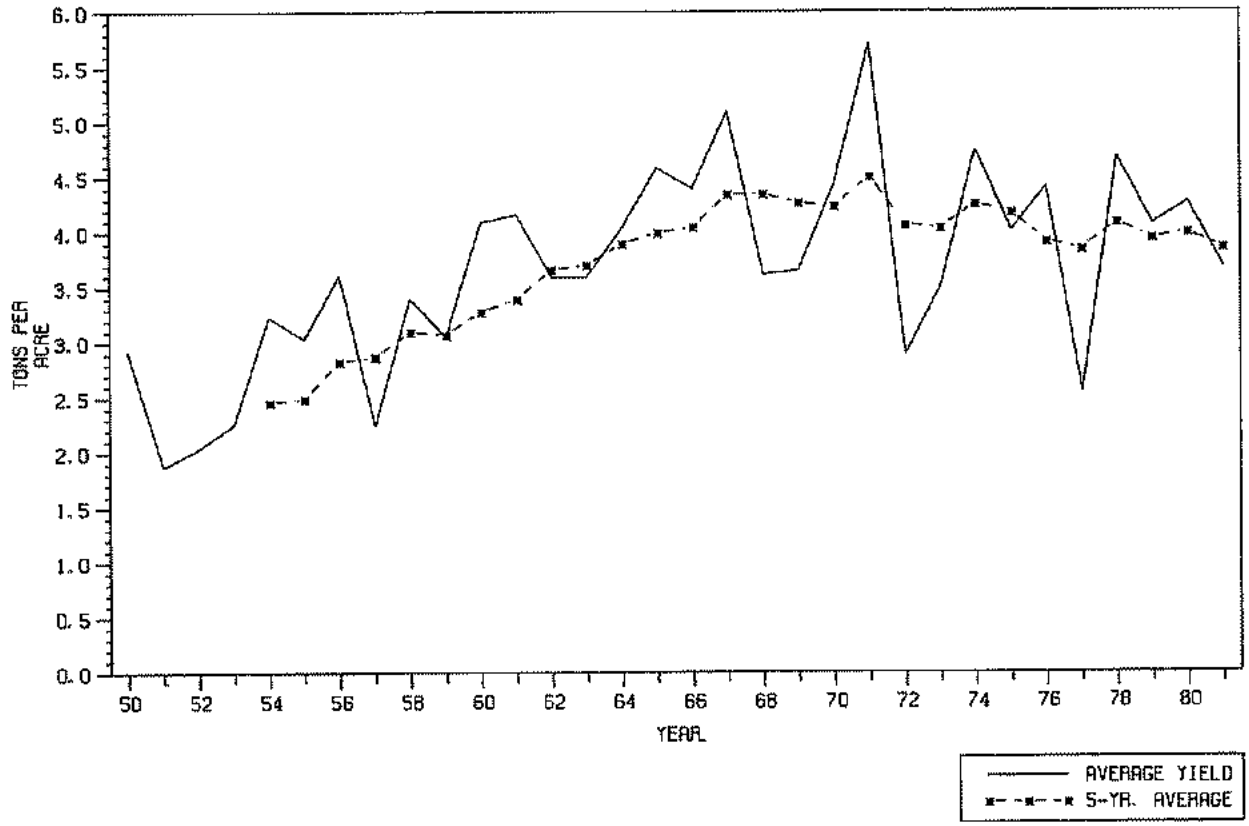


FIGURE 29B.
NEW YORK STATE
AVERAGE GRAPE YIELD, 1950-81



3) During most of the 1970's there were relatively more young grapes bearing, but not at their fully mature potential than there had been in the previous two decades. This should be less of a factor since 1979.

4) Poor grape farm profitability has generally decreased the overall level of vineyard management in the late 1970's, as previously discussed. Some of this represents abandonment of vineyard acreage that is still counted and harvested, but is being deliberately run down.

Offsetting these factors somewhat is the fact that much of the new acreage planted in the early 1970's was French Hybrid varieties that can theoretically out-produce most of the American varieties, e.g. De Chaunac, Aurore, etc.

Table 44 illustrates some of the major yield differences among New York regions and varieties that were referred to above.

Geneva Double Curtain

Since its commercial introduction in the mid-1960's, the Geneva Double Curtain (GDC) viticultural management system has received a great deal of attention for its ability to increase both yields and net income to growers. On the surface, it would seem to be an ideal management option for New York grape growers. The 1975 Vineyard Census showed that GDC had received only modest acceptance as of that time:

	Percent of Grape Acreage in GDC		
	Grape Belt	Finger Lakes	New York State
All Varieties	9.7%	2.7%	6.8%
Concords	8.7	3.2	7.4

It is very likely that these percentages have not changed since 1975 and they could be somewhat lower. Ironically, Erie County, Pennsylvania has adopted this system far more readily with 20 percent of its total acreage on GDC in 1977 (19 percent of Concords on GDC). Its larger growers (100 acres +) have 30 percent of their acreage on GDC.

A 1980 thesis entitled "An Economic Analysis of Geneva Double Curtain Concord Grape Production in the Great Lakes Region of New York" by Andrew Markin, then of Cornell University, concluded:

> "The most significant implication of this research (a grower survey and net present value analysis) has been that GDC can be a profitable investment with appropriate management and renewal systems."
>
> "Several conditions are assumed for this investment analysis. First, shading must be a limiting factor to growth of vines. No hardpans must exist beneath potential conversion acreage. No overcropping of GDC must occur, and a renewal plan must be undertaken to rejuvenate cordons."

Table 44. New York Grape Yields by Area and Variety, 1975*

		Yield Per Acre (Tons)	Percent From State Average
By Region			
Lake Erie Grape Belt		4.22	+ 6%
Finger Lakes		3.88	- 3
Niagara County		2.91	-27
All Other New York		3.54	-11
New York State		3.99	-
By Variety			
American Juice -	Niagara	4.17	+ 5%
	Concord	4.11	+ 3
American Wine -	Elvira	5.76	+44
	Delaware	3.47	-13
	Catawba	3.42	-14
	Ives	2.91	-27
French Hybrid Wine -	Aurore	4.28	+ 7
	Baco Noir	3.32	-17
By Variety and Region			
Concord -	Lake Erie Grape Belt	4.26	+ 4%
	Finger Lakes	3.97	- 3
	Niagara County	2.91	-29
	New York State	4.11	-
Catawba -	Finger Lakes	3.54	+ 4%
	Lake Erie Grape Belt	3.22	- 6
	Niagara County	2.80	-18
	New York State	3.42	-
Niagara -	Lake Erie Grape Belt	5.01	+20%
	Finger Lakes	4.22	+ 1
	Niagara County	3.20	-23
	New York State	4.17	-

*The 1975 crop was slightly below normal with an average yield of 4.01 tons which is within four percent of the 1973-76 average of 4.17 tons.

Source: "New York Orchard and Vineyard Survey, 1975", New York Crop Reporting Service, 1976.

Markin tested his overall conclusion under varying cost, price, yield, and cost of capital conditions, and the profitability of the GDC investment held up well under nearly all of them.

If GDC is a profitable investment alternative, then why has more New York acreage not been converted?

1) As Markin stresses, it is a good alternative only when shading is a limiting factor. In many New York vineyards there are other limiting factors such as soil, vineyard climate, or even grower management ability. Thus, many vineyards are not logically good candidates for conversion.

2) Conversion to GDC places an additional cash flow drain on the farm business in the initial year consisting of about $2,043 per acre for conversion costs and a one ton yield loss per acre (Markin). If the farm does not already have GDC, specialized equipment purchases would necessitate a further outlay. Given already tight cash flows, many growers are reluctant to incur these costs at this time.

3) Geneva Double Curtain requires more intensive management than standard vine/trellis systems and some growers may be reluctant to add complexity to their business.

4) Some growers without co-op marketing agreements have had trouble selling all of their grapes in recent years and thus there is a general reluctance to invest additional funds to produce more grapes for an uncertain market.

5) Some growers have chosen to convert to another relatively new vine training system known as Hudson River Umbrella (HRU) which not only requires less initial investment, but is very compatible with mechanical pruning and grooming equipment. Thus HRU may be a more profitable alternative than GDC while also reducing labor management problems.

6) The general degree of uncertainty about the future of their industry has undoubtedly contributed to some growers' reluctance to convert to GDC.

Both GDC and HRU show promise for eventually helping some New York vineyards and growers to produce grapes at a lower cost per ton. Any improvement of this type will have obvious benefits to the individual grower and to the competitiveness of the entire New York grape industry. However, the uncertainties of the present will probably have to be resolved before there is substantial further adoption of the newer vine training systems, especially GDC.

WELCH FOODS

Welch Foods has a number of distinctions - founder of the unfermented grape juice industry, largest processor of Concord grapes, largest seller of grape juice and spread products, and one of the most well-recognized consumer brands in America. Its impact in the major Concord production states is as follows:

- For the major grape states outside of California, National Grape/Welch accounts for roughly 45 percent of the Concord crop and just over 50 percent of the grapes crushed for unfermented products.

- Welch obtains roughly 35 percent of its grapes in New York State. It is New York's largest processor with over 30 percent of the New York crop, 37 percent of the Concord crop, and 53 percent of the New York grapes crushed for unfermented products. In the Grape Belt, National Grape/Welch is the home for about 45 percent of the grapes produced there. It is a relatively small factor in the Finger Lakes.

- Pennsylvania accounts for about 21 percent of the grapes received by National Grape/Welch. This is very important for Pennsylvania as it accounts for about 65 percent of its grapes that are marketed for unfermented products.

- The other "Eastern Pool" states, Ohio, Michigan, Missouri, and Arkansas, provide roughly 16 percent of the National Grape/Welch crush. National Grape/Welch is even more crucial to these states, providing a home for more than three-quarters of their grapes marketed for unfermented purposes.

- Washington accounts for 28 percent of Welch's grapes, although this figure has been higher in some recent years. Of all the states in which National Grape/Welch operates, its 36 percent share of the Washington crush for unfermented products is the lowest.

A July, 1981 Fitch Institutional Report reported Welch's market share of its major product lines to be 72 percent of all bottled grape juice, 60 percent of all frozen grape concentrate, and 39 percent of all grape spreads. While no data is available with which to track these market shares over time, it is very likely that all three market shares are lower than whey they once were, especially for grape spreads and frozen concentrate.

Welch Foods' 1981 net sales consisted of:

	Net Sales	
	$Million	Percent
Grape Juice	$ 74.6	31.7%
Grape Spreads	48.1	20.4
Frozen Grape Concentrate	41.4	17.6
Grape Drinks	23.7	10.1
Other Grape Products	16.1	6.8
Nongrape Products	31.4	13.4
Total	$235.2	100.0%

Much of the New York grape industry's past and future relates closely to the operating experience of Welch Foods and the National Grape Cooperative. This is especially true in Chautauqua County and for Concord grape growers. A review of National Grape/Welch operating data from their annual reports provides an excellent picture of the business of processing and marketing Concord grape products as well as the changing nature of National Grape/Welch grower returns.

Figure 30A shows Welch's net sales for the past twenty-five years. Much of the rapid growth of sales has been due to inflation. During the entire 1956-81 period, Welch's after-inflation sales have increased at an annual rate of 3.3 percent - substantially better than the 1.8 percent for all U.S. food sales during the same period. The largest gains in after-inflation sales occurred in the late 1950's, the late 1960's and the early 1970's. The lowest growth rates were achieved in the early 1960's and in the most recent five years. These latter figures are further confirmed by Welch's figures on case sales in its Food Store Division:

Fiscal Year	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Case Sales (Million)	20.7	20.7	21.2	18.9	19.8	21.1	21.2	21.3	22.5	18.8

Of course, not all of these cases are grape products, but they do illustrate Welch's difficulties in expanding grape product sales during the past decade. The 1981 decrease reflects cost-cutting measures, e.g. elimination of unprofitable products.

The tonnage of grapes delivered to Welch by National Grape members is shown in Figure 30B. This figure clearly illustrates the lower levels of grape supply in the late 1960's and early 1970's, and the very sharp run-up in grape supply since 1975. Grower deliveries to Welch have averaged 184,570 tons in 1978-81, about 42 percent higher than the 129,680 tons in the previous four years (1974-77). This reflects Welch's efforts to expand acreage throughout the 1970's - from a low of 31,439 acres contracted in 1974, National Grape acreage increased to 36,697 acres in 1981, a net increase of 5,258 acres or 17 percent. The last of the Welch acquisition programs was for 3,050 additional acres in the Eastern Pool states in 1979 - this consisted of a planting program in 1979-82, permanent or three-year contracts on existing acreage, and nonmember patron agreements for the crop years of 1979-81. A return to better yields and an unprecedented four-year string of normal yields has also had a great deal to do with these large crops.

National Grape's share of the U.S. crush of grapes for unfermented products has remained remarkably close to 50 percent during the 1956-1979 period. (See Figure 31A.) There has been a small, but significant trend from the low of about 45 percent of the crush in 1972 to the 1979 level of 56 percent of the crush. This reflects National's efforts to add acreage during the 1970's, as well as less member withdrawals and diverted grapes during the ample markets of recent years. The Eastern Pool (which includes grapes from New York, Pennsylvania, Ohio, Michigan, Arkansas, and Missouri) averaged close to 80 percent of all National Grape tonnages from 1956 to 1975, with the other 20 percent being that of the Western Pool, e.g. Washington. (See Figure 31B.) Since 1975 there appears to be a trend towards a lower share for the East in the 65-70 percent area and a higher share for the West in the 30-35 percent area.

FIGURE 30A.
WELCH FOODS' SALES, 1956-81

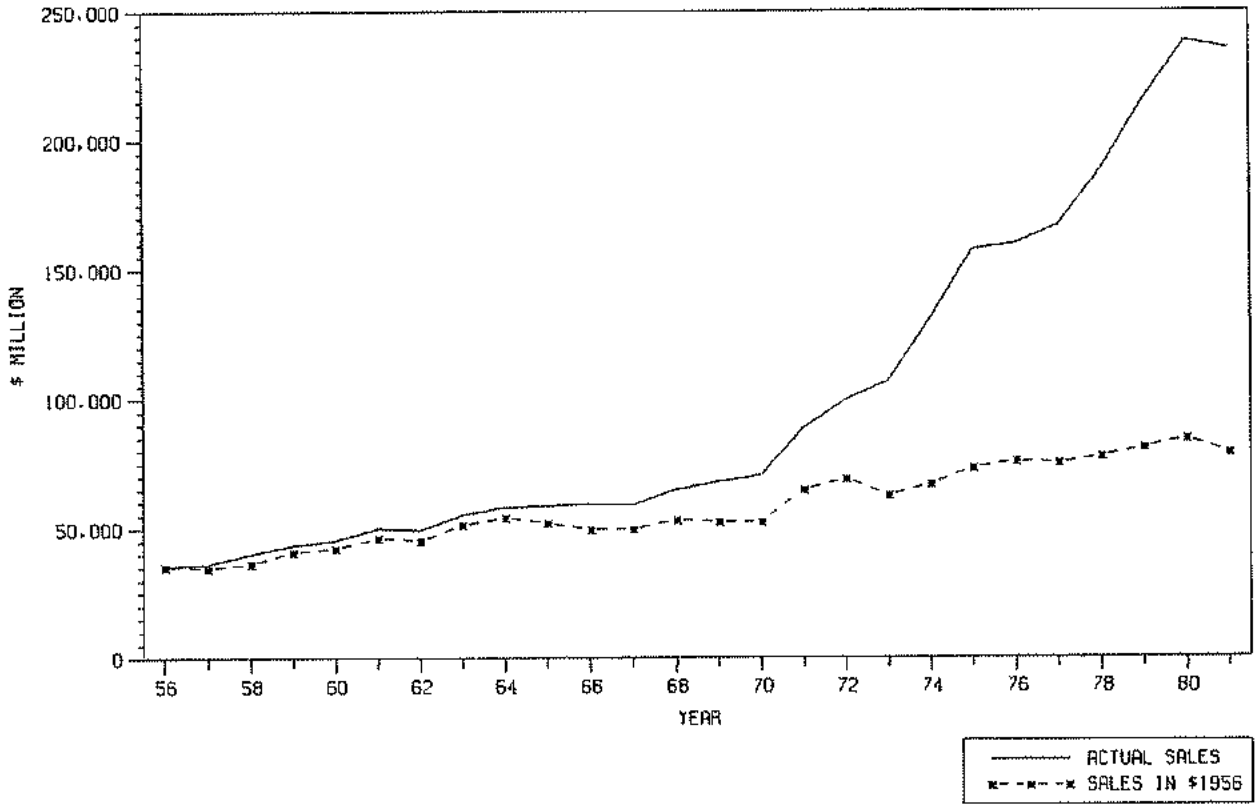


FIGURE 30B.
NATIONAL GRAPE/WELCH MEMBER TONNAGE, 1956-81

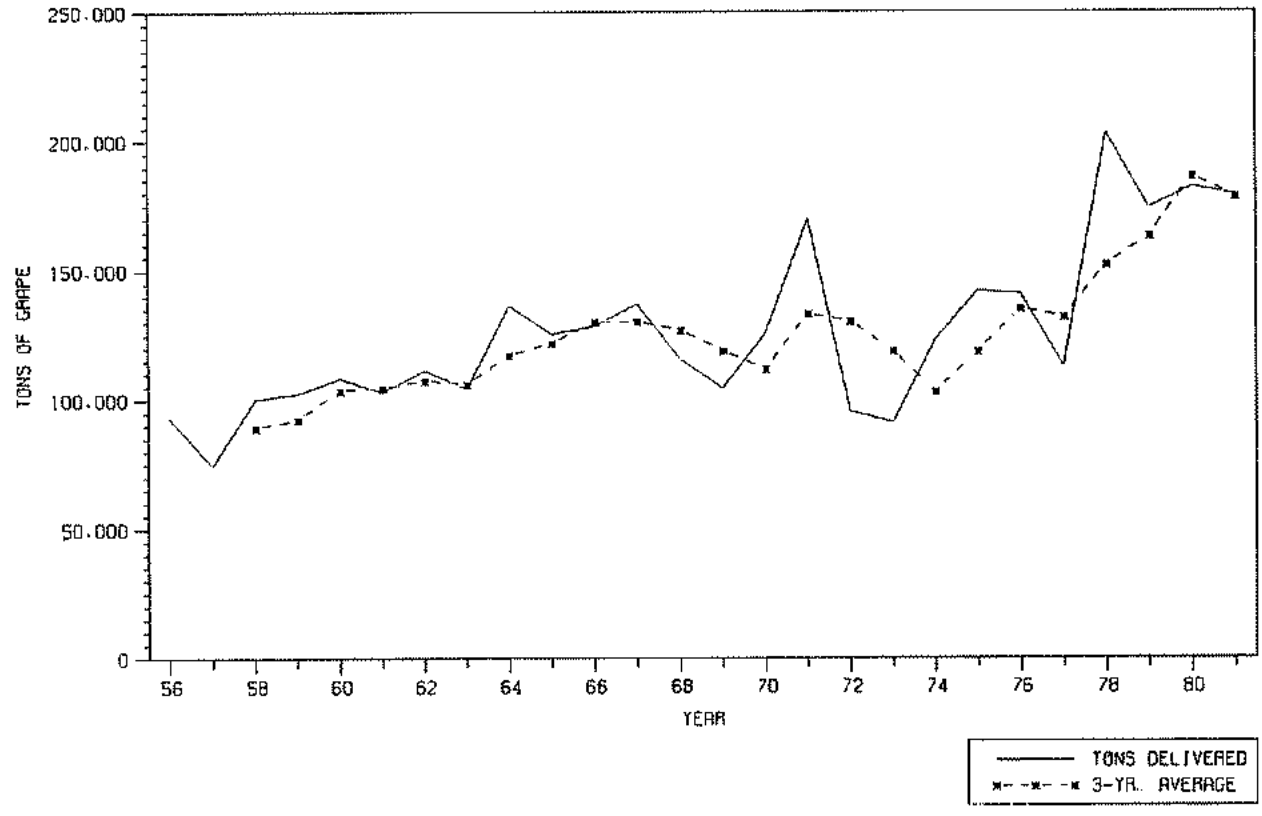


FIGURE 31A.
NATIONAL GRAPE/WELCH TONNAGES AS A PERCENT
OF THE TOTAL U.S. UNFERMENTED PRODUCT CRUSH, 1956-80

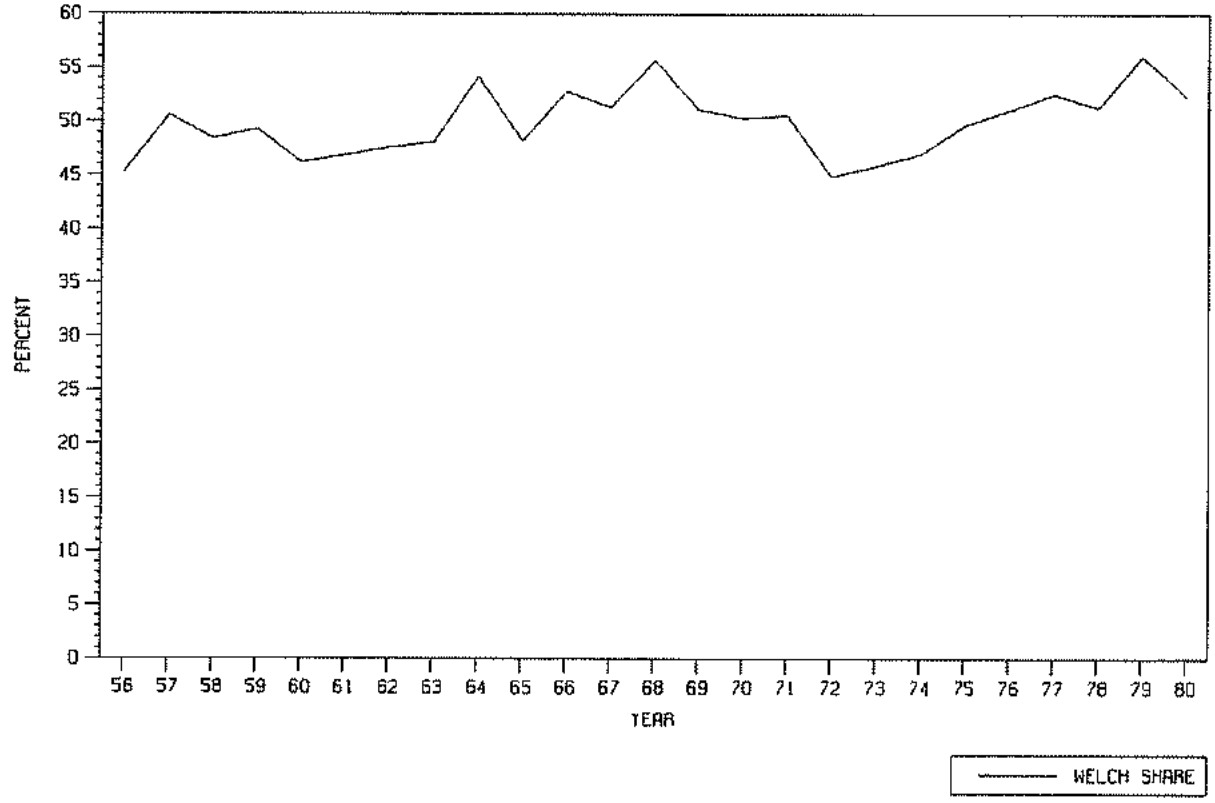
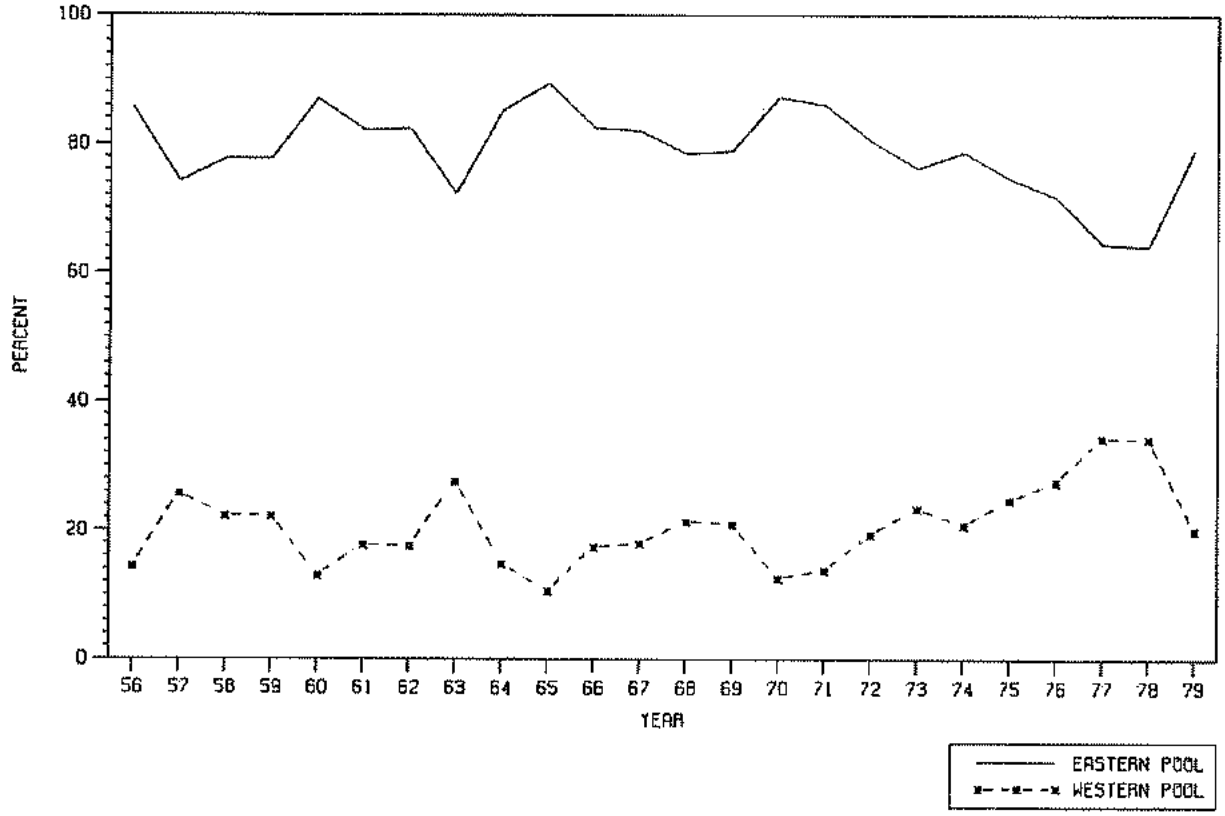


FIGURE 31B.
NATIONAL GRAPE/WELCH TONNAGE SHARES
FOR THE EASTERN AND WESTERN POOLS, 1956-79



This reflects the higher Washington grape yields in recent years, except 1979, and the mix of new National Grape contracts during the early 1970's. Welch also makes the point that its consumer markets are growing faster on the West Coast because of the faster growing populations there.

The growth of National Grape tonnages has had a significant impact on the Welch business in most areas. Storage capacity has been increased to handle the larger crops and to ensure against future product shortages as follows:

Year	1958	1960	1965	1970	1975	1980
Approximate Owned Storage Capacity (Million Gallons)	23.4	24.0	27.1	32.8	38.0	44.5
Average Annual Increase from Prior Period	-	+1.3%	+2.5%	+3.9%	+3.0%	+3.2%

Increased storage capacity is a two-edged sword for National members, National Grape/Welch co-op, and the entire Concord industry. On the one hand, increased storage capacity was obviously needed to handle the larger crops and to ensure against product shortages in poor crop years. Larger storage capacity clearly benefits all growers by reducing the chance of distressed grape markets at harvest time and distressed grape juice markets after the crush. On the other hand, there are also significant costs relating to storage. National Grape members must pay for the cost of constructing storage, operating it, and the interest on their crop stored in the tanks. This may take the form of lower net proceeds or waiting longer to receive them, a grower cost either way. At some level of grape juice stocks, there may be so much surplus juice that it demoralizes the market and creates uncertainty for other processors which may in turn affect their demand and pricing for grapes during the next harvest. Grape growers, like most other farmers, have historically favored the storage alternative rather than not harvesting the grapes or letting them go into the cash market. Of course Welch is not the only factor in grape stocks, but it is clearly the largest and most visible.

During the past decade, there have been significant increases in Welch advertising and selling expenses as follows:

Year	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Advertising Expenses										
Actual ($ Million)	$2.6	$2.3	$2.4	$3.8	$4.8	$4.7	$6.0	$7.0	$8.4	$8.5
Percent of Net Sales	2.6%	2.2%	1.9%	2.4%	3.0%	2.8%	3.2%	3.3%	3.5%	3.6%

While some of this increase has been for nongrape products and for keeping up with inflation, Welch has clearly responded to heavy Concord supplies by more aggressively advertising its products during the late 1970's. From 1972 to 1981, actual advertising expenditures more than tripled, and even after inflation they nearly doubled. Looked at another way, $2.60 out of every $100 of net 1972 sales was spent for advertising and this increased to $3.60 in 1981. Because of Welch's position in the Concord industry, this increased advertising has probably also had "spinoff" benefits to growers not delivering to National Grape/Welch.

As with any company with rising sales in an inflationary economy, Welch's costs have increased rapidly in all categories. However, the relationship among the three major cost categories has changed dramatically in the last twenty years, as shown in Figure 32:

1) Cost of Sales. This has always been the largest cost category and includes manufacturing costs such as labor, energy, ingredients, containers, and other supplies. Its share of the net sales dollar increased by more than ten percentage points between 1965 and 1974, and has fallen by about the same amount since then.

2) Selling, Administrative, & General. This includes the costs of marketing Welch products and running the entire Welch/National Grape organization. This category took less than 20 percent of the Welch net sales dollar prior to 1973, but then rapidly escalated to 33 percent of the 1980 net sales dollar. This category's share of the Welch sales dollar declined noticeably in 1981.

3) Net Proceeds. In the accounting for Welch, this is what is left after all other costs and extraordinary charges are deducted from net sales. It is what is available as cash or deferred payments to growers and can also be thought of as Welch's cost of grapes. Since 1964, grower payments have accounted for a decreasing share of Welch's net sales. This category ranged between 30 and 35 percent of net sales for most of the 1960's, and has been between 15 and 20 percent of net sales for the most recent five years.

It is clear that the three major uses of Welch's net sales dollar have increased at much different rates during the past sixteen years. The "Selling, Administrative, and General" cost category has increased an average of 13.0 percent annually, followed by "Cost of Sales" at 9.1 percent annually, and "Net Proceeds" at 4.5 percent annually. To better understand what has occurred, this analyst has adjusted "Selling, Administrative, and General" costs for the impact of changing grape tonnages and inflation as follows:

1) Because a given year's crop is sold during both that fiscal year and the next one, I have used an average of the two year's grape tonnages to convert costs to a per ton basis.

2) I have adjusted for inflation using the "Implicit Price Deflator for GNP," a generally accepted measure of inflation. After-inflation dollars are based on the value of a dollar in 1967.

Because rapid inflation of recent years has had a major impact on costs for all businesses, the line in Figure 33 showing "Selling, General, and Administrative," costs per ton in 1956 dollars is the most accurate indicator of the basic cost trend. These costs were quite level between 1958 and 1969 and then more than doubled (after inflation) during the early 1970's, peaking twice in Welch's Fiscal 1975 and 1978. Since 1978, this cost has been reduced by nearly 23 percent as unprofitable lines of business have been eliminated, unprofitable sizes and products have been cut, and overhead costs have been reduced. Specifically, Welch reduced its product line by one-half, licensed the marketing rights for its soft drinks to Dr. Pepper, reduced its salaried staff by 25 percent, and revamped many of its marketing programs. Nonetheless, these increased costs have had a very significant impact on the Welch business and its farmer-owners. Because much of this cost category is for marketing expenses, there is probably a very important lesson to the entire Concord grape industry.

FIGURE 32.
WELCH FOODS - MAJOR COSTS AND NET PROCEEDS AVAILABLE FOR DISTRIBUTION, 1960-81

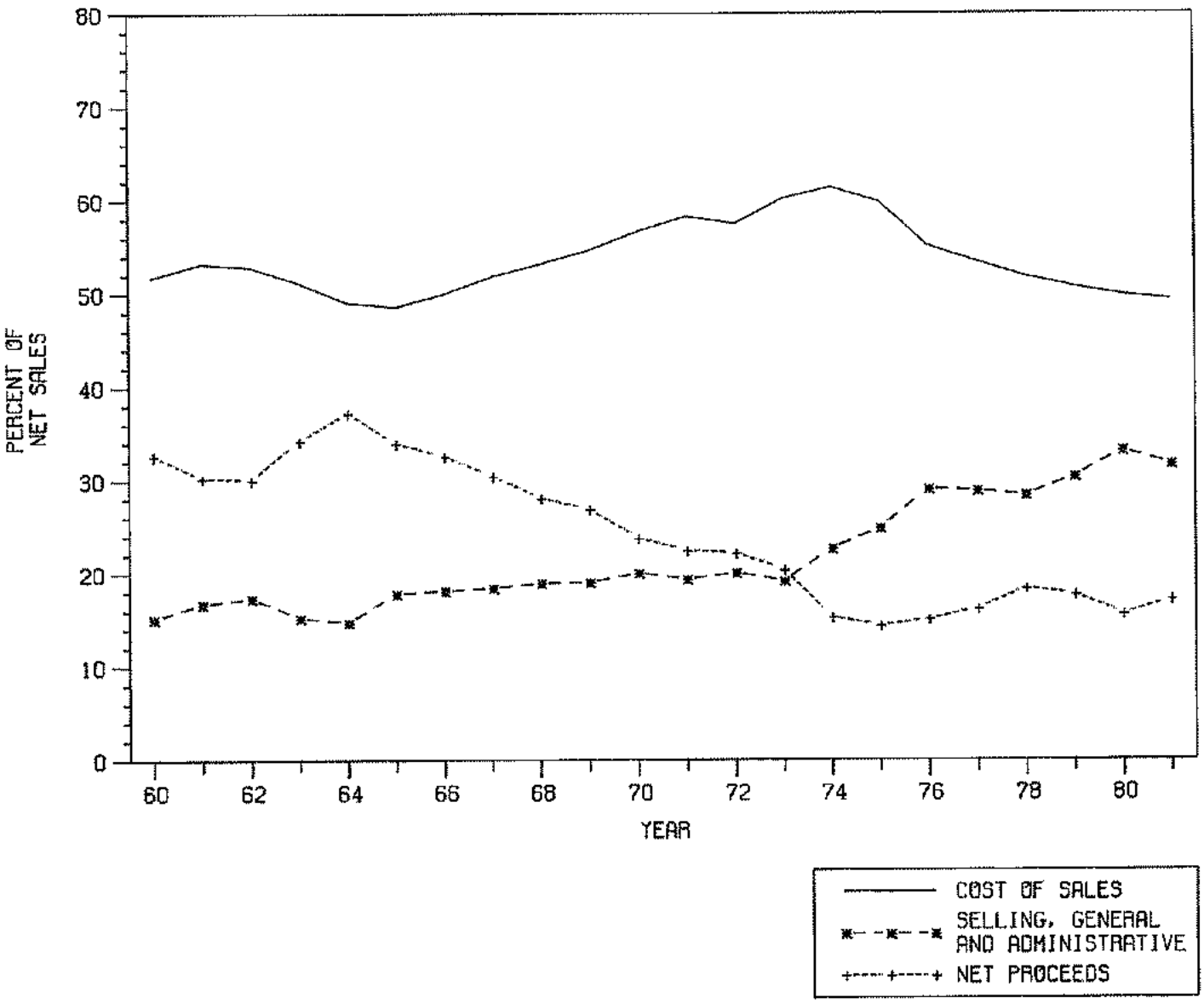


FIGURE 33.
WELCH FOODS - SELLING, GENERAL AND ADMINISTRATIVE
COST PER TON, 1958-81

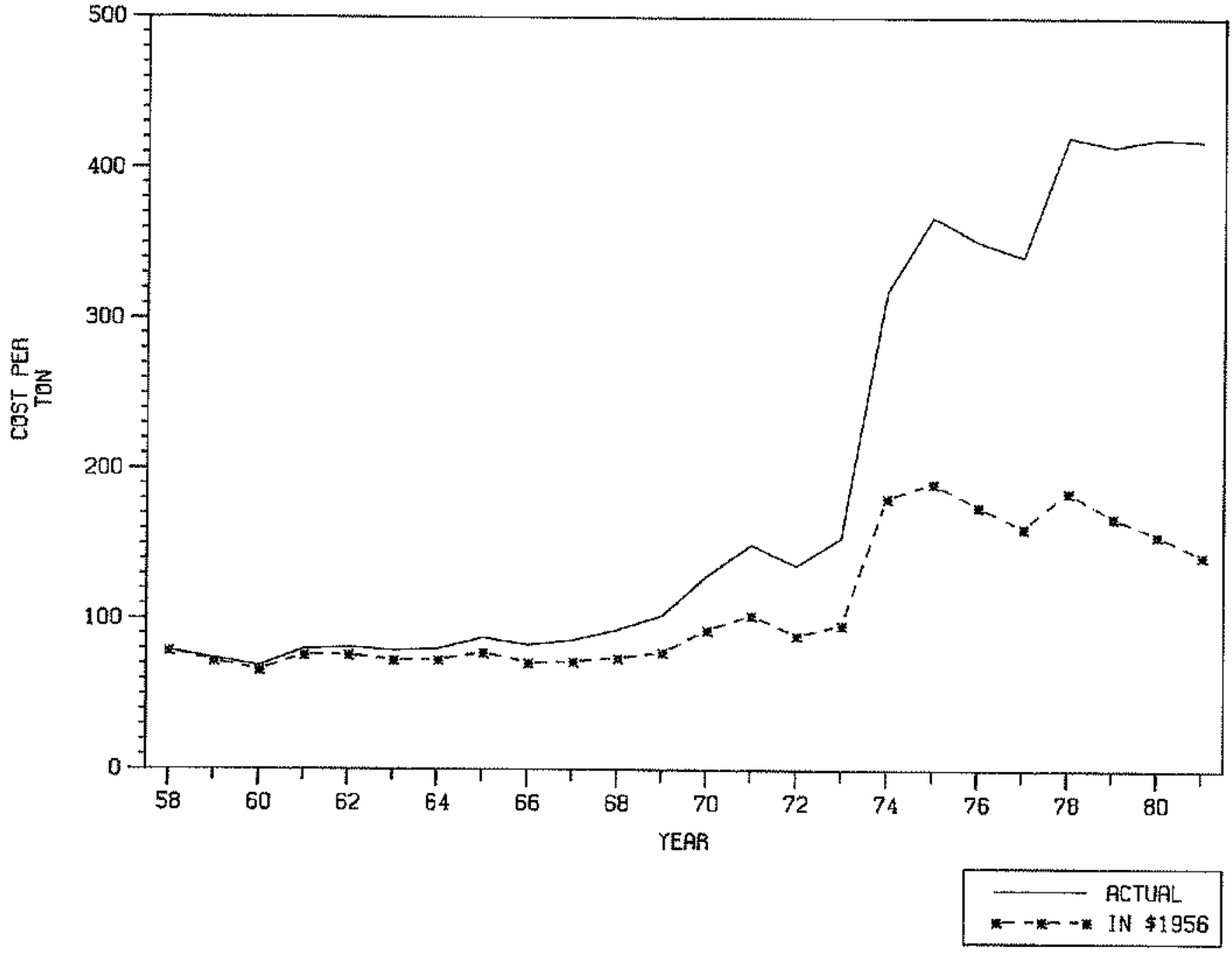
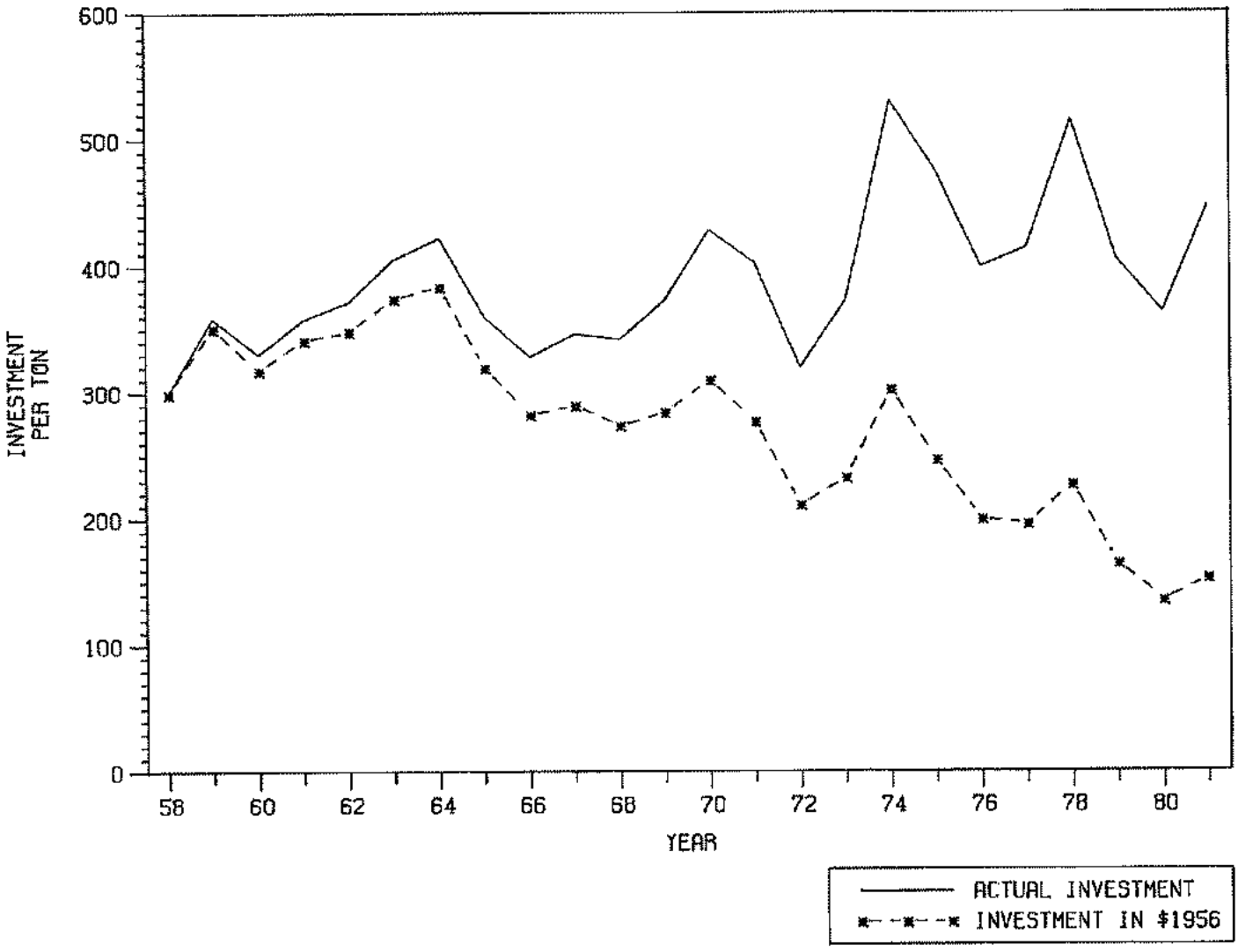


FIGURE 34.
WELCH FOODS - GROWER INVESTMENT PER TON, 1958-81



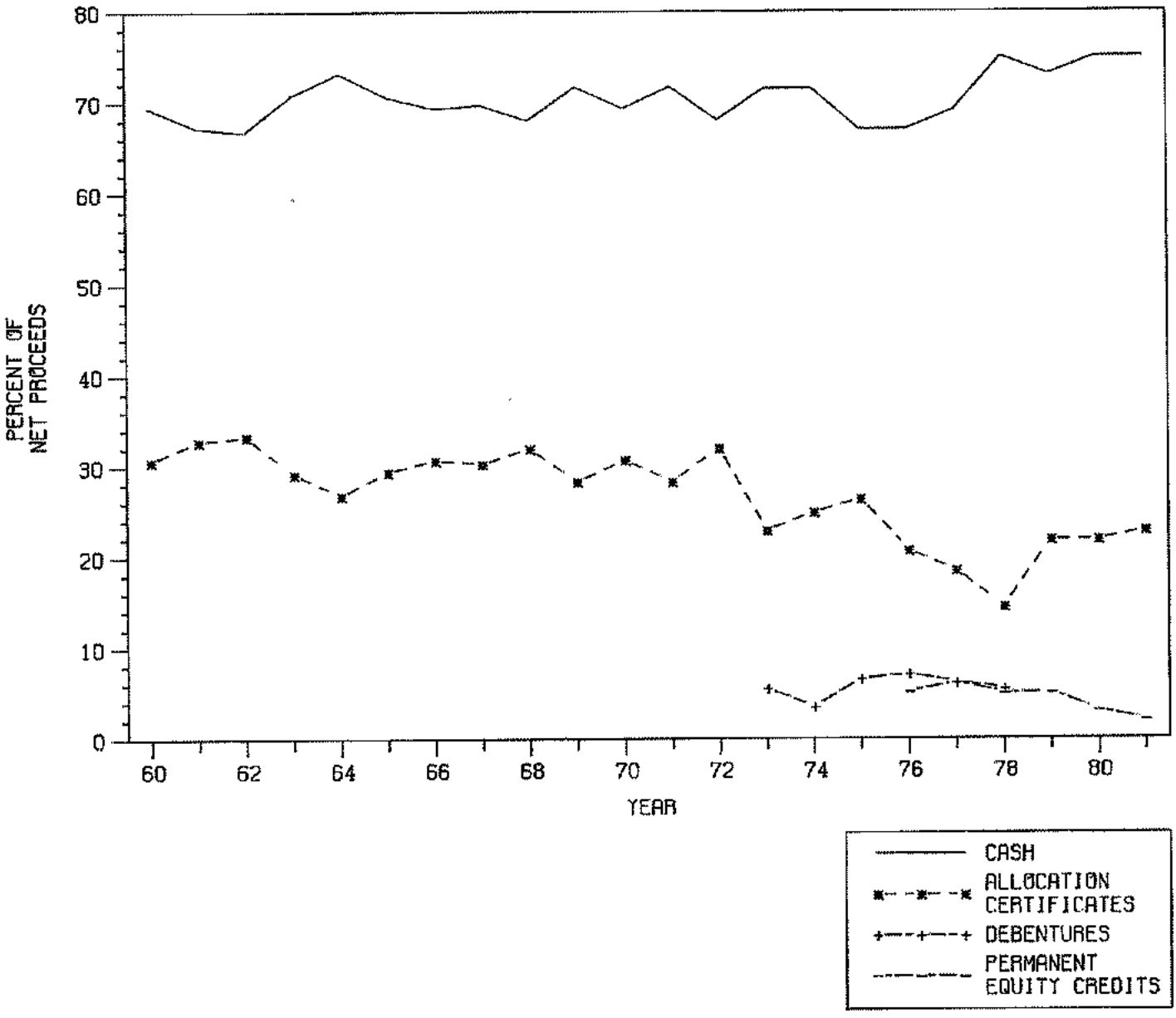
That lesson being that in today's consumer marketing climate with a highly competitive fruit juice market and large industry stocks of grape juice, it is now much more expensive to market Concord grapes than it was in the 1950's and 1960's.

Grower investment in Welch Foods has been a cornerstone of this business since the initial agreement between Jack Kaplan and the National Grape Cooperative. All of this grower investment has been accumulated through retentions of net proceeds as allocation certificates, debentures, and permanent equity credits paid out of the grower pool to individual growers. Grower investment has enabled Welch/National Grape to remain financially strong and has avoided the need for relatively large amounts of debt capital. In so doing, Welch has had much lower interest expenses and higher net proceeds available to growers than would have been the case with larger bank credits. Higher debt and interest expenses would have had an especially significant impact on Welch/National Grape and its members in the past several years' climate of tough product markets and historically high interest rates.

Allocation certificates have always been the largest part of the grower investment in Welch and continue to be so today. In reality, many of the certificates and debentures are not held by growers, having been sold for cash on the market which exists for these financial instruments. Data regarding member investment in Welch/National Grape is shown in Figure 34 and has been adjusted and converted to a per ton basis similarly to that in Figure 33. While the actual dollar investment per ton has been somewhat higher in recent years than the levels of the late 1950's and early 1960's, the real value (after inflation) of that investment has been on a continual downslide since 1964 to the historically low levels of Fiscal 1980 and 1981. In real dollars, today's level of grower investment is less than half of what it was in the early 1960's. This is, of course, good for Welch/National Grape members as it requires less of a strain on their farm businesses. The reasons for this decline in "after-inflation" grower investment are more efficient asset use by Welch (more sales per dollar of assets) and somewhat greater reliance on bank credits in recent years.

The distribution of Welch's net proceeds to National Grape members has not changed very much over the past twenty years. (See Figure 35.) Cash distributions have remained at close to 70 percent of net proceeds throughout the period although they have been slightly higher in the last three years. The form in which deferred ("paper") payments were made has changed since 1973 with some allocation certificates being replaced first by debentures and more recently by permanent equity credits. Two important factors have changed the value of certificates and debentures to National Grape members in recent years. First, reduced profitability and tighter cash flows have made it even more necessary than in the past for many National Grape members to sell them for cash prior to maturity. Second, the higher interest rates of recent years have been factored in by the market for Welch/National Grape paper so that their current cash value is lower than the value to which growers were once accustomed. At the same time, growers' own farm interest expenses have been rising rapidly due to both higher production costs and the higher interest rates. While these impacts have contributed to National Grape members' feelings of distress in recent years, it is not the method of payment and Welch capitalization that is the root of the problem. Rather, it is distressed grape markets, high interest rates, and stagnant yields that are hurting National Grape members and all other

FIGURE 35.
WELCH FOODS - DISTRIBUTION OF NET PROCEEDS, 1960-81



Concord growers. Had the capital necessary to efficiently operate Welch been more heavily borrowed with correspondingly less grower investment, Welch's net proceeds would be much lower than they have actually been due to much higher interest costs that would have been paid by Welch.

Net proceeds paid to National Grape members are important not only to them, but ultimately to all other Concord growers. Welch's grape product prices affect other processors' product prices and the price that they pay their growers for grapes. Figure 36 shows the relationship between National Grape/Welch Concord prices and the average Concord price for New York State and Washington. (The Washington State price is that paid for all grapes, but Concords are approximately 94 percent of that state's production.) Throughout the 1960's, but especially in the short crop years of the late 1960's, National Grape/Welch payments declined in relation to the state average prices. Since the low point in 1969/70, they have improved relative to the state average prices, especially in the recent surplus crop era. For New York, the National Grape cash payment was above the state average until the mid-1960's and has been below it since then. The total payment, including certificates, debentures, and equity credits as well as cash, has remained above or at the New York State average in every year since 1956. Of course, the deferred or "paper" payments do not have the same monetary value as cash to the grower when received. National Grape/Welch members in Washington fared slightly better than New York members relative to the state average price. For the 1976-79 period:

- Washington members' cash payment averaged 8.5 percent below the state average price while New York members averaged 13.5 percent below, not a very large difference.

- Washington members' total payment averaged 25.5 percent over the state average price while New York members averaged 18.0 percent over their state average.

Probably most of the difference for New York members is explainable by the impact of high Taylor Concord prices on the state average price. This is likely to be much less of a factor in the future as Taylor reduces both its purchases and price of Concords.

The substantial grower investment in Welch and the somewhat below-market value of cash payments are obviously significant costs to individual members. In return, the National Grape member has the market stability that his National Grape marketing agreement provides. To date, National has taken all of their members' grapes and has not terminated any marketing agreements because they did not need the grapes. In the current grape supply climate, this stable "home" for the crop obviously has a special value to growers.

There is no question that some of National Grape/Welch's past operating experience has been affected by strictly internal matters such as diversification, changes in management philosophy, inadequate business information systems, and past miscalculation of the future grape supply situation. However, much of their experience reflects changes in the entire Concord grape industry. Of special concern to all Concord growers should be what it costs Welch to market a ton of grapes for its growers. This increasingly expensive, but vital marketing function reflects the competitive pressures of other fruit juices and spreads as well as competition from other grape product brands which are in plentiful supply. Welch management's current

FIGURE 36A.
NATIONAL GRAPE/WELCH FOODS - CONCORD PAYMENTS FROM EASTERN POOL
COMPARED TO NEW YORK STATE AVERAGE CONCORD PRICE, 1956-79

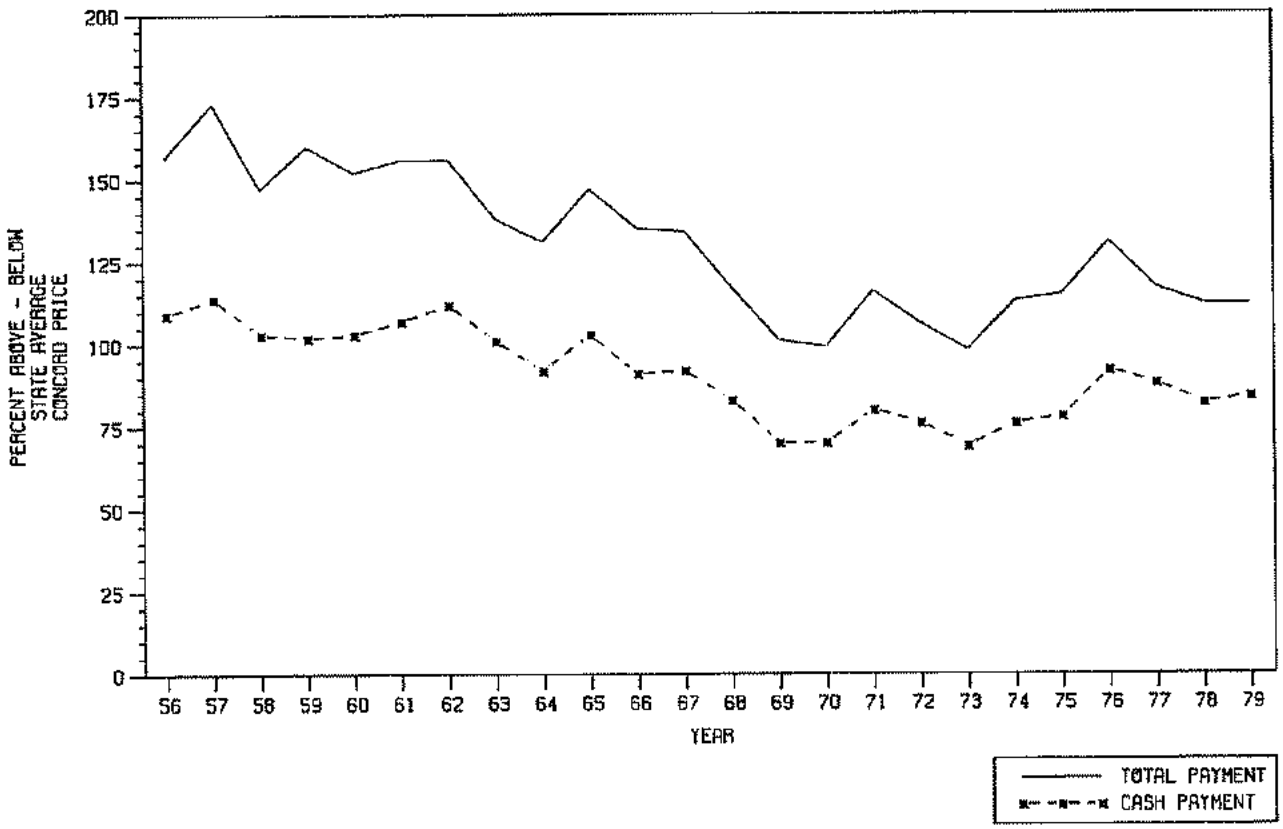
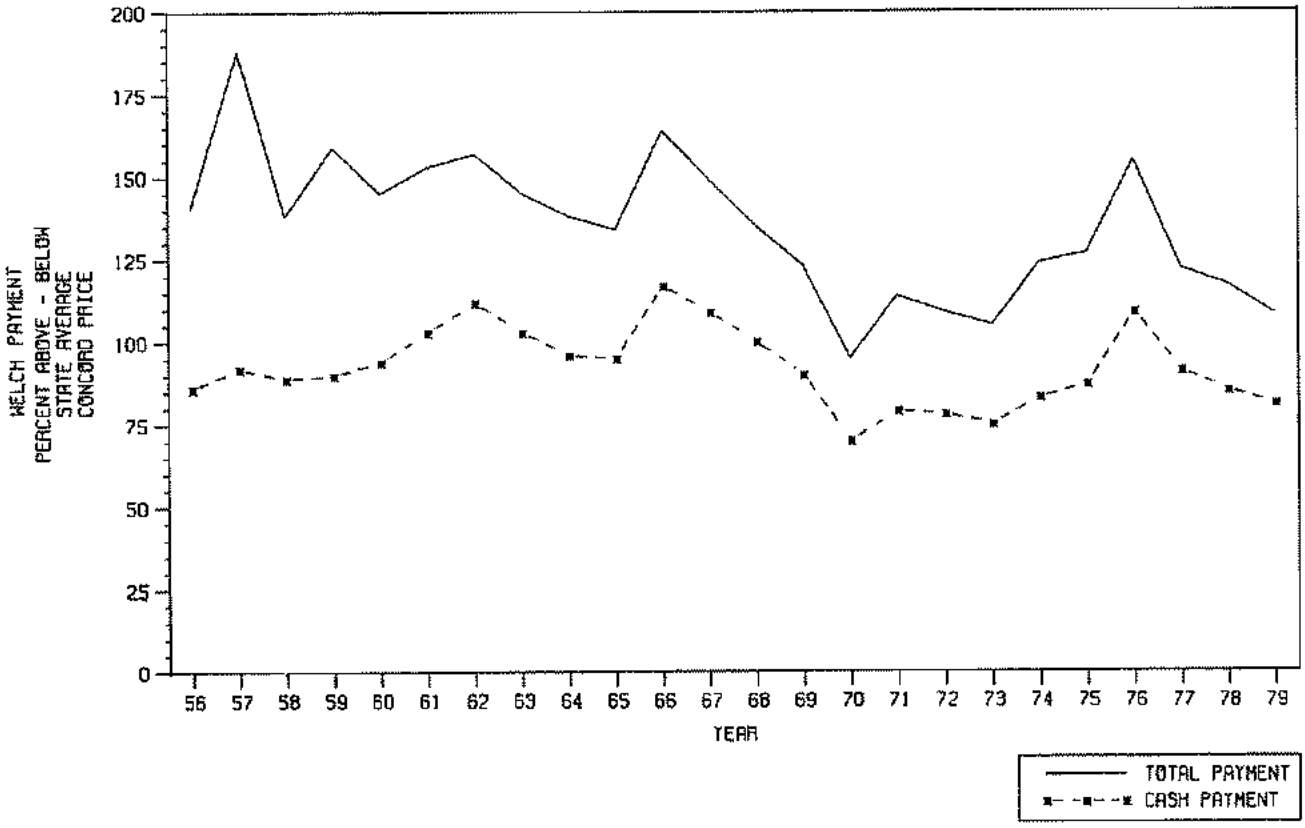


FIGURE 36B.
NATIONAL GRAPE/WELCH FOODS - CONCORD PAYMENTS FROM WESTERN POOL
COMPARED TO WASHINGTON STATE AVERAGE CONCORD PRICE, 1956-79



cost reduction program has achieved significant reductions in the past several years, but it is doubtful that in today's marketing climate that after-inflation marketing costs can be further reduced to the extent that grower net proceeds could be significantly increased.

Between National Grape/Welch and the other farmer co-ops in the Concord grape industry, Concord grape growers have one of the highest degrees of processing facility ownership of any major fruit or vegetable processing commodities. With National Grape/Welch, its members own not only a well-maintained set of processing facilities, but a premium national brand and a professional marketing organization that can operate in the "major leagues" of consumer marketing. While Welch's current high inventory levels are a liability to some extent, their ownership under one grower entity and their sheer size are more favorable than they might be under fragmented proprietary ownership. Conceivably these inventories could yet be turned to growers' advantage. Aside from internal shortcomings, National Grape/Welch illustrates that farmer ownership of downline processing/marketing functions does not make farmers immune from the basic supply/demand fundamentals for their product.

THE TAYLOR WINE COMPANY

The Taylor Wine Company purchases approximately 25 percent of New York's grape crop, making it the second largest processor after Welch and the largest processor of nearly all varieties other than Concord. It takes a very high proportion of the crop in the Finger Lakes region and a much smaller proportion in the Grape Belt. Just as Welch's operating history reflects much about the juice market, Taylor's operating history reflects changing conditions in the market for New York State wines.

Taylor produces a wide variety of New York wines under both the Taylor and Great Western brands. Under its Taylor label it produces:

- Champagnes - Dry, Brut, Pink, Sparkling Burgundy, and Cold Duck.
- Dessert Wines - Ports and Sherries.
- Table Wines - Generic wines such as Burgundy, Rhine, Claret, Sauterne, and Rose. The Lake Country Series in Red, Pink, White, and Gold. The Lake Country Soft Series in Red, Pink, and White. Pink Catawba.
- Vermouth and Sangria.

Under its Great Western label it markets much the same mix of wines as well as a line of varietal table wines from selected French Hybrid and American varieties. Both labels are especially strong in the dessert wine and champagne categories and Taylor is the leading marketer of domestic ports and sherries.

Until 1955, when it became a privately-held corporation, Taylor was a family partnership. In late 1961, it acquired the Pleasant Valley Wine Company (Great Western) and several months later in 1962, Taylor became a publicly-held corporation. In January 1977, Taylor was merged into the Coca-Cola Company of Atlanta, Georgia. Figure 37 shows Taylor's net sales and net income record during the 1962-1976 period when it was publicly-held. During much of this period Taylor's net sales grew rapidly, even after adjustment for inflation. Net income as a percent of net sales also increased, and as a result, Taylor's net income grew very rapidly up until 1973. Starting in 1973, Taylor's sales growth slackened, its net margin on net sales declined, and net income declined, especially after adjustment for inflation. The difference between the pre-1973 and post-1973 periods is very apparent:

	Average Annual Rate of Change	
	1963-1973	1973-1976
Actual Net Sales	+11.6%	+ 5.3%
Net Sales After Inflation	+ 7.3	- 2.2
Actual Net Income	+15.5	- 6.2
Net Income After Inflation	+11.1	-12.9

FIGURE 37A.
THE TAYLOR WINE COMPANY - NET SALES, 1962-76

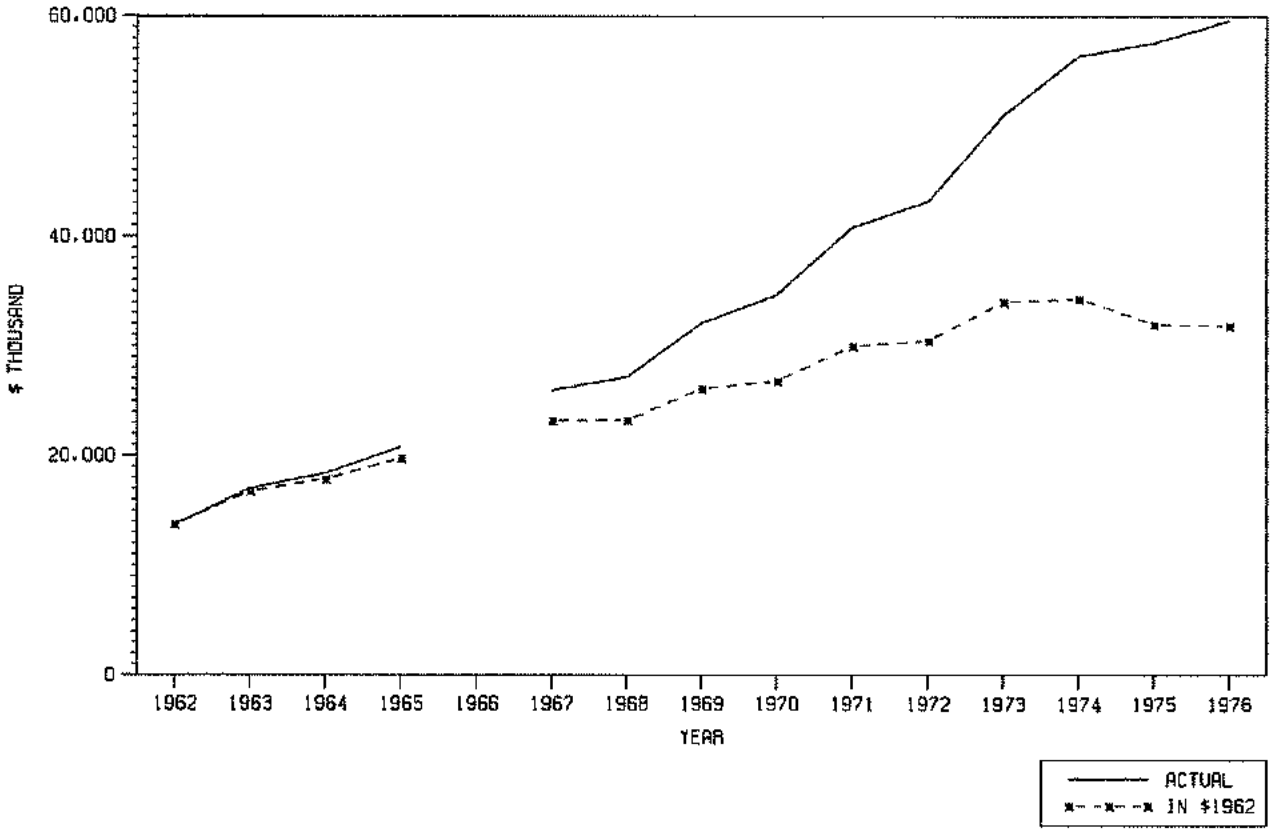
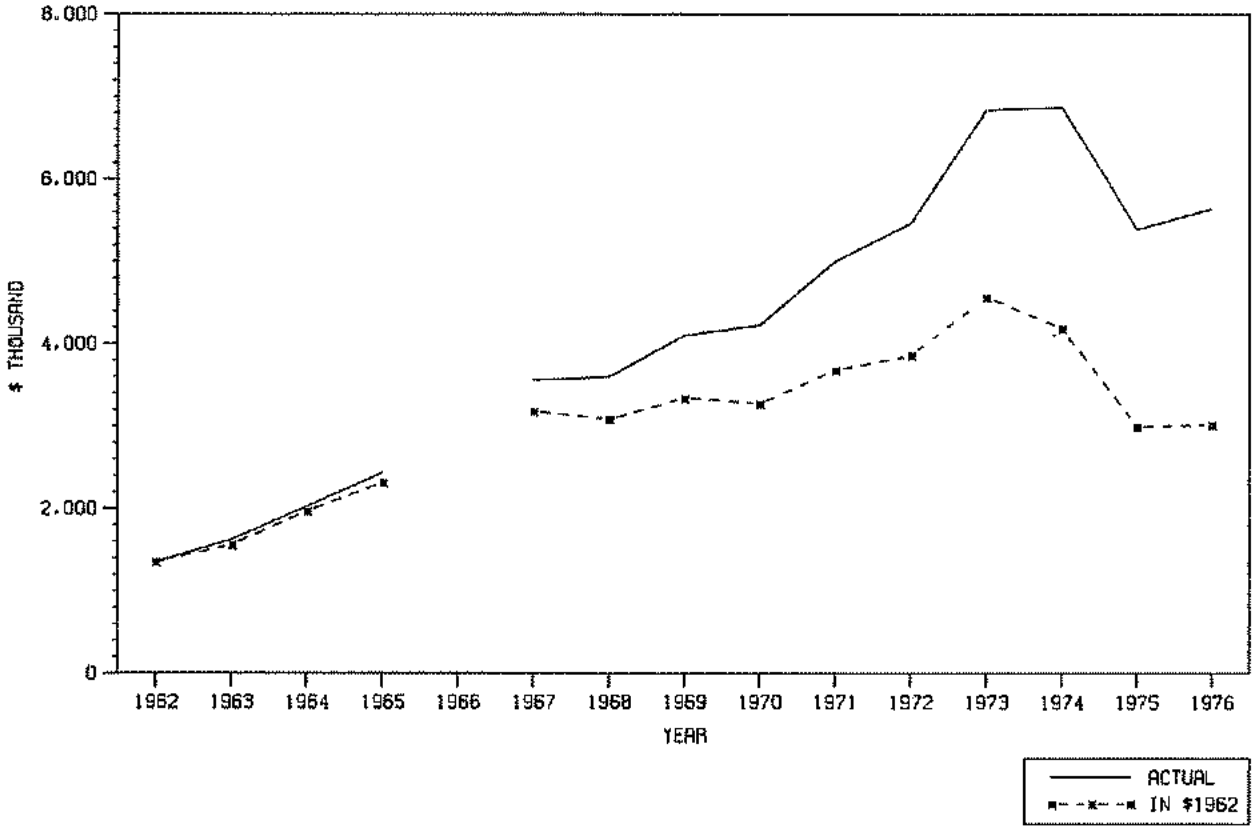


FIGURE 37B.
THE TAYLOR WINE COMPANY - NET INCOME, 1962-76



With its wide array of wine types, Taylor was able to increase its wine sales in the growing U.S. market during the late 1960's and early 1970's. The "Cold Duck" boom during this period certainly helped Taylor increase sales of wines in its sparkling wine category, but the big increases apparently occurred in the table wine category. Not all of the Taylor case sales data for the past fifteen years is available, but the following is:

Annual Percent Increase in Cases Sold

1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-80
+2.1%	+19.2%	+4.9%	+17.8%	+8.4%	+12.4%	+5.9%	-0.1%	+1.2%

. . . . . .

Annual Percent Increase in Cases Sold by Wine Category, 1971-75

Table	Dessert	Sparkling	Total
+16.7%	+1.5%	-1.4%	+6.6%

It can be concluded that up until the mid-1970's, the Taylor Wine Company was on track with the changing U.S. wine market and the California wine industry. It was achieving healthy increases in case sales, net dollar sales, and net income. In just the five years between 1971 and 1975, it reduced its dependence on the declining dessert wine market from 49 percent in 1971 to 41 percent in 1975, with a corresponding increase from 32 percent table wine sales in 1971 to 46 percent in 1975.

A number of circumstances became important in the mid-1970's that all contributed to Taylor's deteriorating operating results and eventually the decision to merge with the Coca-Cola Company in late 1976. Before discussing these circumstances, it is important to understand the type of company that Taylor was. Isolated from the mainstream of the American wine industry 3,000 miles away in California, and with a heritage of family and local ownership, Taylor was a conservatively managed company. Until the mid-1970's, it made dependable net earnings and financed most of its own growth from its own earnings rather than with outside debt. An October 4, 1976 article in "Business Week" termed Taylor as "somnolent" - sleepy. Despite the purchase of Pleasant Valley in 1971, Taylor never fully integrated the two companies located next door to each other. Taylor had ambitiously expanded its winery facilities during the 1960's and early 1970's, but some of this expansion was apparently unneeded, ahead of its time, or out-of-date, giving Taylor a relatively high level of overhead costs.

Taylor supplied 10 percent of its grape needs from its own vineyards and purchased grapes from 12,000 acres operated by 450 independent growers. About 25 percent of its wine was bought bulk from California and bottled in Hammondsport, often in blends with New York State wines. While growers did not always agree with Taylor pricing levels, most had a great deal of respect for the company. Taylor traditionally paid more for grapes than other buyers in the New York market. It expressed interest in pricing accordingly to growers' cost of production, it had a highly regarded field staff working with growers, and it had a good grower relations program. It recognized that with its dominant position in the purchase of most wine grape varieties, it could easily

demoralize cash markets and it behaved accordingly. Taylor was the leading edge in the expansion of the New York wine industry in the 1960's and early 1970's and it was one of the prime innovators and leaders with French Hybrids for table wines.

What were the circumstances that upset Taylor's pattern of growth and consistent profitability in the mid-1970's?

1) Competition in the American wine market had heated up to a point where Taylor was hard-pressed to do the things necessary to compete. Gallo, United Vintners, and the other California giants had become large enough to achieve significant cost economies in mass production of wine and integration into related businesses such as production of glass wine bottles. Such companies could produce everyday wines at a far lower cost than Taylor. The entrance of consumer marketing giants into the California wine industry with names such as Heublein, National Distillers, and Seagrams had led to an escalation of marketing/advertising expenditures for wine.

2) In the mid-1970's California experienced a glut of red wine grapes and a flood of cheaper red wine was available in the American wine market. Taylor, with its higher grower prices for grapes and its own higher cost structure, could ill-afford to discount its prices and still remain profitable.

3) The premium table wine market had clearly emerged as the big-growth area by the mid-1970's. While Taylor was considered a premium winery and its wines were priced in the premium category, its table wines had the most appeal to a blue collar/rural market which was not increasing its wine use and was price-conscious. To sell in the premium table wine market, it was necessary to have quality wines vinted from European (Vinifera) premium varieties and large advertising budgets to properly present them to the consumer. Taylor had neither of these.

4) By 1976, it was clear to Taylor and most everyone else in the American wine market that white table wines were where the best growth would be. Taylor had based its plans more on red table wines and had initiated a grower planting program of red French Hybrids to support those plans. Having encouraged and contracted with growers to do so, Taylor was faced with a serious supply dilemma.

Given these circumstances and its remaining strengths, which were considerable, Taylor became a prime takeover candidate for a larger corporation. In 1976, consumer marketing giants Coca-Cola, Pepsi Co., Beatrice Foods, and Norton Simon, as well as a private investor group, all expressed serious interest in Taylor. In 1975 and 1976, Coca-Cola's Business Development Group had taken a "hard, bold look at the beer and wine industries." That study, according to Albert E. Killeen, who was then Coca-Cola's Executive Vice President - Marketing, "found the probable scenario for wine in the decade of the '80's to be far more promising in terms of growth and increased per capita consumption than for beer." In late 1976, Coca-Cola and Taylor reached a merger agreement and Taylor became a cornerstone of the Wine Spectrum, a division of the Coca-Cola Company. Several months later in July 1977, the Wine Spectrum acquired the Sterling Vineyards in California's Napa Valley, a premium estate winery. In November 1977, they acquired another California premium winery, the Monterey Vineyard on the Monterey Peninsula.

What was Coca-Cola's strategy in these acquisitions and why did they want Taylor? In the past year, Albert E. Killeen, the Wine Spectrum's first president and Harry E. Teasley, its current president have talked about this in an "IMPACT" interview and at the 1981 "IMPACT" wine and spirits trade seminar. The essential elements are:

1) Coca-Cola had learned through consumer research that, "with Taylor we were acquiring, next to Gallo, the best-known wine trademark in the United States, one respected for premium wines of consistent and uniform high quality." (Killeen)

2) Patterned after its approach to soft drinks, Coca-Cola wanted entries in all categories of the wine market - table wines, dessert wines, and champagnes; New York, California, and imports. Taylor had strong entries in the dessert and champagne categories, while the California acquisitions strengthened the table wine segment, especially in the premium white table wine area.

3) "From the start we had a master plan, and wineries on the West Coast were part of it. We knew from the outset that Taylor would have to have a California entry. We wanted to very quickly, very swiftly, accomplish our basic market plan, before competition or the industry saw the real thrust of our ambitions." (Killeen)

4) Coca-Cola's goal was that Wine Spectrum's sales would be a billion dollars by 1990 in after-inflation dollars. To have done this from Taylor's 1976 base of $60 million, sales would have required an incredible annual growth of 22 percent. Quite clearly this goal could not be reached with New York wines or without a strong entry in the fast-growing premium white wine market.

5) Taylor was available for takeover in 1976. Very rarely does the opportunity to buy the nation's sixth largest wine company arise, and coincidentally Coca-Cola was in the market at that time.

In retrospect, Coca-Cola may have found even more difficulties with its New York acquisition than they had originally anticipated. Again quoting from the March 15, 1981 "IMPACT" interview with Albert E. Killeen:

- "What we didn't know, but could only suspect, was that Taylor's approach to long-range planning, administrative controls, and the marketing function, particularly in the research area, might be somewhat parochial, conservative, and unprofessional. However, there were no disruptive or critical surprises."

- "We were, perhaps, more amused than surprised to find that Taylor management had put Great Western management into a deep freeze of almost total isolation. This, in turn, had allowed Great Western management to duplicate most services and facilities."

- "Then there were the barriers of the enormous differences in size and scope between the two companies (Coca-Cola & Taylor). There were the differences of operating philosophies, methodologies, systems, procedures, all of which had to be accomodated, and have been, gradually, gently, reassuringly, all the while not wanting Taylor's tradition, spirit, morale, individuality, and character to be crushed by the larger partner."

. "Basically, the Taylor people welcomed the entrance of the Coca-Cola Company into their lives. Initially, they may have felt we would perform instant miracles and cause all of their problems to vanish overnight. Now they know Coca-Cola's miracle cycle is irregular, perhaps one every decade."

Coca-Cola left the existing 1976 Taylor management in place. Steps were taken to more fully integrate Taylor and Great Western. Advertising expenditures were increased for the existing product line and steps were taken to improve the existing sales force and distributor network. Plans were made to take distribution nationwide by marketing some Taylor and Great Western products on the West Coast. However, many of Taylor's basic difficulties that it had encountered in the mid-1970's were not resolved after the merger and have persisted until the present. Taylor's management was uncertain as to its new role and Wine Spectrum was cautious in overwhelming them. Probably the most important factor in this delay was that the Wine Spectrum was more occupied with an ambitious, aggressive plan to perform a wine marketing miracle with California wines, taking on the established marketers of premium wines and the U.S. Bureau of Alcohol, Tobacco, and Firearms (BATF) at the same time. This management drift in New York's largest winery and industry leader left important issues unresolved within the company and consequently precious time was lost. Because of Taylor's historical role as a leader in the New York wine industry, this drift carried over to the entire New York industry.

Coca-Cola's successful introduction of Taylor California Cellars has become a noted success story in marketing circles and has had long-lasting impact on U.S. wine industry structure and marketing. Coca-Cola's research had indicated the growth opportunities in premium California table wines and their master plan called for it. Their research also showed that combining the words "Taylor", "California", and "Cellars" would create a very positive consumer response. During late 1977 and 1978, the Wine Spectrum had a crash program to formulate (blend) the new wine series, to do the necessary market research, to develop an advertising program, and to organize distribution. In September 1978, the California Cellars line was introduced along with a precedent-shattering television advertising program in which results of a comparative wine-tasting with other named California brands were presented. This advertising program not only provoked criticism from the traditional California wine industry, but it also drew the disapproving eye of the BATF. Eventually, after a prolonged debate with BATF, Wine Spectrum was allowed to continue the ad series and BATF enacted new rules permitting comparative wine advertising. More recently, this advertising approach has been used by other California wineries including Gallo.

The case sales record of Taylor California Cellars illustrates the success of Coca-Cola's approach and the value of the planning and research that preceeded its introduction:

1978	500,000 Cases (four months' sales).
1979	1,500,000 Cases.
1980	3,800,000 Cases.
1981	First six months, sales apparently up another 2,600,000 cases over first six months of 1980. Wine Spectrum estimates sales at no less than 5,500,000-6,000,000 cases.
1985	Wine Spectrum anticipates case sales of 20,000,000 to 25,000,000 cases.

The Wine Spectrum has consistently exceeded its own sales goals for California Cellars, and according to them, has never lost any money on its wine business.

One of Taylor's assets which made it an attractive takeover candidate in 1976 was a relatively strong distributor network. The Wine Spectrum has further built this up in recent years, making it a nationwide network with a full line of New York, California, and Italian (Cinzano) wines. Gallo has led the industry in providing support to wine retailers including point-of-sale materials, advice on retail displays, and even setting up retail wine displays. Reportedly, the Wine Spectrum has come closest to matching Gallo in this type of support. It is the first wine company to provide computerized shelf-alignment studies that help retail stores match space availability and profit potential. (Business Week, March 15, 1982). This distributor network and strong retailer relationship may be a very positive factor in achieving good sales for new wine products from the Hammondsport winery in the future.

It is interesting to note that the Monterey Vineyard division of Wine Spectrum has been an aggressive leader in developing an improved white wine grape supply in Monterey County, California. After they introduced California Cellars, they called local growers together and informed them of what their long-term grape needs were in terms of quantity and variety. They then developed a ten year contract that proved to be quite popular with growers in that area. It has encouraged significant amounts of grafting over, replanting, and new plantings of premium white wine varieties. Items of interest in the Monterey Vineyard contract are:

1) Base price is determined as a three-year average of the average market price for each given variety as published by the California Department of Agriculture.

2) Sugar levels at delivery are to be:

   . 22 to 24 degrees Brix for all black varieties except Grenache. Also for Chardonnay and Sauvignon Blanc.

   . 21 to 24 degrees for Brix for Grenache.

   . 20 to 22 degrees Brix for all white varieties except Chardonnay and Sauvignon Blanc.

3) There are bonuses and penalties based upon stated sugar levels (Degrees Brix). These can be as much as 20 percent above or below the base price for Chardonnay and black varieties. For all other varieties it can be as much as 10 percent above or below the base price.

4) Either the grower or the winery can reopen the contract for renegotiation by filing written intent between April 1 and May 1 of each year. If no mutual agreement can be reached in thirty days, the contract automatically terminates the following April 1 during the first three years of the contract, and on April 1 three years later in the remaining years of the contract.

5) No contract dispute relieves the obligation of the grower to make full delivery or the winery to take full delivery.

6) If the winery requests delivery (in writing) prior to the time when the grapes would have reasonably reached full maturity level, the grower is to receive the full bonus.

7) The contract covers a specified acreage of grapes and there is no provision for winery allocation of tonnages in a given crop year.

Monterey Vineyard is considered to pay fair, but not "top of the market" prices in the Monterey Peninsula area. It has apparently worked closely and well with growers there. Some of the precedents that have been established there would appear to deserve consideration in the New York wine industry as well.

The question of whether Coca-Cola's ownership of Taylor has been detrimental to the New York wine industry is purely academic at this time. Had Taylor ownership remained local, there certainly would have been much more incentive to get Taylor back on a solid growth track, but the basic problems existed before Coca-Cola arrived on the scene and have little to do with who owns Taylor. As Coca-Cola has conclusively demonstrated with California Cellars, it does have the marketing know-how and the resources needed to successfully market wines to the consumer. As Coca-Cola itself stresses, however, they did not create the market for California Cellars. Their research identified the product that consumers wanted and the rest of their production, advertising, and distribution program was developed around what the consumer wanted. New York grape growers can only hope that Wine Spectrum will eventually turn greater attention to its New York operation and deliver new marketing successes with something such as the Lake Country Soft series. Only the Wine Spectrum really knows what its plans for New York are, but this analyst sees some positive signs:

1) New management at Hammondsport in 1981.

2) Recognition of packaging and quality shortcomings in the Great Western varietal line in 1981, and the announcement of a program to upgrade this product line.

3) Greater recognition and understanding of New York's problems by key Wine Spectrum management personnel, including attendance at the 1981 grower meeting.

I conclude that Coca-Cola can still play a very positive role in the New York wine industry - if they want to do so. As an organization, they certainly have the knowledge and resources to do positive things for New York.

WASHINGTON - THE COMPETITION

In three of the last six years, Washington State has produced more Concord grapes than New York, and throughout the 1970's it has crushed more grapes for unfermented products than New York. Washington State is also the most rapidly increasing major grape producing state with 1976-80 production triple (+198%) that of 1956-60, compared to a 66 percent increase in New York during the same time. (Also see Figure 38.) These production increases are the result of continued new plantings throughout the past two decades, as shown in Table 45. While other varieties are being planted more rapidly, Concords continue to grow in acreage and still account for more than 80 percent of Washington's grape acreage and 90 percent of its grape crop. Other important varieties are Niagara (778 acres), Johannisberg Riesling (519 acres), Grenache (280 acres), Chardonnay (194 acres), and Gewurztraminer (180 acres). French Hybrids are relatively insignificant.

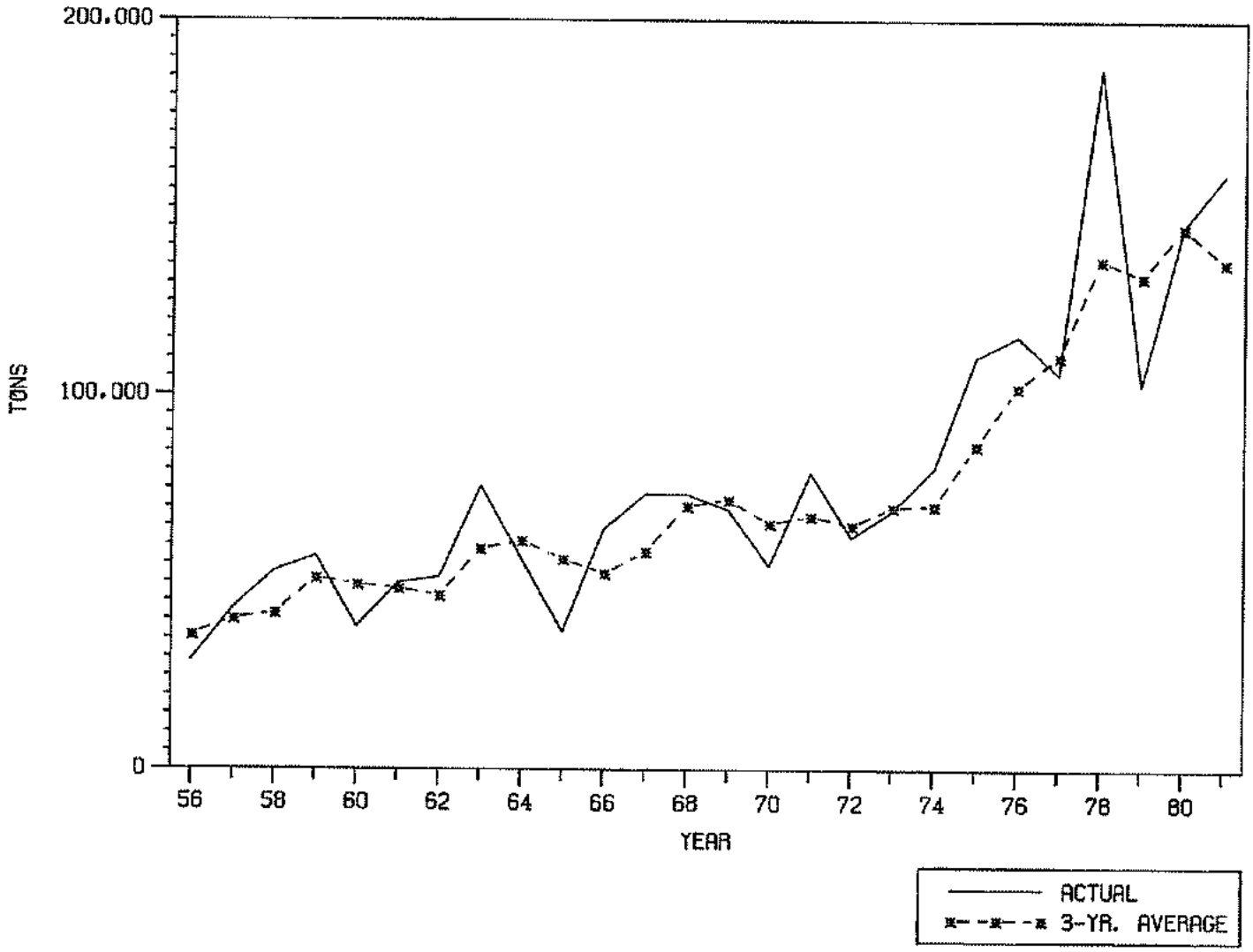
Table 45. Estimated Grape Acreage by Type of Grape in Washington in 1967, 1972, 1974, and 1978

Type	1967	1972	1974	1978	Percent Increase 1967-78
Concord	9,458	16,440	18,001	19,015	+101%
Other Native American	491	560	364	1,067	+117%
European (Vinifera)	431	1,155	1,621	2,608	+505%
French Hybrid	35	66	43	78	+123%
Total	10,415	18,221	20,029	22,768	+119%

Source: "Washington Grape Acreages and Processing Capacity for Concord Grapes, 1978," R. J. Folwell and C. W. Nagel, Washington State University, 1979.

Grapes have historically been confined to the Yakima Valley, but recent wine grape plantings have been in the Columbia River Valley. Grapes were customarily a secondary farm enterprise in multi-crop operations, often on the poorer land not suited to other crops. This orientation has changed in recent years and grapes are now regarded as the second most profitable crop in the Yakima area after hops. Asparagus and/or apples are commonly found in the same operation as grapes. In the late 1970's, the sugar beet industry folded up in this area, freeing acreage that could be planted to other crops. Growers prefer to convert to a permanent crop with grapes, apples, and asparagus being the preferred ones.

FIGURE 38.
WASHINGTON STATE GRAPE PRODUCTION, 1956-81



Washington has a number of production advantages for growing grapes. It has a relatively long, frost-free growing season with hot, sunny days and cool nights which favor both sugar and acid formation. Its sandy soils are deep and relatively inert providing good drainage and more opportunity for grower control over the vines. Washington has no phyloxera in its soils so own-rooted vines can be planted, a very significant advantage in European wine grapes. This is a desert climate so nearly all water is supplied with irrigation. This permits the metering of nutrients and moderate water stress is used in the fall to harden off vines prior to winter.

In terms of quality, Washington State Concords have a higher sugar/acid ratio than do those from eastern states such as New York. For the seven years between 1972 and 1978, National Grape Cooperative's Western Pool (Washington) averaged 17.2 Degrees Brix, while its Eastern Pool averaged 16.4 Degrees Brix. What this means is that Washington Concord juice is sweeter and has a milder labrusca flavor than does Eastern Concord juice, which may be more in line with what many consumers desire.

Washington had a yield problem in that average Concord grape yields were 7.8 tons per acre in the 1966-71 period and declined to 6.1 tons in the 1972-77 period. This trend has apparently reversed itself in the last several years. Many vineyards have also suffered varying degrees of 2-4 D herbicide damage in recent years because of drift from large adjacent wheat areas. The Washington State Department of Agriculture is working with grape and wheat growers on this problem and it appears that progress is being made.

Without access to irrigation water, there can be no farming in this area. In general, the areas with grapes already on them have no problem with water availability. Grapes are a moderate consumer of water, especially when compared to some row crops which require much more water. In the Yakima Valley, availability of water could have an impact on new plantings although it has not to date. Water availability does not appear to be a concern along the Columbia River where water from the Columbia Basin irrigation project is available. In both areas, surface water from canals is used and pumping costs are not a major concern.

The winter of 1978-79 was the most severe one for Washington in twenty-five years. As a result, the 1979 crop was down 45 percent from the record 1978 crop. Certain vineyards were hurt much more than others, and Concords were hit harder than European (Vinifera) varieties. In some vineyards there was substantial vine loss. However, 1980 production came back much better than had been anticipated earlier, although Washington is probably still producing at something less than its potential due to the residual effects of the 1979 freeze. The varying experience among vineyards confirmed the value of water management in winter-freeze protection. Moderate water stress to harden vines in the fall and irrigating prior to ground freeze to moisten the soil both proved to be very useful in minimizing damage. Washington grape growers, especially the newer wine grape growers, seem resigned to the fact that they may occasionally be frozen out, and have reduced crops and/or some vine loss. However, they regard this as just another cost of production which they can afford to pay.

Washington can have late spring frosts and early fall frosts, although site selection is very important in minimizing this risk. Growers do not feel that the level of risk is enough to justify the use of "wind machines" for frost protection.

Knowledgeable grape industry personnel feel that Concord acreage has continued to expand in the last several years. The most dramatic new grape acreages are being planted to European wine varieties, especially white varieties. There are 3,000 acres currently in production and another 4,000 have been planted, mostly along the Columbia River Valley rather than in the traditional Concord area of the Yakima Valley. No one in Washington foresees Concord acreage being replaced by wine varieties since there are still thousands of acres of good new sites that can be planted to grapes. Furthermore, the wine grapes are being planted by new grape growers, often investor syndicates, rather than by Washington's traditional Concord growers.

There are eight major processors of Concords in Washington. As of 1978, their crushing capacity was 170,000 tons in a normal season, with a storage capacity of 34 million gallons of juice. ("Washington Grape Acreages and Processing Capacity for Concord Grapes, 1978," Folwell and Nagel, Washington State University, 1979).

National Grape/Welch is the largest processor of Washington State grapes with 6,300 acres of Concords and Niagaras under contract. It crushes all of these grapes at its Grandview plant. The next largest operation is the farmer cooperative Yakima Valley Grape Producers plant located in Grandview which is primarily a bulk juice seller with a very small-scale packing operation. In the early 1970's it entered into a long-term contract with E. & J. Gallo to supply Concord concentrate for sparkling wine/Cold Duck production. Gallo is now trying to modify or be released from the contract as they do not need the concentrate.

The third largest operation is a combination of the A. F. Murch Co., a subsidiary of Smuckers of Ohio, and Safeway Stores. Each of these companies has a plant across the street from each other in Grandview, but they share these facilities. The Safeway plant packs consumer grape products for Safeway stores, while the Murch plant ships juice to Smuckers.

Seneca Foods has a modern plant at Prosser which also processes apple juice and sauce. It processed 22,000 tons of grapes in 1981. Much smaller juice processors are Milne Fruit Products in Prosser and U.S. Grape Growers, a farmer cooperative, with a plant in Sunnyside. Both Seneca and Milne have a certain amount of contracts, but they and Murch are aggressive cash market buyers of grapes. The crop is always sold, but these processors can often acquire at least some grapes at relatively cheap prices.

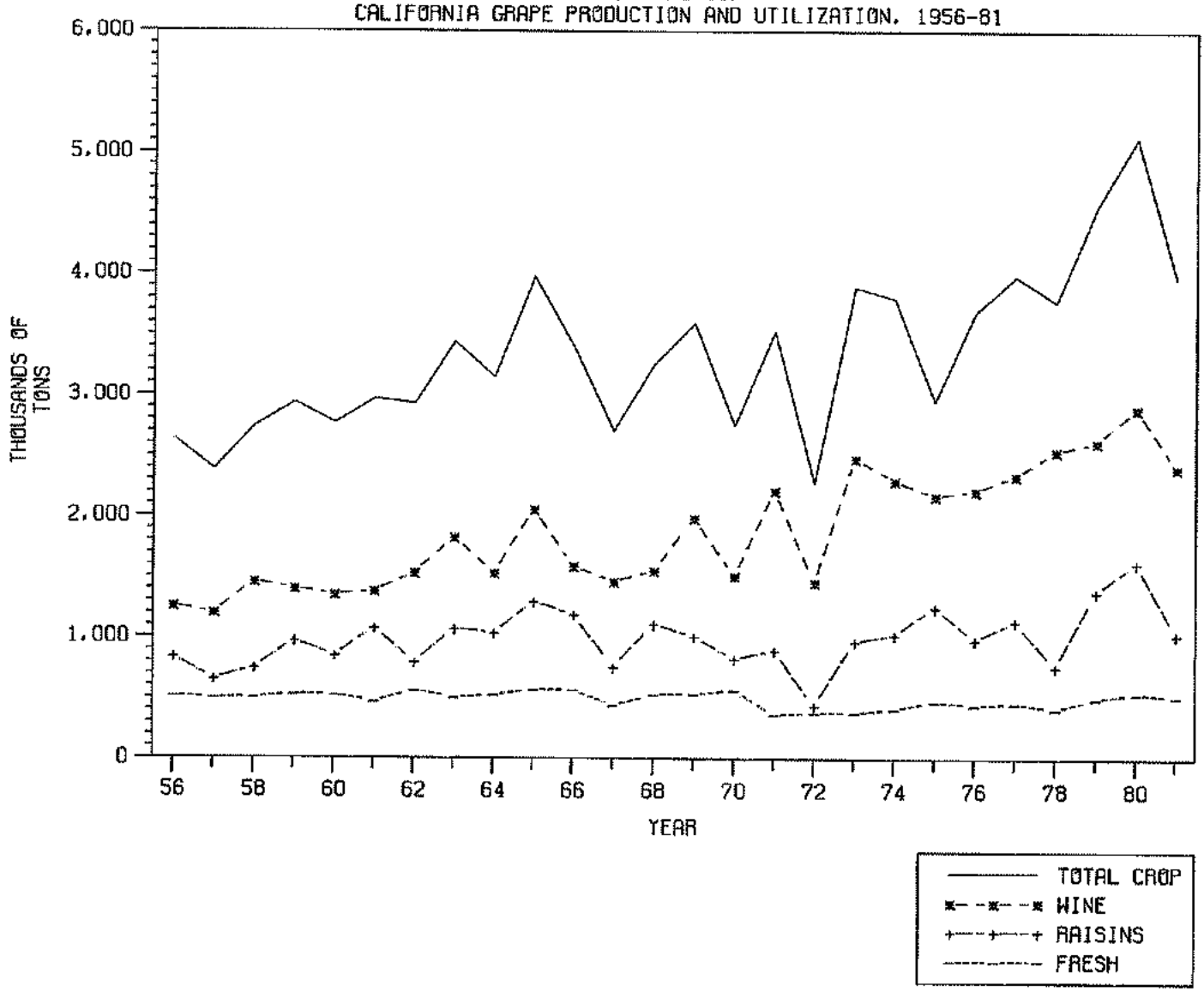
Washington's largest winery is Ste. Michelle Vintners, with wineries at Grandview, Woodinville near Seattle, and Patterson. They are owned by the U.S. Tobacco Company of Connecticut. It has 3,200 acres of wine grapes and continues to plant more. It is also a major buyer of wine grapes. Ste. Michelle's current storage capacity before completion of the Patterson plant is 2,000,000 gallons, somewhat smaller than Gold Seal.

As with most areas, the wine grape growers and wineries here are very bullish on the quality of their wines. Both Preston Wine Cellars and Ste. Michelle Vintners have won prizes in competition with North Coast California wines, especially for white wines. On paper at least, Washington's climate should be more ideal for production of white wine grapes than that of most California areas. Washington unquestionably has better yields, lower production costs, much lower land values, and more potential for expansion of acreage than the North Coast of California.

For the past several years, Washington's wine grapes have been priced at 90 percent of the California North Coast price for white varieties and 60 percent for red varieties. In addition to Ste. Michelle, there are a number of smaller premium wineries in Washington, Oregon, and Idaho that are in the market for grapes. Wine grapes have also been shipped as far east as Michigan and into British Columbia, Canada.

My conclusion is that Washington will continue to be a strong competitor to New York in the Concord juice market. New York may have an advantage in that its Concords have a stronger "labrusca" or grape flavor that is so characteristic of Concord grape products, although Washington State has the advantage of higher sugar (degrees Brix) content. Of concern to New York should be the continued planting of Concords in Washington, despite the softer prices in recent years and the unavailability of long-term processor contracts.

FIGURE 39.
CALIFORNIA GRAPE PRODUCTION AND UTILIZATION, 1956-81



CALIFORNIA - THE COMPETITION

California is today much more of a competitive factor to New York than it was ten or twenty years ago because of its impact in both the sweet juice and wine markets. It is not necessary, in this analyst's judgement, to provide an intensive description of California's grape industry which would require many pages to present. This chapter will provide a "quick" profile of the California industry and discuss some areas which are especially relevant to the New York grape industry.

Figure 39 shows the growth of California grape production over the past twenty-five years. Its total crop increased by 57 percent between 1956-60 and 1976-80, not much different than New York's percent increase for the same period. The sharpest growth has occurred in the late 1970's with new crop records set successively in 1977, 1979, and 1980. Most of the increased grape crop has been absorbed by the wine crush with moderate growth in raisin utilization. Table grape shipments declined substantially between 1956 and 1972, but have since recovered to about the same level as the mid-1950's.

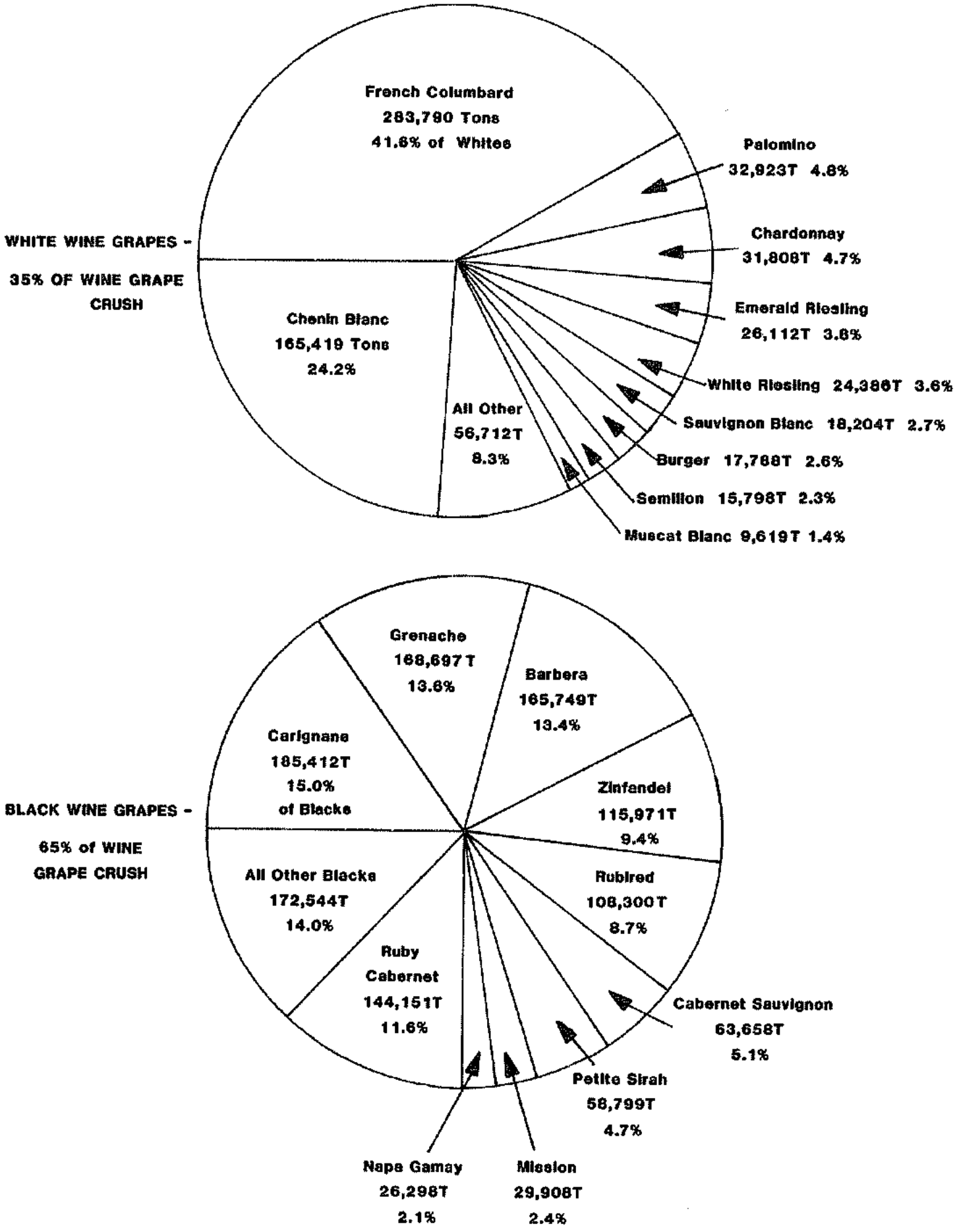
Table 46. The California Wine Crush by Varietal Group, 1956-80

Period	Type by Variety			
	Raisin	Table	Wine	Total
	Tons			
1956-60	578,074	267,687	469,949	1,315,710
1961-65	782,061	318,160	555,951	1,656,172
1966-70	736,510	281,055	596,529	1,614,094
1971-75	920,752	263,145	935,107	2,119,004
1976-80	701,811	212,521	1,589,259	2,503,591
Percent Change from 1956-60 to 1976-80	+21%	-21%	+238%	+90%
	Percent of Total Crush			
1956-60	44%	20%	36%	100%
1961-65	47%	19%	34%	100%
1966-70	46%	17%	37%	100%
1971-75	44%	12%	44%	100%
1976-80	28%	9%	63%	100%

Source: "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, Washington, D.C.

FIGURE 40.

WINE VARIETIES CRUSHED FOR CALIFORNIA WINE, 1980



As has been stated previously, the California wine industry crushes substantial amounts of raisin varieties (Thompson Seedless) and table grape varieties (Tokays, Emperors, White Malagas, and Ribiers) for wine. In recent years, a substantial change has occurred in the mix of grapes crushed from the three basic variety groups. Where wine varieties only accounted for a little over one-third of the crush in the late 50's and early 60's, they now account for nearly two thirds. (See Table 46). While the total crush nearly doubled (+90%) between 1956-60 and 1976-80, wine grape production more than tripled (+238%) during the same time. The tonnage of table grape varieties crushed for wine has actually declined during the same time period. There are three important conclusions that can be drawn from these changes in varietal mix crushed. First, they reflect the wine industry's clear and decisive role in the expansion of the California grape industry. Second, they reflect a very significant upgrading of the quality of grapes crushed for California wine. While the Thompson Seedless does make a good neutral blending wine, it cannot by itself make quality table wines, and the same is basically true for table grape varieties. Third, while the wine industry's dependence on the table grape and raisin markets has substantially decreased, there is still an important overlap. This is true for wine, and especially for grape concentrate (which is included with the statistics on wine crush) because these other varieties often are used for concentrate production.

Wine Grape Varieties

Many people outside of the California grape industry have an image of California wine grapes as being Cabernet Sauvignon, Chardonnay, Pinot Noir, White Riesling, and other premium European varietals. In reality, these premium varieties are overwhelmed in terms of the tonnages of common wine varietals grown and crushed for California wine. Figure 40 shows the 1980 wine varietal mix which was 35% percent white varietals and 65 percent black (red wine) varietals. Leading varieties in order of tonnage are French Columbard, Carignane, Grenache, Barbera, and Chenin Blanc. These are used primarily in everyday jug wines and generic blends (chablis, burgundy, etc.), although French Columbard and Chenin Blanc are also sold as inexpensive varietal wines.

The current wine grape acreage mix is shown in Table 47, which again confirms California's reliance on common, everyday varieties. While trends in California wine grape plantings will be discussed a little later, it is very clear that California is moving towards heavier production of white wine varieties. Thirty-two percent of its ten major white wine varieties were non-bearing in 1980 compared to only two percent of its black varieties. The biggest production increases in the near future will be with Sauvignon Blanc, French Columbard, and Chenin Blanc.

Table 47. California Wine Grape Acreage, 1980

	Total Acres	As Percent of: Own Color	As Percent of: All Wine Grapes	Percent Nonbearing
White Grapes				
French Columbard	44,252	35.0%	13.1%	38%
Chenin Blanc	32,279	25.5	9.6	35
Chardonnay	17,033	13.5	5.1	22
White Riesling	10,186	8.0	3.0	22
Sauvignon Blanc	7,269	5.7	2.2	43
Palomino	3,746	3.0	1.1	1
Gewurztraminer	3,645	2.9	1.1	26
Semillon	2,848	2.3	0.9	5
Emerald Riesling	2,832	2.2	0.8	9
Gray Riesling	2,424	1.9	0.7	25
Ten Leading Whites (Above)	126,514	100.0%	37.6%	32%
Black Wine Grapes				
Zinfandel	29,148	18.1%	8.6%	5%
Carignane	25,293	15.7	7.5	1
Cabernet Sauvignon	22,811	14.1	6.8	5
Barbera	19,305	12.0	5.7	0
Grenache	17,560	10.9	5.2	5
Ruby Cabernet	16,935	10.5	5.0	0
Petite Sirah	11,254	7.0	3.3	2
Rubired	10,658	6.6	3.2	1
Gamay (Napa)	4,751	2.9	1.4	2
Mission	3,686	2.3	1.1	1
Ten Leading Blacks (Above)	161,401	100.0%	47.9%	2%
Other Black and White Varieties Not Shown Above	48,926	-	14.5%	11%
Total Wine Grapes	336,841	-	100.0%	14%

Source: "Final Grape Crush Report - 1980 Crop," California Department of Food and Agriculture, March, 1981.

Table 48. Regional Profile of the California Wine Crush, 1980

Region - Map Number*	Total Crush		Percent of Region's Crush From:				
	Tons	Percent of California	Raisin	Table	White Wine	Black Wine	Total Wine
Central San Joaquin Valley - 13	1,221,334	42%	45%	3%	17%	35%	52%
Southern San Joaquin Valley - 14	638,488	22	29	8	26	38	64
Northern San Joaquin Valley - 15	412,080	14	10	a.	31	59	90
Sacramento Area - 11	232,316	8	a.	48	12	41	52
Monterey Peninsula - 7	80,147	3	1	a.	48	51	99
Napa Valley - 4	80,112	3	a.	-	42	58	100
Sonoma - 3	79,067	3	-	-	38	62	100
Mendocino - 1	40,076	1	-	-	39	61	100
All Other California Areas	112,159	4	a.	1	36	63	99
Total	2,895,779	100%	27%	7%	24%	43%	66%

*See Figure 41.

a. Less than 0.5 percent.

Source: "Final Grape Crush Report - 1980 Crop," California Department of Food and Agriculture, March, 1981.

FIGURE 41.

LOCATION OF

CALIFORNIA WINE DISTRICTS.

REFERENCE TO TABLE 48.

Grape Production Regions

Because of its large and very diverse geographic area, California has several important grape production areas that are as different from each other as they are different from New York. Key statistics on each of the important areas are presented in Table 48 while the areas themselves are shown on the map of California in Figure 41. A brief profile of each area is as follows:

Central San Joaquin Valley. This is in California's vast interior valley through which the San Joaquin River flows. It has a long, hot, dry summer and depends on irrigation from canals for water. The climate is ideal for production of large tonnages per acre with good sugar levels, although sugar-acid balances may not be ideal. This particular part of the valley is the heart of the American raisin industry based upon the Thompson Seedless grape. The central San Joaquin provided 42 percent of the grapes crushed in California during 1980, but 45 percent of these grapes were raisin varieties, almost entirely Thompsons. It also produces tremendous tonnages of common wine varieties, especially the black ones.

Southern San Joaquin Valley. This is a continuation of the Central Valley area with the same conditions, although the season is longer and hotter. Table grape production is much more important, especially around the Bakersfield area, and this is reflected in the crush of table grapes for wine. The crush of Thompson Seedless raisin grapes is not nearly as large as in the adjacent region to the north. Nearly two thirds of the grapes crushed for wine from this area are wine grapes. As is true of the Central Valley in all areas, the common white varieties are French Columbard and Chenin Blanc, while the common black ones are Carignane, Grenache, Barbera, Ruby Cabernet, and Rubired.

Northern San Joaquin Valley. This area provides 14 percent of California's grape crush, almost entirely from wine grape varieties. It is the "headquarters" of California's wine industry with Gallo located at Modesto and other major wineries within the area. Growing conditions and wine variety mix are similar to the other parts of the Central Valley.

Sacramento Area. This is a major table grape and juice grape shipping area, but it provides eight percent of California's wine crush. Nearly one-half of this area's wine crush is from table grapes and most of the remainder is red wine varieties, especially Zinfandel.

Monterey Peninsula. This area produces only three percent of the grapes crushed for wine in California, but is very important as the State's fastest growing premium wine grape area. This is where Wine Spectrum (Coca-Cola) is developing its California operations through its Monterey Vineyard division. It has an ocean-modified climate that provides a long growing season with sunny days and cool nights ideal for development of excellent sugar-acid ratios and production of premium European varietals such as Cabernet Sauvignon, Pinot Noir, Chardonnay, White Riesling, Sauvignon Blanc, etc. Yield potentials are much lower than in the Central Valley because of the climate and soils, the varieties grown, and prevailing vineyard management practices. Because of the newness of its plantings, it has the best mix of white versus black varieties of any area in the State, based on today's market conditions.

Table 49. Selected California Wine Grape Prices

	1979	1980	Average Degrees Brix, 1980
	Dollars Per Ton		
French Columbard			
Central San Joaquin	$230	$ 224	19.8
State	241	233	19.5
Chenin Blanc			
Southern San Joaquin	$237	$ 224	18.3
Napa Valley	570	596	21.7
Monterey Peninsula	505	525	21.4
State	286	281	19.1
Chardonnay			
Napa Valley	$978	$1,098	23.1
Sonoma	856	897	22.7
Monterey Peninsula	651	791	22.9
State	784	905	22.8
White Riesling			
Napa Valley	$653	$ 701	21.5
Sonoma	591	608	21.5
Monterey Peninsula	481	569	21.2
State	497	552	21.1
All White Wine Varieties			
Central San Joaquin	$221	$ 217	19.4
Northern San Joaquin	231	227	19.3
Monterey Peninsula	516	549	21.6
Sonoma	556	608	22.0
Napa Valley	665	734	22.2
State	299	287	19.6
Carignane			
Central San Joaquin	$113	$ 113	23.3
State	133	135	22.7

Table 49. (Cont.) Selected California Wine Grape Prices

	1979	1980	Average Degrees Brix, 1980
	Dollars Per Ton		
Zinfandel			
Sacramento Area	$188	$ 183	22.5
Monterey Peninsula	342	203	23.6
Sonoma	479	497	23.1
Napa Valley	527	519	22.8
State	285	261	22.6
Cabernet Sauvignon			
Napa Valley	$538	$ 616	23.3
Sonoma	404	462	23.6
Monterey Peninsula	242	262	23.3
State	336	406	23.3
Rubired			
Central San Joaquin	$127	$ 112	22.5
State	124	111	22.3
All Black Wine Varieties			
Central San Joaquin	$120	$ 117	22.1
Monterey Peninsula	278	260	22.6
Sonoma	401	427	22.8
Napa Valley	482	530	22.8
State	170	164	22.1
State Prices by Type			
Raisin	$151	$ 144	19.4
Table	155	144	19.0
White Wine	299	287	19.6
Black Wine	170	164	22.1
All Wine	215	210	21.2
All Varieties	196	190	20.6

Source: "Final Grape Crush Report - 1980 Crop," California Department of Food and Agriculture, March, 1981.

FIGURE 42A.
APPROXIMATE PLANTINGS OF CALIFORNIA WINE GRAPES, 1967-80

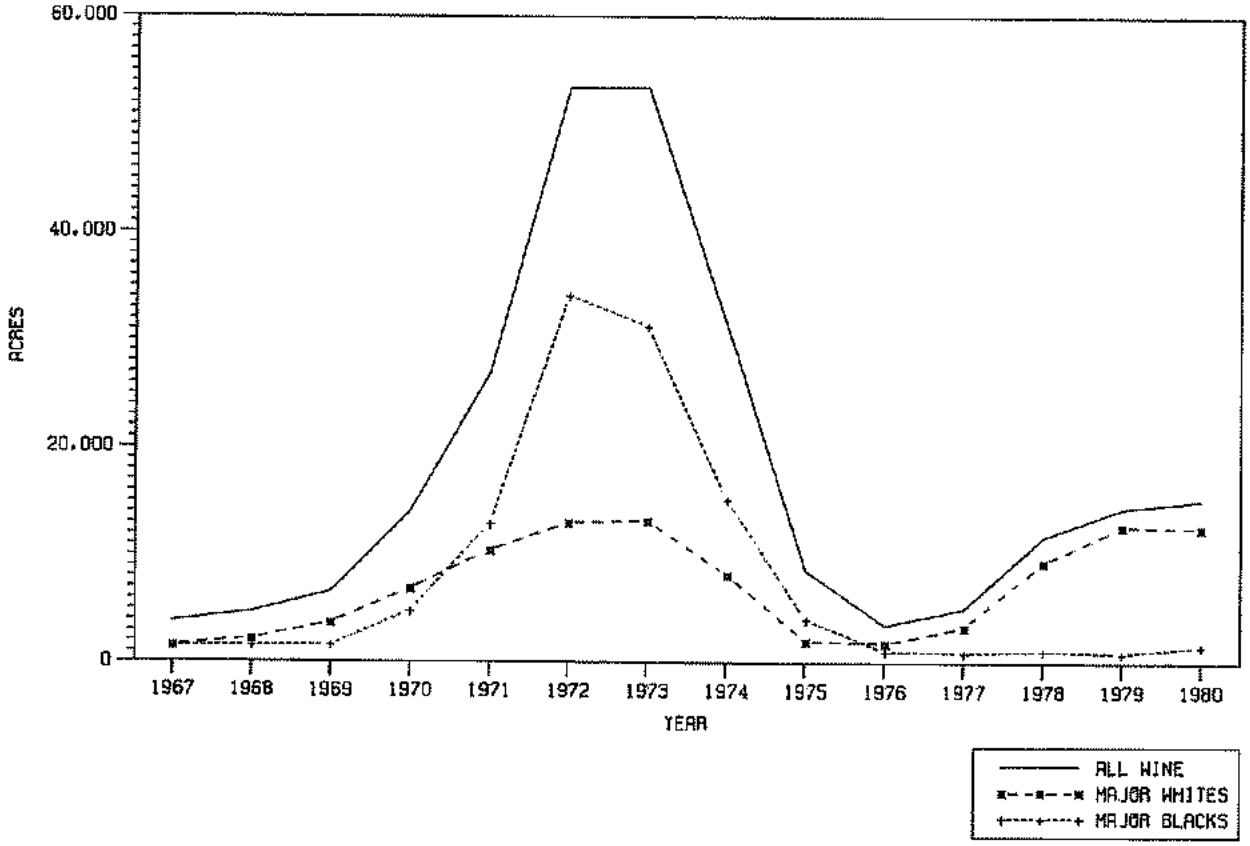


FIGURE 42B.
CALIFORNIA WINE GRAPE PLANTINGS - PERCENTAGE IN WHITE VARIETIES, 1967-80

Napa, Sonoma, and Mendocino. These are California's most prestigious premium wine grape areas, especially the Napa Valley. Together they account for only seven percent of California's wine crush, entirely wine grapes. They are still somewhat heavy in black varieties since they were heavily planted in the late 1960's and early 1970's when black varieties were the prevailing wisdom.

Climatically, these areas have an ocean-modified climate similar to that of the Monterey area with the same ideal conditions for premium wine grapes. Napa is located in an interior valley and is somewhat more vulnerable to spring frost than the other two counties on the coast. Both Napa and Sonoma are "bedroom community" areas to San Francisco and there is substantial urban influence and pressure on these areas.

Grower prices for wine grape varieties vary widely among the different areas and varieties. Selected average prices are shown in Table 49. The substantially higher average prices received in the premium areas along the coast relates to their mix of premium grapes, generally higher sugar levels, and higher market price structures in general, e.g. even for the same variety such as Chenin Blanc or Zinfandel. North Coast growers receive substantially better prices than Monterey growers and especially those in the Central Valley area.

The preferences of the market in terms of varietal type are very clear in California. Based on 1980's average price paid for all grapes crushed, white wine varietals brought prices 58 percent higher, black wine varieties were priced 10 percent below the average, table grapes were priced 18 percent below, and raisin varieties were priced 24 percent below. The premium for white wine grapes extends even to the heavily produced, everyday white wine varietals such as French Columbard and Chenin Blanc.

New York State grape prices compared to California wine grape prices as follows in 1980:

Whites			Reds (Blacks)		
Chardonnay	CA	$905	Cabernet Sauvignon	CA	$406
White Riesling	CA	552	Baco Noir	NY	377
Delaware	NY	417	Foch	NY	371
Seyval Blanc	NY	398	Rougeon	NY	291
Aurora	NY	374	Zinfandel	CA	261
All Whites	CA	287	De Chaunac	NY	254
Catawba	NY	282	Concord	NY	185
Chenin Blanc	CA	281	All Blacks	CA	164
Niagara	NY	248	Carignane	CA	135
French Columbard	CA	233	Barbera	CA	127
Thompson Seedless	CA	144	Rubired	CA	112

Plantings of Wine Grapes in California

The pattern of California wine grape plantings during the past fifteen years explains much of what went wrong in the New York State wine industry in the mid and late 1970's. Approximate wine grape plantings are shown in Figure 42 - approximate to the extent that actual plantings were somewhat higher than shown, but some have already been removed. In the late 1960's, California wine grape plantings were less than 10,000 acres annually and there was a good balance between white and red varieties. This was followed by a tremendous surge in plantings during the four years between 1971 and 1974 in which 180,000 acres of new vineyards were planted in California.

There were several reasons for these large plantings in the early 1970's:

1) Developing new vineyards had a tremendous tax shelter advantage in that development costs could be deducted from ordinary income in the year they occurred and the vineyard could be sold after it came into production with the net gain taxed at the lower capital gains rate. The higher the tax bracket, the larger the tax shelter advantage was. Almonds and citrus groves had attracted large amounts of investor money as tax shelters, but this was shut off as of 1970 by the Tax Reform Act of 1969. Investors then turned to grapes and other orchard crops as a tax shelter during the early 1970's.

2) There was a tremendous sense of optimism and bullishness in the California wine industry during the early 1970's. The "pop" wine fad of that era was widely misinterpreted as a permanent market for grapes and yet much of it centered around apple wine, e.g. Boone's Farm apple wine. A large California bank released a very bullish forecast on the future need for red wine grapes during this time.

3) Wine grapes were in short supply and grower prices surged ahead. The 1972 crop was the smallest since the mid-1950's and this also was misinterpreted.

4) There was a big influx of outside money that flowed into the wine industry, both in vineyard development and new wineries. Most of these outsiders were naive as to what they were doing, spurred on by promoters who packaged the "deals." Grapes were planted with no markets arranged for them and there was indifference as to what varieties were planted. Several large life insurance companies and California banks amply extended the funds needed to bankroll this unprecedented expansion.

Not only were these plantings too much too fast for the markets to absorb, but they were more than two-thirds black (red) wine varieties. Not only were premium varieties such as Cabernet Sauvignon and Petite Sirah overplanted, but large acreages of ordinary black varieties such as Ruby Cabernet, Rubired, and Barbera were also overplanted.

In 1973 and 1974, California had good grape crops. After a poor 1975 crop, it recovered to strong production levels in 1976, 1977, and 1978. It set new records for crop size in 1979 and 1980. The 1973-1980 crop years were an unprecedented period for California with only one poor crop year and new grapes continued to come into production from the early 1970's plantings. Wine demand slowed in 1974 and 1975 as consumer incomes were reduced by the recession in the economy. As these new red plantings came on line, the dominant consumer trend was clearly towards premium white table wines. California was now considerably out of step with its markets.

The inevitable distress came in 1975 and later years. Black grape prices fell and some vineyard development deals failed. A number of wineries also encountered difficulties because of the highly competitive climate, including a premium winery venture owned by Pillsbury (Souverain in Sonoma County) and the Monterey Vineyard Winery venture later purchased by Coca-Cola. By 1976, red grape plantings had slowed to a mere trickle of what they once were. Wineries scrambled to find outlets for surplus blacks, including the grape concentrate market.

Growers pulled some excess black varieties, and grafted others over to white varieties. While grafting over has received a great deal of publicity, it has not been that large in terms of overall black wine variety acreages. Most California growers have been just as reluctant as New York growers to convert from blacks to whites, hoping instead that the market would grow out of its current imbalance or that consumer tastes would return to red table wines. In 1979-80, California grape growers pulled a total of 9,874 acres of wine grapes, or about 2.9 percent of California's wine grape acreage. Despite all the publicity received by grafting over via T-budding, California converted only 2,875 acres (0.8 percent of total acres) in this manner in 1979-80. Most of what was converted was black (red) varieties such as Cabernet Sauvignon and Pinot Noir to white varieties such as Chardonnay, Sauvignon Blanc, and White Riesling. Much of the grafting has occurred in the Monterey area where Monterey Vineyard (Wine Spectrum) is offering long-term contracts on white varieties. Most California wine grape growers are reluctant to change over due to the cost of replanting or grafting over, the loss of income during the converison process, the risk of losing the vines if grafting is done improperly, and their uncertainty as to future market demand for reds versus whites.

California Wineries

California had approximately 470 wineries as of 1980, up from 321 in 1975 and 240 in 1970. One of the best ways to understand the structure of the California wine industry and how it has evolved since the Repeal of Prohibition is through six categories of wineries identified by one of California's leading winery consultants, Louis Gomberg.

"Mom and Pop" Wineries. Many of these were begun by small grape growers after the Repeal of Prohibition as an appealing way to market grapes, but few are now left, having gone out of business or having been absorbed by other operations. As Gomberg states it, "in time they learned that the wine business is quite different, and far more demanding, than the grape business; that wine calls for technical, management, and marketing skills, continuing capital outlays for facility maintenance and expansion, inventory buildup and market development, and above all, a degree of capital intensity considerably exceeding that of basic farming operations."

"Family-Owned and Operated" Wineries. These were somewhat larger than the "Mom and Pop" class, but they were still relatively small and unsophisticated. Most of these have also been shaken out by the very competitive conditions in the wine industry, but a few have survived as part of larger wineries or have evolved into successful operations. Gallo started out in this category, but outgrew it in the late 1940's and the 1950's. Most of these were in the bulk wine business and few made the transition to bottled goods sales of quality wines. The reasons that most of these operations did not survive are "lack of incentive or capability to preserve product quality improvement, to learn and implement advanced marketing techniques, working capital and expansion capital resources, and that inescapable and demanding essential of the premium bottled business, capital intensity." (Gomberg).

"Farmer Cooperative" Wineries. Since Prohibition, some 44 winery cooperatives have been started in California, but only eight of these have survived. Most of these have been in the bulk wine industry in the San Joaquin Valley, most commonly as an outlet for growers' excess of unmarketable table and raisin grapes. Guild Wine Co. is the fourth largest winery in the U.S. and has established consumer brands such as Cribari, Tavola, Winemasters, Cresta Blanca, and Roma. It has been plagued by sales problems in the 1970's and is heavily positioned in the popular-priced consumer wine and bulk wine market segments. Other surviving co-ops are Gibson Wine, Delano Growers, Woodridge Vineyard, and East-Side Winery. United Vintners, now owned by Heublein Company of Connecticut, was owned by the farmer cooperative Allied Grape Growers until 1969 when they sold Heublein an 82 percent interest in it. Allied now functions as a grape grower organization that does some negotiating relative to United Vintners' long-term grape supply contract. Allied had acquired the once dominant Italian Swiss Colony and Petri Wineries in 1959 after they had encountered operating problems and had been surpassed by Gallo. In ten years of operation, they were unable to reverse their difficulties. Heublein has had mixed results with United Vintners in the 1970's, although sales have increased and United Vintners continues to be second in sales after Gallo. Gomberg's conclusion is that "on the whole, I think it can be said that the co-op route historically has not been a very good way for growers to go in search of increased returns."

"Small Premium" Wineries. At first glance, these could be easily confused with the first two categories. In the past fifteen years, some 300 new wineries have been started in California, most of which fall in this category and most of which have survived. Most are relatively small businesses and some grow at least part of their own grape needs. They are almost entirely in the premium grape areas of the North Coast and the Monterey Peninsula. The people involved in this category are a new wave of entrepreneurs who came into the wine industry from outside - most with substantial financial resources of their own or the ability to tap outside sources of risk capital. Most were highly educated or experienced outside of the wine industry - in business, law, medicine, physics, etc. Many of these entrepreneurs entered the wine industry for noneconomic reasons - the "romance" of the wine industry, as a way to enjoy the "good life," as a way to enter a prestigious circle of wine industry "insiders" that includes many of America's rich and famous.

The factors which have enabled most of these wineries to survive are summarized well by Gomberg:

1) "First, that the winery is owned and operated by one or more persons whose sense of dedication to quality excellence and determination to run a reasonably tight ship are beyond question."

2) "Second, that the owner or owners have the financial staying power to wait five, ten, maybe even fifteen years before positive cash flow begins; in short, the power to persevere until the enterprise becomes profitable."

3) "Third, that the owners are just as aware of the importance of marketing effectively as they are mindful of the importance of product quality . . ."

4) "Fourth, that the owners are prepared to reinvest all or a large portion of their earnings each year in inventory buildup, facility improvement and expansion, and product promotion - year after year without letup, so long as conditions demand."

5) "Fifth, that the owners are entrepreneurially oriented, capable of sound judgement and prudence in operation."

This segment of wineries has undoubtedly been very important in upgrading the image of the California wine industry in the past decade. They have provided a vital dose of innovation, experimentation, and competition in the California wine industry that has benefited the larger wineries and grape growers.

It should be recognized that not all of these wineries have prospered and survived, or that it has been easy for the ones who did. The necessary level of financial resources has been widely underestimated - many of these businesses have had strained cash flows and have had to dig further in their own pockets or seek additional help. While Bank of America, PCA, and other conventional lenders have had a financing role, much of the capital needed has been "risk" or "venture" capital from individuals. The businesses that have failed have been acquired by others eager to give the wine business a try. In some cases, real estate appreciation has prevented losses, but in some other cases, the new buyer has acquired the winery at less than its replacement cost.

"Corporate" Wineries. These are the large California wineries that have survived and prospered in this business, mostly having emerged from one of the previous categories. Common ingredients of success have been good marketing and capital staying power. Gomberg observes that they were often adept in other areas. "Some of these success stories could be attributed to expert research and development. Others proved exceptionally skillful in handling funds economically. Still others were extremely adroit at knowing where, when, and how to build inventories - and not to build them; where, when, and how to acquire raw material most advantageously; when, and when not, to expand facilities with accompanying increases in fixed capital commitments." Examples of wineries in this category include Almaden, Franzia Brothers, Paul Masson, Christian Brothers, and California Growers Winery.

"Industry Giant" Wineries. Gomberg separates Gallo and United Vintners from the previous category because of their dominant position in the California and American wine industry. Together they account for more than 40 percent of California's wine crush and wine shipments. The two largest winery operations are nearly opposites of each other, although Gomberg observes that both have achieved their positions of leadership through "judicious use of the four 'M's of business achievement: Money, Manpower, Management, and Marketing." While Gallo is one of America's largest family owned and operated businesses, United Vintners is a subsidiary of one of America's largest consumer marketing corporations that also sells Kentucky Fried Chicken, Smirnoff Vodka, and A-1 Steak Sauce. Gallo developed itself internally with its own brands and profits, with very little reliance on acquisitions and outside capital. United Vintners is a combination of many brands acquired through mergers and acquisitions over the years. Gallo is an outstanding American business success story, while much of United Vintners' history is dominated by various business problems.

E. and J. Gallo Winery

Because of its dominant role in today's U.S. wine industry, and its premier role in developing the California wine industry to what it is today, the E. and J. Gallo Winery deserves a profile of its own. While Gallo is headquartered in Modesto in the central San Joaquin Valley, it purchases wine grapes throughout California, either directly or through other organizations. Even in the renowned Napa Valley, Gallo is the single largest buyer of grapes. It could be said that the California wine industry has a "love-hate" relationship with Gallo. Gallo's leadership in the growth that the California industry has experienced in the last two decades is widely acknowledged and appreciated. Gallo was very instrumental in the technical upgrading of California's winery facilities and winemaking techniques, leading by example and breaking with centuries of tradition. Their aggressive and innovative marketing is attributed with having expanded the mass market for all California wines.

The Gallo Brothers are also known as shrewd businessmen. Many people in the California grape industry will say that Gallo has been heavy-handed with growers, labor unions, distributors, and others with whom it has dealt. They have been investigated by government agencies, although they have never been seriously prosecuted. A 1975 "Forbes" article characterized Ernest Gallo as follows: "Throughout his career, Gallo has used people; bullying them, conniving them - whatever it took to get the upper hand." In 1977, Gallo signed a consent decree with the Federal Trade Commission in which they agreed not to use their dominant market position to restrain their competition.

A recent "Readers Digest" article tells another side of the Gallo story, about its leadership in upgrading the quality of wine grapes grown in California:

> "Probably the most important factor in breaking the impasse was a research project run by the Gallo Wine Company. In the early 1940's, Gallo planted 400 varieties of European wine grapes in an experimental vineyard in California's hot Central Valley, where the bulk of jug-wine grapes are grown." "For the next 25 years, Gallo subjected sample wines from each of the varieties to rigorous tastings. Finally, in 1967, after about 10,000 individual samplings, the company took two important steps.
>
> First, it announced its choice of the eight top European grapes. Then it made an offer to vineyard owners. Gallo would sign a 15-year contract agreeing to pay a guaranteed minimum price (or the market price if it was higher) for the entire crop of any grower who planted the listed varieties. Since Gallo was by far the biggest buyer of California wine grapes, its offer carried tremendous weight."

Gallo has a large portion of its grape supply on long-term contract. It is a fifteen year contract with a minimum price of $75 per ton or the market price, if higher. White varieties must have a minimum of 21 degrees Brix sugar and blacks must have 22 degrees Brix - for every degree (or fraction) the grapes are short on sugar, the price is reduced by $10. The grapes must be grown to Gallo standards for both sugar and grade, and the contract stipulates price reductions when they are not. One of the most controversial features of this transaction is that Gallo determines what is/is not acceptable without the services of a third party grader. Growers feel that Gallo fieldmen are often arbitrary, telling the grower which rows they will accept and which they will not, not giving the reason for nonacceptance, finding many quality problems in years of heavy supply, etc.

The other controversial feature is the pricing because growers believe that inflation has made the $75 minimum meaningless. There is a thin cash market for most California wine grapes and Gallo has a large impact on the cash market price.

Gallo purchases an estimated 40 percent of California's wine grapes. While many growers feel that Gallo has manipulated price to growers' disadvantage, it has also been known to move it the other way to other wineries' disadvantage. The 1975 "Forbes" article explained the 1974 pricing situation:

> "Last year, Gallo paid, say $75 a ton for grapes that growers would have gladly sold for $65. Why the largesse? The company says it pays top prices to get top grapes. Perhaps another explanation is that by paying more, Gallo can whack its competitors. Years back, when prices were climbing, Gallo signed many long-term contracts with growers guaranteeing minimum prices. If Gallo let prices drop below those minimums, the company would benefit only marginally, while its competitors would be free to make killings in the open market. By setting prices higher, on the other hand, Gallo forces its less well-heeled competitors to pay far more than they otherwise would."

For many years Gallo's marketing thrust has been to use earnings from cheap, mass-market wine products to move itself upward into higher-quality, higher profit wines that did not require any more raw material to produce. The first big step in this strategy came in the late 1950's when Gallo conceived and marketed a potent new product called "Thunderbird" that consisted of white port wine and citric acid. It sold an unprecedented 2.5 million cases in its first year. For Gallo, it generated not only huge profits, but tremendous loyalty from its distributor network. This was used to upgrade into innovative new products such as Pink Chablis, Ripple, and Spanada in the 1960's.

In 1969, Gallo reformulated its "Boone's Farm" apple wine by adding carbonation to it, thus creating the "pop" wine boom. Sales advanced from 30,000 cases a year to 8.6 million cases in 1971 to 16 million cases in 1972, the peak year. In what has now been termed marketing "genius," Gallo decided to stop advertising "Boone's Farm" and start milking it for profits. Case sales declined to six million in 1974, but Gallo had meanwhile used the profits to upgrade into the higher priced, higher profit Hearty Burgundy line which grew from 4 million cases in 1971 to 13.5 million cases in 1974.

A March 15, 1982, "Business Week" article described Gallo's marketing and sales system as follows:

> "The Gallo creed relies on canny distribution. Its sales force provides retailers with a Gallo manual, How to Maximize Your Wine Profits, that emphasizes placing wine displays near poultry, fish, and related sections of supermarkets, since 70% of all wine sales are impulse purchases. It advises, too, that the prime, eye-level shelves feature the fastest-selling advertised items - with larger sizes placed to the right of smaller ones to encourage consumers to trade up. Says Shanken: 'Gallo trained their people in concepts such as shelf positioning long before other companies even knew they were an aspect of selling."

In recent years, Coca-Cola's Wine Spectrum has been the leading innovative marketing force in the California wine industry. Gallo continues its upgrading with a new line of cork-finished, popular-priced varietal wines under the "Wine Cellars of Ernest and Julio Gallo" brand. There is no question that Gallo will continue to be a dominant force in the California wine industry, both in terms of pricing of grapes and wines, as well as wine marketing. Since the New York wine industry operates in California's long shadow, this means that what Gallo does will continue to have an impact on the New York wine industry.

California Grape Concentrate

Grape concentrate is a by-product of the California wine industry. It is easy to produce within an existing winery operation and is often used in the production of certain types of wines. Some California wineries apparently got into it during the late 1960's in response to the demand for grape concentrate in sparkling wine production. Concentrate production became even more appealing as the market for blending traditional Concord products expanded in the early 1970's. This was compounded even further when California entered a surplus market condition for common red wine grape varieties in the early 1970's.

There are twelve California wineries listed in "Wines and Vines" annual directory as sellers of grape concentrate. Among these are three cooperatives, Delano Growers, Guild, and Sun-Maid Growers. Concentrate production may be almost a necessity to these co-ops that have a commitment to market their members' grapes regardless of variety or market demand. Other important concentrate producers are Bisceglia Brothers, California Growers, Giumarra Vineyards, United Vintners, and Vie-Del. Almost all of the concentrate production is from the San Joaquin Valley, very commonly in the table grape and raisin grape areas.

Thompson Seedless (raisin variety), Rubired (red wine grape), and some of the table grape varieties such as Tokay are the common ones used for concentrate production. For comparison, average prices and sugar levels have been:

Variety	Degrees Brix		Price Per Ton	
	1979	1980	1979	1980
Thompson Seedless	20.9	19.3	$151	$144
Ribier	18.9	19.3	104	82
Tokay	18.2	18.5	175	173
All Table	18.7	19.1	155	144
Rubired	23.2	22.3	124	111

Compared to Concords, which typically have a lower sugar level and are typically priced between $150 and $200 per ton, the price competitiveness of California grape juice/concentrate can be readily seen. Rubired, for example, not only has a very low grower price, but a higher yield to the processor because of its relatively high sugar.

Wine Organizations

The Wine Institute, founded the year after Prohibition was repealed, is California's best known wine organization. It is a voluntary organization consisting of most California wineries and funded by them. It engages in lobbying at both the State and National levels as well as intensive gathering and dissemination of wine industry data. As it is an organization of wine makers, grower groups do not always agree with it or trust it. One of its most vigorous thrusts is in fighting barriers to foreign trade at the current time.

From 1938 until 1975, Wine Institute members operated the Wine Advisory Board which was voluntarily funded. Its activities consisted of generic (nonbrand) advertising, public relations, comparative wine tastings, trade barrier lobbying, research, and education. While some of its activities were more successful than others, it is generally believed that the Wine Advisory Board was instrumental in raising the image and public awareness of California wines. Well-known winemaker and industry leader, Robert Mondavi, recently called for a renewal of some of these activities at the industry level - specifically public relations, research, a medical program, a campaign against trade barriers, an export development program, and an effort to assess California's competitiveness in world markets.

There are an estimated 8,000 wine grape growers in California. In addition to the usual diversity of grower opinions commonly found within an industry, there are sharp regional differences among them based on different histories, markets and production orientations.

The California Association of Wine Grape Growers was founded in 1974 as a Statewide organization of wine grape growers. Approximately one-half of the State's growers representing 55 percent of the tonnage produced belong to it. It is supported by a voluntary $2 per $1,000 of grower gross sales. In 1977 this group promoted a research and promotion market order which was narrowly defeated in a referendum. It is currently moving towards another referendum on the same issue. They feel that bargaining with the wineries would be suicidal because of the high concentration of grape purchases among several of the larger wineries and the relatively diverse and autonomous nature of wine grape growers in different regions of the state. Instead, they feel that the only way growers can impact the price of grapes is to create new demand for grapes and to lobby for the best foreign trade terms. They are quite concerned about the large share of the U.S. wine market being taken by imported wines and the restrictions which many of these same exporting nations apply to U.S. wines entering their market. In addition to generic wine promotion, they would like to have funds with which to conduct sophisticated market research and to provide growers with good market information comparable to what wineries receive through the Wine Institute.

Their proposal calls for a deduction of one percent of the price paid to the grower which would provide a $4 million budget. They are opposed by the Wine Institute and some regional wine grower groups. Growers on the North Coast are suspicious of being united in a statewide organization which would be overwhelmingly dominated by Central Valley growers.

There are a number of regional wine grape grower associations such as the North Coast Wine Grape Growers, the Central Coast Wine Grape Growers, the San Joaquin Valley Wine Growers Association, etc. Most of these do little more than exchange information on crop condition and winery prices. Both the North Coast Wine Grape Growers and the Napa Valley Grape Growers have moved further by announcing floor prices for their growers' grapes. Of course, their members are not bound to these prices and so the degree of success has been mixed.

In 1978, the Napa Valley Grape Growers Association was successful in developing a grower contract that tied the price of grapes to the price received for a bottle of wine - a so-called "bottle price formula." The primary advantage of this type of pricing is that, once the terms are initially settled, it aligns the movement of the grower's return and the winery's raw product cost to the ultimate product return. This is especially useful in long-term contracts and may avoid some potential for risk and conflict between growers and wineries. The disadvantages lie in the difficulty of negotiating the initial terms of the price formula and the fact that many grapes are used in generic blends where the identity and contribution of a particular variety, and thus its value, becomes difficult to quantify. To date, some of the smaller North Coast wineries have adopted bottle price formulas for some grapes and some growers. Robert Mondavi winery is the largest of the California wineries to have adopted this type of provision so far.

The Monterey Winegrowers Council, founded in 1974, has been very instrumental in that area's wine industry development in recent years and may well be a model organization for cooperation between growers and wineries. It was founded in order to study and improve grape and wine production in this region and to counteract some wine quality image problems that had developed for the area's wines. The Council has reportedly fostered a high level of participation, interaction, and mutual support and generated an "esprit de corps" among the local wine industry.

COST OF PRODUCTION AND OTHER REGIONAL FACTORS

Cost of Production

Before beginning any analysis or commentary on cost of production differences among areas, three important factors must be raised. First, cost of production varies widely within a given production area such as the Finger Lakes based on variety mix, market outlets, the vineyard site(s) itself, and the grower's management ability. Second, costs vary according to the market for which the grapes are grown. Thus it costs more to grow hand-harvested premium vinifera grapes for fine wines than it does to produce mechanically harvested Concords for juice. Finally, every cost of production study is different in terms of definitions and assumptions made. To the extent possible, the data used in this analysis has been standardized to eliminate obvious differences, but minor differences in specific categories should not be overemphasized.

Table 50 shows three basic categories of grape production costs:

1) Total Cash Expenses are those that must be paid every year in order to produce a crop. They include a payment for the operator's labor at the hired wage rate, but this is consistent given that the operator must have some minimum income annually just for family living expenses. Growers are most sensitive to this category of costs because their gross income must more than cover them to remain a viable business, even in the relatively short-run.

2) Total Depreciation is a category of costs that does not have to be paid every year, but is crucial to the long-term viability of a business. Machinery especially must be replaced on a timely basis, while changing markets and/or technology periodically dictate the replacement of vineyards.

3) Total Interest is calculated as if the grape grower had borrowed all of the capital used in his business at commercial interest rates. Of course, most grape growers have less than 50 percent of their capital borrowed and some have no borrowed capital. Obviously, few growers have to pay all of this expense on either a short or long-term basis. However, for grapes to be an attractive enterprise compared to other crops and for growers to be attracted to farming, the enterprise has to earn some rate of return on the capital employed. This is most crucial for growers who have debts, but is an important long-term consideration for all growers.

On a per acre basis, there is not a wide range among the four wine grape production areas shown, although the San Joaquin Valley of California and California's North Coast stand out at the opposite extremes. Because of the wide variation in yields per acre, however, cash production expense per ton varies widely. The two New York areas tend to be high cost of production areas for wine grapes, although they are exceeded by California's North Coast. The relationships do not change greatly if depreciation costs are added to cash costs. Because of the much higher land and vineyard values in California, adding interest to other costs changes the relationship substantially, although the San Joaquin Valley still retains a substantial cost advantage. Compared to the San Joaquin Valley, the Finger Lakes grape growers' cost per ton is:

Table 50. Cost of Production for Grapes, 1981

	Wine Grapes				Single Curtain Concords		
	French Hybrids-NY Grape Belt	Mixed Varieties-Finger Lakes	Mixed Varieties-Cal. N. Coast	Mixed Varieties-Cal.-San Joaquin	NY Grape Belt	Michigan	Washington
	Cost Per Acre						
Labor (1)	$ 360	$ 387	$ 346	$ 187	$ 294	$ 249	$ 247
Trellis Repair & Tying	24	56	25	23	24	69	36
Fertilizer	35	56	9	21	35	37	18
Chemicals	69	66	102	81	52	87	2
Machine Operation	114	114	91	64	114	69	55
Harvest & Trucking (2)	175	224	311	319	215	140	240
Taxes	44	30	260	33	44	24	42
Irrigation & Frost Protection	-	-	22	36	-	-	36
Other Cash Expenses	43	85	77	35	43	43	47
TOTAL CASH EXPENSES	$ 864	$1,018	$1,243	$ 799	$ 821	$ 718	$ 723
Machinery Depreciation	$ 132	$ 149	$ 132	$ 68	$ 132	$ 91	$ 88
Irrigation Depreciation	-	-	16	31	-	-	-
Vineyard Depreciation	52	52	146	131	32	40	200
TOTAL DEPRECIATION	$ 184	$ 201	$ 294	$ 230	$ 164	$ 131	$ 288
Interest on Real Estate (3)	$ 135	$ 135	$1,241	$ 838	$ 110	$ 180	$ 550
Interest on Machinery (3)	96	135	116	47	96	66	98
Interest on Irrigation (3)	-	-	129	43	-	-	-
Interest on Operating Capital (3)	43	51	62	40	41	36	36
TOTAL INTEREST	$ 274	$ 321	$1,548	$ 968	$ 247	$ 282	$ 684
TOTAL CASH EXPENSE	$ 864	$1,018	$1,243	$ 799	$ 821	$ 718	$ 723
TOTAL CASH & DEPRECIATION	1,048	1,219	1,537	1,029	985	849	1,011
TOTAL CASH & DEPRECIATION & INTEREST	1,322	1,540	3,085	1,997	1,232	1,131	1,695
Yield Per Acre	3.5	3.9	4.0	7.0	4.3	4.0	7.0

	Cost Per Ton						
TOTAL CASH	$ 247	$ 261	$ 311	$ 114	$ 191	$ 180	$ 103
TOTAL CASH & DEPRECIATION	299	313	384	147	229	212	144
TOTAL CASH & DEPRECIATION & INTEREST	378	395	771	285	287	283	242

Notes:

1. Operator's labor valued at hired labor rate. No return to management included.
2. Harvest and trucking includes hand harvest labor in California.
3. Interest calculated at 10 percent on land, 10 percent on average vineyard value, 14 percent on average machinery and irrigation investments, and 15 percent on total cash expenses for four months.

Sources: All figures adapted, standardized, and/or updated by J. Putnam II based on the following original sources:

"Economics of Grape Production in the Great Lakes Region of New York," G. B. White and T. D. Jordan, November, 1978.

"Grape Production Cost Study," New York State Wine Grape Growers, Inc., 1981.

"Economics of Concord Grape Production in Southwestern Michigan, Projections for 1980 Revised," Myron P. Kelsey & Theodore M. Thomas, March 1980.

"Sample Costs to Establish and Produce Wine Grapes in the North Coast Counties, 1980," July, 1980.

"Wine Grapes - Cost of Production," James J. Kissler, June, 1979.

"Establishment and Production Costs in a 25-Acre Concord Grape Vineyard," Daniel Kirpes & Raymond J. Folwell, May, 1981.

"Agricultural Prices," Statistical Reporting Service, U.S. Department of Agriculture.

- 129 percent higher for Total Cash Expenses
- 113 percent higher for Total Cash Expenses & Depreciation
- 39 percent higher for Total Cash Expenses & Depreciation & Interest

The Grape Belt has about the same degree of disadvantage relative to the San Joaquin Valley.

New York is clearly not a low cost producer of wine grapes when compared to the vast San Joaquin production area which produces the majority of this country's wines, especially the everyday or "jug" wines. This is not necessarily a problem for New York so long as its grapes and wines are different enough to be able to compete for a consumer price premium. It is clear, however, that New York would be at a severe disadvantage in competing directly with the San Joaquin area on price alone.

At first glance it would appear that New York is at a clear advantage to California's premium wine area, the North Coast. What enables the North Coast to compete with the San Joaquin Valley and the world is the consumer price premium established for its wines. Thus a comparison to New York at the present time is an "apples to oranges" type of comparison. Furthermore, much of the North Coast's higher interest cost of production relates to some unique real estate market factors. First, the North Coast area has a heavy urban influence from nearby San Francisco. Second, vineyard buyers have bid up the price based on the expectation that it will continue to rise in the future.

For Concord grapes, Washington's Yakima Valley has a substantial advantage over the Lake Erie Grape Belt and Michigan in total cash expense per acre. This is due to its desert climate which eliminates many of the disease prevention measures so necessary in New York. On a per acre basis, this advantage is entirely offset by Washington's higher depreciation and interest expenses. All of these considerations are washed away by the wide difference in grape yields among the three areas - 4.0 tons for Michigan, 4.3 tons for the Grape Belt, and 7.0 tons for Washington. On a per ton basis, the Grape Belt's per ton cost is:

- Nearly double (85%) Washington's Total Cash Expense
- 59 percent above Washington's Total Cash Expense & Depreciation
- 19 percent above Washington's Total Cash Expense & Depreciation & Interest

Clearly, New York's largest Concord competitor has a significant cost of production advantage. While New York's Concords are higher in acid and Washington's are higher in sugar, there is not a substantial quality difference between the two areas' products to justify a wide price differential.

Grape Yields

As already shown, New York grape growers are already at a substantial yield disadvantage to most of their West Coast competitors. This has a serious impact on both per ton production costs and gross income per acre and per farm. Unfortunately, the trend in New York's grape yield is not positive:

	New York, All Grapes	Washington, All Grapes	California All	California Raisin	California Table	California Wine
	Tons Per Acre					
1966-70	4.2	7.0*	6.9	8.0	6.4	5.0
1971-75	4.2	5.6	7.4	8.5	6.8	6.0
1976-80	3.9	6.1	7.2	9.2	6.8	5.6
% Change From 1966-70 To 1976-80:	-8%	-13%	+4%	+15%	+6%	+12%

*Does not include 1966 for which data is not available.

. . . . .

New York's yield per acre has been stagnant for fifteen years, although it should be noted that the 1978-1980 crops averaged above the level of the late 1960's and early 1970's. Washington has also had yield problems, experiencing a 20 percent yield decline in the early 1970's which has only been partially recovered in the past five years. As with New York, it should be noted that Washington has exhibited substantial yield recovery in the last three years, including a record yield in 1978.

California has been making gradual progress towards higher yields during the 1966-80 period. Yields of raisin and wine varieties have both made impressive gains during the past fifteen years, thus adding further distance between California and other wine grape production areas such as New York. For wine grape varieties, California has been able to accomplish this while simultaneously improving the quality of its wine variety mix. It should be noted that for all grape varieties, California shows only an unimpressive four percent gain in the 1966-80 period. This low figure is entirely a statistical quirk caused by relatively lower yielding wine grapes becoming an ever-increasing proportion of California's total grape mix.

Grower Prices

There are substantial regional differences in the average price per ton received by grape growers in different areas which may account for and offset production cost differences. In 1980, the average price received by wine grape growers relative to New York State was 27 percent lower in California, 20 percent lower in Pennsylvania, and 87 percent higher in Washington State. Of course many regions of California, while small compared to the San Joaquin Valley, receive substantially higher prices than New York, e.g. the North Coast and the Monterey Peninsula. Perhaps more significant is how these regional relationships have changed over time:

Percent Statewide Average Wine Grape Prices are Above/Below the New York Wine Grape Average

	California	Washington	Pennsylvania	U.S.
1969-70	-68%	-	-	-66%
1971-75	-53%	-35%	-12%	-51%
1976-80	-32%	+74%	- 2%	-26%
1980	-27%	+87%	-20%	-31%

Grower prices for California wine grapes have increased much faster than New York prices throughout the past 12 years and consequently most of New York's price advantage has been eroded. The advent of commercially significant quantities of European (vinifera) wine grapes grown in Washington during the past several years has placed that state's small, but growing wine grape industry at a substantial and growing price advantage to New York State. The decline of New York's competitive standing on the price side must be of substantial concern to the New York industry. While there are important market factors behind it, there have been no offsetting changes in yield or cost of production that would have moderated the impact on New York.

For grapes crushed for juice, New York State's competitive position has been much more stable:

Percent Statewide Average Juice Grape Prices
Are Above/Below New York Average

	Washington	Michigan	Ohio	Pennsylvania	U.S.
1969-70	-14%	-10%	+10%	- 5%	-7%
1971-75	- 9	-11	-	- 1	-4
1976-80	-16	+ 1	-10	- 8	-8
1980	- 7	+33	- 7	-17	-1

For juice grapes, New York's price position relative to other states has stayed about the same during the 1969-1980 period, although the margin is not particularly wide between it and any other area. This is no surprise given the large role played by National Grape/Welch in this market and the fact that it has a single pool price (adjusted for Brix/sugar) for its members throughout the East and Midwest.

A more general price comparison can be made based on grower prices received for all grapes (table, juice, raisin, wine, and canning):

Percent Statewide Average Grape Prices (All Uses)
Are Above/Below the New York Average

	California	Washington	Arkansas	Michigan	Ohio	Pennsylvania	U.S.
1956-60	-50%	-32%	-	- 6%	+ 4%	+ 5%	-46%
1961-65	-59	-27	+ 8%	- 2	+ 7	+ 9	-54
1966-70	-54	-27	- 8	-10	+ 4	- 6	-49
1971-75	-36	-21	- 8	-20	- 3	-10	-33
1976-80	-12	-19	-21	- 7	-12	-10	-11
1980	+10	-18	-22	+15	-20	-23	+ 9

While New York has traditionally averaged higher in price for all of its grapes than have other major states, this advantage is eroding. For the first time, the average price for all California grapes exceeded the New York average by 10 percent in 1980. Washington State gained significant ground on New York in the late 1950's and the 1960's, but has remained at about the same position relative to New York since then. Michigan appears to be gaining ground on New York State, while the other major Concord states (Pennsylvania, Ohio, and Arkansas) appear to be losing ground to New York State. This is probably a result of the greater influence of the wine grape market in New York State than in most of the other traditional Concord states.

Vineyard Values

In many farm industries, appreciation on real estate has become an increasingly significant source of increasing farmer net worth in the past decade. While such appreciation cannot be "spent" in an ongoing farm operation, it does provide borrowing power and the promise of a substantial capital gain when the farm real estate is finally liquidated. Farm real estate appreciation depends upon a number of market factors, but in total, it is a crucial indicator of buyers' and sellers' degree of optimism for the future.

During the early 1970's, there was a fair degree of optimism in the New York grape industry and this was reflected in rising vineyard values. (See Table 51.) Vineyard values peaked in 1975-76 and have had a very uneven record since then. Market prices were abnormally low in 1980 due to a limited number of transactions, but the overall price history of the past five years reflects a stagnant New York State vineyard market. If adjusted for the severe inflation of the 1970's, there has been a significant loss of value in New York State vineyards:

	Actual Value in $1972	1981 Value in $1972 (Adjusted for Inflation)	Percent Change 1972-81
Yates County	$1,600	$ 966	-40%
Chautauqua County	$1,240	$1,051	-15%

The stagnant vineyard values of recent years reflect the poor economic returns and the disappointments that have occurred in this industry. However, they have also squeezed grape growers' borrowing ability and have contributed little to vineyard owners' overall net worth.

The New York State experience with vineyard values during the late 1970's and early 1980's is in sharp contrast to that of California and Washington State, as is readily demonstrated in Table 51. In addition to having higher vineyard values, these major competing areas have enjoyed dramatic rates of vineyard appreciation throughout the 1970's - exceeding the overall rate of inflation and New York State vineyard values by a large margin, especially in California. While this appreciation has not paid the bills, it has provided California and Washington growers with steadily expanding net worths and collateral against which they might borrow. It has been a powerful incentive to keep the vines in the ground and to plant new ones. Even though this appreciation may not be due entirely to grape industry factors, it is clearly a significant competitive advantage for California and Washington State over New York State.

Table 51. Vineyard Values in New York State, Washington State, and California

	Mixed Varieties in New York					
	Yates County (Finger Lakes)	Chautauqua County (Grape Belt)	California Wine		California Raisin	Washington
			Central Coast	San Joaquin	San Joaquin	Concords-Yakima
	Value Per Acre					
1969	-	-	-	-	-	$1,400-2,000
1970	-	-	-	-	-	N/A
1971	-	-	$ 3,030	$1,740	$1,500	N/A
1972	$1,600	$1,240	3,510	2,020	1,640	N/A
1973	1,700	1,375	N/A	N/A	N/A	N/A
1974	1,800	1,420	N/A	N/A	N/A	N/A
1975	2,000	1,670	4,350	2,500	2,500	N/A
1976	1,670	1,920	4,150	2,500	2,800	N/A
1977	1,450	1,850	6,250	3,200	3,500	N/A
1978	1,800	1,860	7,900	4,200	4,950	N/A
1979	1,900	2,060	8,900	6,400	6,900	N/A
1980	1,200	1,640	10,300	7,900	10,150	N/A
1981	1,870	2,035	14,250	8,250	10,200	$4,500-6,500

Average Annual Rate of Appreciation:

Time Period:	1972-81	1972-81	1971-81	1971-81	1971-81	1969-81
Rate:	1.7%	5.7%	16.7%	16.8%	21.1%	10.2%

N/A = Not Available

Sources: New York data is actual vineyard sales compiled by local Farm Credit Service and Springfield Banks' Appraisal Department. California data is from annual surveys (except in 1973 and 1974) conducted by the California Crop and Livestock Reporting Service, Sacramento, CA. Washington data is through private communication with Spokane Federal Land Bank, Spokane, WA.

Cost to Develop New Vineyards

If there is a need for additional grape production in the U.S. at some future time, where will they be planted? A number of factors will determine which of this country's viticultural areas will be able to take advantage of future growth:

1) Availability of desirable sites with economically suitable soils, topography, water supply, and climatic conditions.

2) The types of grapes needed and where they can be suitably grown.

3) Existence of adequate processing facilities within an economic hauling radius.

4) Past grower profitability and perceived future profitability.

5) The cost of acquiring land and developing vineyards, and the availability of capital to do so from both growers and other sources, e.g. commercial lenders, outside investors, etc.

This section will analyze this last factor in some detail in terms of New York State's comparative advantage relative to other areas. With New York State's relatively low cost of land compared to the major production areas on the West Coast, the question naturally arises as to whether New York State might be a very economical area for future expansion.

The analysis of development costs and financing presented in Table 52 does not include several significant costs. The investment and depreciation on machinery and equipment is excluded because it is not greatly different among competing regions and thus does not greatly affect the competitive balance. Similarly, the investment and depreciation on irrigation is excluded for the West Coast areas - however, this is a major factor only on the California North Coast.

Interest rates used are the 1979-81 national average for PCA and FLB, adjusted upward for five percent stock. Other standards used for developing these figures are noted on Table 52.

Comparing Concords for both Washington State and New York State, the three-year cost of development per acre is nearly identical. Because Washington State has nearly twice the yield potential per acre, its development costs per ton of production are roughly one-half that of New York State. While the cost of bare land does not need to be recovered by grape production since the land will presumably maintain or increase its value, the cost of a mortgage in terms of farm cash flow is a very important factor in comparing areas. Because Washington State has a substantially higher bare land value, its mortgage payment is substantially higher than New York State's - on either a per acre or per ton basis. When development costs and mortgage payments are added together on a per ton basis, Washington State and New York State are very equivalent. If the investment and depreciation on irrigation equipment was added to Washington State's per ton development cost, it would have a minimal impact because of the low value of this type of irrigation (rill irrigation).

Table 52. Costs to Develop Vineyards in New York State, California, and Washington in 1981

	Concords		Wine Varieties (1)			
	New York	Washington	New York	CA-San Joaquin	CA-North Coast	Washington
	Per Acre					
Year 1						
Plants & Trellis	$1,254	$ 246	$1,410	$ 212	$ 945	$ 334
Labor, Operations & Taxes (2)	485	625	524	694	474	652
Total Year 1	$1,739	$ 871	$1,934	$ 906	$1,419	$ 986
Year 2						
Plants & Trellis	$ 9	$ 509	$ 9	$1,019	$ 76	$ 566
Labor, Operations & Taxes (2)	196	675	235	466	633	801
Total Year 2	$ 205	$1,184	$ 244	$1,485	$ 709	$ 1,367
Year 3						
Plants & Trellis	$ 9	$ 1	$ 9	$ 5	$ 197	$ 75
Labor, Operations & Taxes (2)	547	464	437	626	385	608
(Less) Partial Crop Returns (3)	(555)	(510)	(386)	(856)	-	(1,066)
Total Year 3 (Net)	$ 1	$ (45)	$ 60	$ (225)	$ 582	$(383)
Accumulated Costs-Years 1 to 3	$1,945	$1,980	$2,238	$2,166	$2,710	$ 1,970
Accumulated Interest-Years 1 to 3 (4)	660	539	729	614	644	621
Total Costs & Interest	$2,605	$2,519	$2,967	$2,780	$3,354	$ 2,591
Mature Yield (Tons/Acre)	4.3	8.0	3.5	7.0	4.0	4.5
	Per Ton					
Development Costs (5)						
Ten Year Recovery	$ 61	$ 31	$ 85	$ 40	$ 84	$ 58
Fifteen Year Recovery	40	21	57	26	56	38
Twenty Year Recovery	30	16	42	20	42	29
	Per Acre					
Bare Land Value (6)	$ 850	$3,000	$ 850	$3,650	$8,000	$ 3,000
Mortgage Payment (7)						
Average	$ 68	$ 239	$ 68	$ 291	$ 637	$ 239
Maximum (Year 1)	100	353	100	430	942	353

	Per Ton					
Mortgage Payment (7)						
Average	$ 16	$ 30	$ 19	$ 42	$ 159	$ 53
Maximum (Year 1)	23	44	29	61	236	78
Development Costs (20 Year Recovery + Average Mortgage Payment)	$ 46	$ 46	$ 61	$ 62	$ 201	$ 82

Notes:

1. French Hybrids in New York State; Vinifera on the North Coast and in Washington; and standard wine varieties for the San Joaquin area.
2. Does not include depreciation on field machinery and irrigation equipment.
3. Partial yields valued at 1981 prices.
4. During year in which expense is incurred, interest is charged for four months. For subsequent years, it is charged for full 12 months. Interest rate used is average national PCA rate for 1979-81 of 12.7 percent adjusted to 13.4 percent for five percent stock.
5. With proper care, vineyards should remain productive for more than twenty years. However, technology and/or market changes may make it obsolete in less than that time.
6. Bare land suitable for development to vineyard. For North Coast of California, this includes cost of clearing old orchard or vineyard which is the normal situation there.
7. Seventy-five percent of bare land value financed for twenty years with equal annual principal payments (Springfield Plan). Interest rate used is average national FLB rate for 1979-81 of 10.2 percent adjusted to 10.7 percent for five percent stock.

Sources:

1. "Vineyard Establishments Costs in the Great Lakes Retion of New York," Darrel Good & Trenholm Jordan, Cornell University, 1976.
2. "Establishment and Production Costs in a 25-Acre Concord Grape Vineyard," Daniel Kirpes & Raymond Folwell, Washington State University, 1981.
3. "Establishment and Production Costs for a 50-Acre Wine Grape Vineyard," Daniel Kirpes, Raymond Folwell, & Mohammad Ahmedullah, Washington State University, 1981.
4. "Wine Varieties - Cost of Establishing a Vineyard, San Joaquin Valley," Harry Andris, et al, Cooperative Extension Service, 1980.
5. "Sample Costs to Establish and Produce Wine Grapes in the North Coast Counties - 1980," Keith Bowers, et al, Cooperative Extension Service, 1980.
6. "Agricultural Prices," Statistical Reporting Service, U.S. Department of Agriculture, various years.

At first glance, this would appear to put New York State and Washington State on equal terms of competition for new Concord acreage. However, three factors discussed in previous sections swing the advantage to Washington:

1) Lower annual operating cost per ton.

2) New York State has only a small Concord price advantage over Washington State.

3) Real estate appreciation has been much more significant in Washington State.

Turning to wine grapes, development costs per acre range from $2,600 per acre in Washington State to $3,400 on the California North Coast, with New York State in the middle of this range. Once again, the wide range in yields per acre has a dramatic impact upon development cost per ton. The San Joaquin Valley's advantage is very dramatic - nearly one-third less than its nearest rival, Washington State. New York State and the California North Coast are on the high end of the range for development cost per ton, more than double that for the San Joaquin Valley. In reality, development costs on the North Coast would be substantially higher than for New York State because of the large investment for irrigation equipment (drip and/or over head) necessary in that region.

These four wine grape areas have a tremendous range in bare land values with per acre values ranging from three to eight times that of New York State. If the resultant mortgage payments are added to the development costs, New York's per ton development cost is washed away and its combined development cost/mortgage payment is equivalent to that of the San Joaquin Valley, well below that for Washington State, and less than one-third of that for the North Coast. Again, it must be pointed out that this is not the only factor, or even the most important factor, in determining where grapes will be planted in the future. Each of these areas grows a different type and/or mix of grapes than New York does, and both Washington and the San Joaquin Valley have annual production cost advantages over New York State. If New York State markets develop for additional French Hybrids and other wine varieties that will return premium prices to the grower, there may well be a role for additional plantings of such grapes in New York State.

Cost of Transportation

The cost of transporting farm commodities across the United States to the large metropolitan markets of the Eastern Seaboard has received much attention in recent years as transportation costs have escalated. The cost of shipping a 67,500 pound rail tank car of grape concentrate from the San Joaquin Valley to the East Coast was $8.95 per hundred pounds as of the summer of 1981. This was roughly equivalent to 98 cents per gallon of 68° brix concentrate and compares to a price of $9.00-9.25 per gallon, F.O.B. plants in the Northeast. At the most, this is an 11 percent advantage for the Northeast plant, but much of this would disappear if the Northeast plant shipped its juice to another Northeast processor. In terms of unprocessed grapes, this would be about $35 per ton to ship the concentrate from one ton of grapes to the East Coast.

The cost of shipping a 51,000 pound rail tank car of bulk wine from California's San Joaquin Valley, to the East Coast is $6.67 per hundred pounds as of the summer of 1981. This is equivalent to about 53 cents per gallon, 10.6 cents per 750 ML of wine, or $106 per ton of grapes. The comparable cost of shipping case goods of wine is $5.01 to $6.09 per hundred pounds. This is equivalent to 11.7 to 14.2 cents per 750 ML bottle, which is not much when compared to the typical retail price of $2-2.50 per 750 ML bottle. Transportation does not provide much of a "cushion" for the New York wine industry since the cost of transporting wine across the country does not have a large role in the final consumer price.

There is no specific data available regarding processing (manufacturing) costs for either grape juice or wine for New York State or its competitors. For comparable plant sizes, there are no obvious reasons why processing costs should be substantially different. In grape juice, Washington may have a slight advantage in its higher brix levels and its cheaper energy costs. In wine, California's large "jug wine" processing facilities with their high levels of automation and high-speed bottling lines probably have substantially lower costs than New York's wineries, the largest of which does not come close in scale to California's large wineries. Most of New York's upstate wineries are operating at substantially less than the capacity for which they were built and this is very likely adding costs to current wine production. While the exact magnitude of New York's processing cost disadvantages are not known, they are probably not a major disadvantage for New York so long as it does not compete in the lower price ranges of the wine market.

It can be concluded that New York State is a relatively high-cost producer of grapes when compared to its major competitors; that it still retains some price advantage for its growers, although it is a shrinking advantage; and that the cost of transportation differentials do not provide New York with a major advantage from a cost standpoint. All of this drives home the crucial importance to New York of competing in the right markets with the right products when it is at all feasible to do so.

ORANGE JUICE - THE COMPETITION

It is important to recognize orange juice as a competitor to grape juice in the consumer market, just as other states compete with New York in the various grape product markets. Future levels of orange juice availability and price will be a very important factor in how much grape juice, especially frozen concentrate, can be sold and at what price.

The Florida Department of Citrus conducts sophisticated research studies to estimate future levels of orange production. According to their October, 1980 projections:

> "Total round orange and Temple production is forecast to increase from an average of 197 million boxes in 1981-82 to a peak of 220 million boxes by the 1991-92 season. This represents an increase over the next decade of 23 million boxes or 12 percent. Average round orange and Temple production is expected to level off in the early 1990's and decline somewhat to about 212 million boxes by the year 2000."

Furthermore, their projections show even smaller increases for the Valencia variety, their principal juice variety. Apparently Florida is running out of good sites on which to plant additional trees, and development and other nonagricultural uses are pressuring the existing acreage in groves.

By themselves, these production forecasts would be very good news to New York grape growers since it would imply tighter future supply levels of orange juice. Unfortunately for both Florida and the grape juice industry, there is another supplier of orange juice already waiting in the wings. Since the 1962 Florida freeze, Brazil has developed an export-oriented frozen orange concentrate (FCOJ) industry. It eventually surpassed the U.S. as the world's leading FCOJ exporter and now holds three-fourths of the world export market with major markets in the U.S., Canada, and Western Europe. A recent report issued by the U.S. Department of Agriculture concluded that Brazil still has ample room to expand its orange production. They further conclude that Brazil's exportable supply will increase another 40 to 60 percent between 1978-79 and 1985. Despite a U.S. customs duty of approximately $487 per metric ton of 65 degree Brix concentrate equivalent to one-half the price of the FCOJ in Brazil, USDA concludes that:

> ". . . all indications are that U.S. demand for Brazilian concentrate will regain its strength and continue at relatively high levels in the foreseeable future. Prices of domestic concentrate are not expected to subside to any considerable degree, and the trend toward increased consumption of orange juice, coupled with population growth, will help maintain sales in the U.S."

While Brazilian imports will not depress orange juice prices, they will moderate future price increases and maintain the competitive pressures on other fruit juices in the marketplace.

The Florida Citrus Commission was established by State law in 1935, is funded by an excise tax on each box of citrus fruit sold, and is administered by a Commission composed of twelve representatives from the Florida citrus industry. Its activities on behalf of fresh and processed oranges, grapefruit, tangerines, lemons, and other citrus includes: public/industry relations, scientific

research, economic research, market research, advertising, and other promotional activities. Much of their funding is used for generic (nonbrand) advertising of frozen orange juice. Advertising expenditures for FCOJ have been:

Year	1970	1975	1976	1977	1978	1979	1980
Expenditures ($Million)	$7.1	$10.6	$9.9	$10.7	$10.0	$8.7	$12.0

Recent changes in the enabling legislation permit the Commission to vary the excise tax rate in relation to the size of the crop, providing it with greater flexibility in its advertising and other programs. They are now also permitted to provide matching funds for brand promotion of Florida citrus products and this is expected to become increasingly important in the future. Interestingly, Florida has always maintained higher quality standards on FCOJ in terms of minimum degrees Brix (12.8 after reconstitution), continuous on-line USDA inspection, and other factors. The Florida Citrus Commission is attempting to raise the U.S. minimum quality standards as well, in order to enhance the overall consumer quality of FCOJ.

There can be no question that orange juice will continue to establish a tough competitive climate in which grape juice will have to be marketed in the foreseeable future.

Table 53. World Production of Grapes - Total and Per Person

	Tonnage (1,000 Tons)			Pounds Per Person		
	1969-71	1978-80	% Change	1969-71	1978-80	% Change
U.S.	4,041	5,045	+ 25%	39	46	+ 18%
Canada	74	87	+ 18	7	7	0
Mexico	159	480	+201	6	14	+133
NORTH AMERICA	4,274	5,612	+31%	31	36	+ 16%
Argentina	2,741	3,509	+ 28%	231	262	+ 13%
Brazil	582	668	+ 15	13	11	- 15
Chile	442	576	+ 30	94	105	+ 12
SOUTH AMERICA	3,765	4,753	+ 26%	60	61	+ 2%
Belgium - Luxembourg - Netherlands	47	34	- 28%	4	3	- 25%
France	10,701	13,022	+ 22	421	487	+ 16
German Federal Republic	1,028	932	- 9	34	30	- 12
Greece	1,191	1,238	+ 4	271	262	- 3
Italy	11,728	12,951	+ 10	437	455	+ 4
Portugal	1,004	1,062	+ 6	222	215	- 3
Spain	4,068	6,239	+ 53	241	337	+ 40
WESTERN EUROPE	29,767	35,478	+19%	248	281	+ 13%
Bulgaria	1,129	1,128	-	266	255	- 4%
Czechoslovakia	141	225	+ 60%	20	30	+ 50
Hungary	892	910	+ 2	173	170	- 2
Romania	1,125	1,509	+ 34	111	137	+ 23
Yugoslavia	1,358	1,408	+ 4	133	127	- 5
Soviet Union	4,653	6,499	+ 40	38	49	+ 29
EASTERN EUROPE	9,298	11,679	+ 26%	59	68	+ 15%
Turkey	3,693	3,371	- 9%	209	153	- 27%
Algeria	1,153	248	- 78	161	26	- 84
Other Middle East & North Africa*	1,624	2,755	+ 70	29	38	+ 31
MIDDLE EAST & NORTH AFRICA	6,470	6,374	- 1%	79	61	- 23%
Afghanistan	366	453	+ 24%	43	43	0
Japan	265	369	+ 39	5	6	+ 20%
Australia	684	893	+ 31	109	124	+ 14
South Africa	778	1,061	+ 36	69	75	+ 9
ALL OTHER COUNTRIES	2,093	2,776	+ 33%	27	31	+15%
WORLD (Above Countries)	55,667	66,672	+ 20%	87	92	+ 6%

*Includes Cyrpus, Iran, Iraq, Israel, Jordan, Lebanon, Saudi Arabia, Syria, Egypt, Libya, Morrocco, and Tunisia.

Note: Various countries collect statistics differently. Primarily wine grapes, but includes some table, raisin, and unfermented products.

Source: "World Indices of Agricultural and Food Production," Economic Research Service, U.S. Department of Agriculture, 1981.

FOREIGN WINE PRODUCTION - THE COMPETITION

Production of grapes, primarily for wine, is important throughout Southern Europe and scattered countries elsewhere. Table 53 presents grape production data for all of the major grape producing countries (except the People's Republic of China) and for most of the minor producing countries. While some of the production shown in Table 53 is for uses other than wine, this analyst estimates that more than 80 percent of the grapes accounted for in Table 53 were crushed for wine. France and Italy are the world's leading grape producers, each with about 19.4 percent of the world crop. They are distantly trailed by the Soviet Union with 9.8 percent of the world crop, Spain with 9.4 percent, the United States with 7.6 percent, Argentina with 5.3 percent, and Turkey with 5.1 percent of it.

Grape production grew substantially during the 1970's with a 20 percent increase worldwide between 1969-71 and 1978-80. Nearly all grape producing countries contributed to this increase, although the Soviet Union, Argentina, the United States, and France accounted for over one-half of it. Even though world population grew significantly during this period, availability of grapes in the producing countries increased by 6 percent to 92 pounds (raw grape equivalent) per person in 1978-80.

Estimated 1979 world wine production was:

Country	Production (Billion Gallons)
France	2.2
Italy	2.1
Spain	1.2
U.S.S.R.	0.8
Argentina	0.6
U.S.	0.4
Portugal	0.3
Other Countries	1.9
World	9.5

This was a record year for France, Italy, Spain, and Portugal. The U.S. does not rank in the same size class as the Western European producers, with only 4.2 percent of world wine production.

Wine is a basic agricultural industry in the Western European countries such as grain would be in our Midwest or the way dairy might be regarded in New York State. Many of the production areas are relatively poor, backward segments of society with few or no other farm or off-farm employment opportunities. For this reason, the "politics of wine" is very delicate and very important in these countries. There is extensive government involvement in the wine industry including a price support system to purchase surplus wine for industrial alcohol distillation.

Very important changes are occurring in the consumer market for wine in the Western European countries. In the past ten years, wine consumption per person has dropped 17 percent in France, 21 percent in Italy, and 2 percent in Portugal, although they still have the highest consumption rates in the world. These declines are a result of increased use of other beverages, changing lifestyles (migration from rural to urban areas), and government programs to discourage alcoholism, especially among children. As with Americans, the Europeans are upgrading the quality of the wines they drink. Interestingly, Europe and especially France have had a problem synchronizing their wine production to their domestic market as follows:

Wine Category	Production for Domestic Market	Foreign Trade
Low Quality, Cheap Wine	Overproduction	Little foreign trade
Medium Quality, Everyday Wine	Underproduction	Net importer
High Quality, Premium Wines	Small production	Net exporter

World trade in wines is approximately one billion gallons and is growing. Italy is the leading exporter with 317 million gallons (30%) followed by France with 218 million gallons (19%). Other important exporters are Spain, Portugal, Algeria, and Argentina. West Germany leads in imports with 216 million gallons (20% of world total), followed closely by the U.S.S.R. with 206 million gallons (19%), and then France with 171 million gallons (16%). The U.S. imports 61 million gallons or six percent of the world's wine trade.

Because of the changing market at home and a tendency toward overproduction, the southern European countries such as France, Italy, Spain, Portugal, and Yugoslavia would like to export their way out of as much of their problem as they can. Algeria and Argentina also have significant wine surpluses that they would like to export. The U.S. and Canada are appealing export markets for several reasons. First, they have the personal income levels with which to pay for wine. Low and medium income countries in South America, Asia, and Africa do not have great potential for buying wine until their standards of living become much higher. Second, the relatively low levels of wine consumption in the U.S. and Canada are interpreted as an opportunity for growth through expansion rather than competition with already-established products. Third, the U.S. is the world's largest single market in terms of purchasing power. Finally, there have been U.S. marketing firms that wanted to market wine without becoming involved in wine production. Securing exclusive importing rights to a European wine product was an ideal situation for both the importer and the foreign producer.

A recent report of the Food and Agricultural Organization (FAO) of the United Nations came to the following conclusions about changes in the world wine market by 1985:

- There will be continued increases in world wine production at an annual rate of 1.5 percent, significantly slower than the 2.6 percent annual growth experienced between the early 1960's and early 1970's. The reason for the slowdown is the campaign in Italy and France to discourage planting of grapes for ordinary wines. They project that North America, primarily the U.S., will increase wine production at 4.2 percent annually between now and 1985.

- World demand for wine will increase at a rate of 1.5 percent annually, more slowly than the 1.8 percent growth of the period between 1962-64 and 1972-74.

- Export ability and import needs would be roughly in balance with no strong tendency for shortages or surpluses.

- In the EEC (European Economic Community) countries, also including Spain, Greece, and Portugal, "the tendency for surpluses to develop would be reduced."

- Argentina will be increasingly important in world wine markets.

- They predict continued increases in the demand for quality wines along with favorable market prices over the longer term.

This outlook is generally favorable to U.S. wine grape growers since a tightening world market suggests better opportunities to export U.S. wines and less competitive price pressure from imported wines. The growth of foreign trade in wine will depend heavily upon the trend in the value of the U.S. dollar versus the currencies of its trading partners. A strong U.S. dollar will favor imports to the U.S. market and discourage exports of U.S. wine to other countries. Conversely, a weak U.S. dollar will generally discourage imports to this country and create opportunities for growth of U.S. wine exports. Regardless of how these factors turn out, it is clear that U.S. wines will continue to compete internationally, primarily on our own shores with wines from Western Europe.

THE OUTLOOK FOR THE FUTURE - UNFERMENTED PRODUCTS

To this analyst's knowledge, there are no publicly available forecasts of what will happen to grape juice (including drinks) in the 1980's. The marketing environment will continue to be very competitive with orange, apple, cranberry, grape, flavor blends, and other juices all striving for market share. The total amount of juice will probably continue to grow, but at a substantially slower rate than in the past, especially orange juice. Marketers will introduce new blends such as "Five-Alive," "Cran-Grape," etc. Despite many consumers' current taste for "pure and natural," more synthetic substitutes will be introduced. The timing of synthetic's introduction will depend on levels of fruit juice prices and potential profitability to the marketers of synthetics. The Florida Citrus Commission's current strategy is to move orange juice to a position as an "anytime" beverage and to ensure consumer availability in the fast food industry, and other juices will be challenged to follow in these directions.

Future changes in the amount of grape juice marketed will depend upon:

1) The prevailing price to the consumer. It is probably possible to sell much more grape juice to consumers, but at prices that would value the fruit at unacceptable levels to growers and their co-ops.

2) Success in getting additional people to use grape juice, especially getting more adults to use it as a beverage.

3) Success in developing and/or promoting new, lighter-tasting grape juice products or blends that are appealing as a meal accompaniment. Examples are white grape juice, blends such as Cran-Grape, and sparkling grape juices.

4) Success in penetrating food service and fast food outlets.

One very negative factor for grape juice is that its best market, among children, is the slowest growing population segment. The U.S. Bureau of the Census's "medium" population projection is for population in the 5 to 13 years category to grow a total of 5.7 percent in the 1980-90 period, compared to 9.4 percent for the entire population and 14.1 percent for the 21 years and older segment.

Another potentially negative factor for New York State and other Concord states is the recent announcement that Sun-Maid Raisin Growers, a California grape cooperative, will be introducing a line of grape beverages.

In terms of raw grape content of grape beverages consumed, per capita consumption increased by 1.61 percent annually between 1961 and 1980, 4.03 percent annually between 1970 and 1980, and 7.21 percent annually between 1975 and 1980. Unfortunately, most of the apparent growth in consumption during the 1970's was the result of recovery from supply shortages in the late 1960's and early 1970's. Furthermore, the rate of growth achieved in the late 1970's is not entirely Concord juice and is at prices that are unprofitable to most growers over the long run.

It is my conclusion that total grape beverage sales (in terms of raw grape content) will grow at close to the long-term (1961-80) rate of 1.6 percent during the next ten years. This implies an increase of grape needs of 28 percent by 1990 based on the Census's "medium" population projection. Unfortunately, there are enough Concord grapes at 1978-1980 production levels to supply this growth in sales. Given today's heavy inventory levels, this supply/demand situation does not promise great price improvement for growers and their co-ops. Price increases will be tied mainly to what happens to frozen orange concentrate and bottled apple juice prices.

THE OUTLOOK FOR THE FUTURE - WINE

Forecasts of future wine sales in this country differ only in the size of the increase they project. The factors that favor increased wine sales have already been discussed and the generally accepted thinking is that the same set of factors is likely to continue operating in the 1980's and 1990's. Because of the current age structure of the U.S. population, the population aged 21 years or older will increase about 14 percent between 1980 and 1990, compared to about 9.5 percent for the entire population.

Some projections of the total increase in U.S. wine consumption between 1980 and 1990 are:

	Extension of 1961-80 Trend*	"IMPACT" Magazine**	Wine Spectrum	Louis Gomberg**
Table	+154%	+171%	+150 to 162%	
Dessert	- 33	- 38	- 55 to -53	Not
Vermouth	+ 4	0	+ 12 to 17	Available
Sparkling	+160	+ 63	+ 65 to 72	
Other Special Natural	+ 68	- 45	- 73 to -72	
Total	+128%	+126%	+106 to 116%	+104 to 146%

* Based on Bureau of Census "medium" population projections.

** Gomberg is the "dean" of California winery consultants and is widely respected and followed within the wine industry. "IMPACT" is the most widely read wine and spirits trade publication.

. . . . .

The closeness of these projections for total wine sales as well as the table and dessert categories confirms the accepted thinking in the American wine industry. By 1990, total wine sales will have at least doubled the 1980 level and table wine sales will have increased by even more. During the same period, dessert wines will have fallen to about two-thirds of their 1980 level. The major risk to this favorable outlook would be lack of sufficient wine from domestic and foreign sources due to major crop disasters in California, Italy, and/or France. Such disasters would have to simultaneously occur in several major wine areas and/or for several years in a row - highly improbable circumstances.

Will this anticipated growth in table wines be red, white, or rose? Some people in the grape industry have felt that the strong growth of white table wine sales in the 1970's was a fad and that as wine consumers gained more experience they would switch to the more complex red table wines. They cite as evidence the prevailing European wine consumption pattern in countries such as France, Italy, Spain, and Portugal where red wines are strongly favored. Trying to predict consumer preferences, especially for wine, is an uncertain and imprecise undertaking at best. However, it is this analyst's conclusion that between now and 1990, the major growth in table wines will go to the whites. Red and rose will also grow, but at lower rates. Sometime in the mid-1980's the mix

(proportions) of white, red, and rose will probably begin to stabilize after which the respective growth rates will be closer to each other. My reasons for this conclusion are:

1) Historic trends support it. White wines have accounted for a rising share of table wine consumption from 1960 to 1980 and it is difficult to argue with a twenty-year trend in consumer preference. White wine is, in fact, responsible for much of the tremendous growth in wine sales during the 1970's.

2) White wine has product characteristics that seem to fit American beverage preferences well. It is consumed chilled, it commonly tastes fruitier or more natural than do many red wines, and it is less complex-flavored than many red wines. However, red or rose wines with the same characteristics described for white wines will also enjoy substantial growth in the 1980's, e.g. the Italian lambruscos.

3) Red wine has product characteristics that favor its use as a meal accompaniment, but much of the growth in American wine consumption is not meal-oriented, e.g. cocktail parties, home entertainment, etc. White wine appears to have greater appeal as a "refreshment" beverage as do the lambruscos. However, as the American wine market matures, red wines may benefit from a "trading up" to the more complex red wines.

4) The European wine consumption pattern is not particularly relevant to the U.S. Different countries and regions in Europe have different wine consumption patterns. Germany, for example, is predominantly a white wine consumer. For another example, the Italian lambruscos that were specially formulated for the American market are now enjoying substantial sales growth in Italy itself. Anyway, American consumers have a unique set of food and beverage preferences that are not closely patterned after Europe and thus there is no reason to believe that their wine preferences will ultimately be so patterned.

Will the anticipated growth in table wines be concentrated in any particular price/quality category such as the premiums, jug wines, etc.? There is no question that the premium category has had the fastest relative growth in the past decade and this is likely to again be true in the next ten years. However, it must be remembered that jug wines continue to account for the vast majority of cases sold, and of special relevance to growers, the majority of the grapes crushed for wine. Relatively inexpensive wines such as the Italian lambruscos and Gallo's generic line (Hearty Burgundy, Rhine Wine, Chablis, etc.) have also enjoyed high rates of growth in the 1970's. Forecasts of continued growth in wine sales during the 1980's are all based on the assumption that good wine will be affordable to the majority of American consumers. While sales of 750 ml bottles of wine for $10 or more attract attention in the wine press, the fact is that most American wine consumers buy a bottle of wine for immediate consumption, not as an investment or an item of conspicuous consumption. In fact it could be argued that most American wine consumers do not have the sophisticated palate necessary to discern or appreciate the difference between a $4 bottle and a $10 bottle of wine. I conclude that wine sales growth will occur across all categories of technically sound quality wines during the 1980's, with premium wines leading the way in terms of highest relative growth. However, growth in sales of popular-priced wines will have the greatest impact on the demand for growers' grapes.

What about the current interest in "light" wines? Several of the premium California wineries including the Wine Spectrum (Coca-Cola), Beringer (Wine World), Sebastiani and Paul Masson (Seagrams) are currently test marketing "light" wines which are lower in alcoholic content and therefore lower in calories than standard table wines. The success of "light" beers during the 1970's and the existence of a significant calorie-conscious market segment suggest that these products could be very successful. To date, New York State's only entry in this category is Widmer's "Lake Niagara Light," although "Lake Country Soft" (Wine Spectrum) is a low-alcohol wine. The early 1980's will be a crucial testing period for light wine products, but by the mid-1980's these products will very likely have carved out a significant niche in the premium wine category. An article in the March 15, 1982 "Business Week" commented that ". . . many see light wine accounting for 15% of total sales by 1990."

Is the current phenomenal growth of Italian lambruscos a fad that will someday collapse? A November 30, 1981 article in "Fortune" magazine gave this analysis:

> "Sales of Riunite (the leading lambrusco) have not yet lost ground in any markets, not even those where the wine has been sold for a decade or more, and marketers at Coca Cola, which is testing a new lambrusco-type product, expect ten more years of rapid growth for the category. The suspicion is growing that lambrusco types just may be building a new wine market entirely - that they are the long-sought philosopher's stone of oenology, capable of transmitting base beer and soda guzzlers into wine enthusiasts." (Underlining by this analyst.)

This is a very positive outlook for Taylor's "Lake Country Soft" series of wines which are currently being test-marketed and which could be New York's most significant new product introduction in many years. "Lake Country Soft" is formulated and positioned to compete head-on with the Italian lambruscos and is backed by the marketing know-how and clout of Wine Spectrum (Coca-Cola). As currently formulated, the red version consists of Catawba and De Chaunac, both of which New York has had surpluses. Several knowledgeable oenologists have told this analyst that there is no reason why Concords could not be used partially in the red product by either Taylor or some other winery. This type of product shows the most promise for helping New York State to market itself out of its surplus condition with existing grape varieties. Apparently Taylor has had moderate success with its test marketing of "Lake Country Soft," although it is still too early to realistically call it a success. "Market Watch," an "IMPACT" trade publication, estimates 1981 sales to be 100,000 cases and projects 1982 sales to be 200,000 cases. If the product contains 75 percent New York State wine, this would be equivalent to 900 tons of New York State grapes in 1981 and 1,800 tons in 1982.

How serious is the forecasted decline in dessert wine sales? It has been correctly asserted by some analysts that most of the erosion in this category has occurred in cheap, high-alcohol California products that appealed to consumers interested in a cheap source of alcohol. New York's premium wineries have never been strong in the inexpensive end of this category and have been primarily positioned in competition with premium sherries, ports, and muscatels, often European imports. Even in this premium category, however, sales have been eroding or at best have been level while competition has been growing. New York's products are well-regarded in this category and New York has a good specialty position in it. New York's reputation in this category and its market share of it will continue strong in the 1980's. Unfortunately, New York will very likely continue to experience sales volume (gallonage) decreases in this category during the 1980's.

What is the outlook for sparkling wines? It appears that champagnes and other sparkling wines are in a good position to make substantial sales gains during this decade, although the rate of growth is unlikely to match either its own 1961-80 rate of growth or the forcasted growth rates for table wines. White champagne sales are apparently benefiting from the spinoff effect of increasing white wine sales. Also, champagne appears to be gaining popularity as a "cocktail" use beverage. Even though it is still a generally higher-priced product than most table wines, the price gap between champagne and premium table wines has also narrowed in recent years, making champagne a relatively better buy. All of these factors point to moderately increased sales of sparkling wines during the 1980's.

Where will foreign trade in wine fit in with the U.S. wine market of the 1980's? A recent study by the Management Resource Group of Arlington, Virginia forecasts that U.S. wine exports will increase by 128 percent in terms of volume and quadruple in terms of value between 1980 and 1985. They point out, however, that the growth appears impressive only because it starts out from almost nothing and that exports of American wine in 1985 will still be at levels that are insignificant by world wine trade standards. While exports of wine may be significant to a few American vintners by 1985, their impact on grower wine grape markets in either California or New York State is very likely to be negligible.

Given the forecasts of growth for both table wines and the lambrusco segment in particular, it follows that imports will continue to achieve sales gains in the American market. To date, much of the foreign wine imported to this country has created new market niches rather than displacing American wines - the lambruscos are the classic example of this phenomenon. There can be little doubt that foreign wines will be competing very strongly in the American wine market of the 1980's. Italy has its sights set for more growth in not only the lambruscos, but in more expensive wines as well. France is currently on the counterattack against Italy in the U.S. Countries as diverse as Argentina, Australia, and Yugoslavia are all attempting to get their share of the growing American wine market.

Wine grape growers in this country do not and should not take this foreign competition lightly. Aside from the unlikely possibility that the U.S. would erect trade barriers to foreign wine, there will be a strong tendency for imports to maintain their current percentage share of the U.S. wine market throughout the 1980's. This will be a constant share of a growing market and thus there appears to be little danger of foreign wines flooding domestic wines out of the market. Serious crop shortages or insufficient grapes of the right type(s) in the U.S. are the biggest risk to this outlook in that they would probably pave the way for significant increases in imports' market share. In the unlikely event that the American thirst for lambruscos were to peak and then undergo serious declines in the 1980's, it is conceivable that imports' market share could decline somewhat. A series of successful American imitators in this category could have a similar impact. American wine grape growers have little to fear in "losing" their markets to foreigners in the 1980's, but imports will certainly have a restraining influence on wine prices and thus on grower grape prices. It is also conceivable that some specific wine categories could be significantly impacted by foreign wines.

Finally, a comment by Peter Sealey of the Wine Spectrum adds perspective to how competitive the U.S. wine industry can be with foreigners in this decade:

> "We're making better products overall. Stainless steel temperature-controlled fermentation and the developments at the University of California at Davis are making our wines better every year. The premium American jug wine is the 'Japanese automobile' in our category here and worldwide."

And how is all of this outlook likely to impact upon the New York State grape industry?

From a table wine quality standpoint, New York's comparative advantage is probably strongest with white wines and not with red wines. Climatically, New York has the most in common with Europe's northern wine production regions and it is in these regions of northern France and in West Germany that Europe's great white wines are produced.

Both the major wineries and the new wave of small wineries in New York State appear to be receiving the most notice and generating the best sales with their white wines, which is, of course, also in line with the prevailing consumer trend. While there are no sales statistics available, the evidence does suggest growing sales of New York State white table wines and it is likely that even more could be sold if certain varieties of grapes were more plentiful. While most of these are hybrids such as Seyval Blanc, Aurora, and Cayuga White, Widmer's Lake Niagara from Niagara grapes is apparently also selling well. Unfortunately it will take time and a serious commitment from growers and wineries to plant additional vineyard acreage to marketable white varieties. All of these have demonstrated commercial success in upstate New York conditions, but require a different set of management practices and more complex management than traditional American varieties such as Concord. They are also more demanding in terms of site selection and are often more subject to cold weather damage than Concord. These viticultural factors combined with the large investment needed to develop new vineyards, prevailing high interest rates, and the uncertainty of future markets make it easy to understand why most New York growers have so far been reluctant to plant substantial new acreages of white varieties.

A crucial question for the future of the New York State wine industry is whether it can successfully market relatively unknown white table wines such as Seyval Blanc and Cayuga White. These are relatively unknown to not only the vast majority of American wine consumers, but in the wine trade and wine press as well. However, there are signs of progress in achieving the necessary recognition. New York's small wineries are attracting attention in the wine media and among the wine buffs of the East. A recent "Friends of Wine" article observed that . . . "without a doubt that the quality of New York State wines is on the rise - remarkably so!" A recent blind taste-testing in Washington, D.C. featured only Seyval Blancs. The most significant aspect is that such a tasting was held because this type of exposure builds consumer awareness and markets for the product. As an aside, New York wineries captured the fourth and fifth spots in the Seyval tasting.

Given today's mix of grapes planted in New York State, the most promising wine product possibility is a successful entry in the "soft wine" (lambrusco) market such as "Lake Country Soft" and hopefully entries from other wineries using New York State grapes or wine. In 1980, 37.2 million cases of lambrusco were sold in this country. A significant success for New York State would be to establish a million case seller in this category within the next several years - this could be equivalent to less than 2.7 percent of the still-growing lambrusco market, but equivalent to 9,000 tons of New York State wine grapes. This would be very significant to New York growers who delivered 11,380 tons of Catawbas, 6,495 tons of Auroras, and 2,827 tons of De Chaunacs to New York State wineries in 1980. It could even be significant in terms of the 25,125 tons of Concords crushed by New York State wineries in 1980. However, it is simply too early to say whether or not New York State will be successful in this market.

Sparkling wines offer some hope for gradually absorbing additional New York State grapes. New York has a strong reputation in this category and Taylor/Great Western is one of the largest sellers of American champagne while Gold Seal is recognized as one of the premier American champagne houses. Native American varieties can be successfully used in making sparkling wines because the secondary fermentation process destroys their characteristic "foxy" taste. It appears that the U.S. market for sparkling wines will be extremely competitive in the next few years as France, Italy, New York, and established California champagne houses all fight for increased sales of the growing market. There also appears to be new interest in this market from some of the newer, successful premium wineries on California's North Coast such as Robert Mondavi. Italian imports have also been very aggressive in this market in recent years. While this will very likely be a growing market in the 1980's, it will remain quite small compared to the table wine market. Therefore, I conclude that it will be very difficult for New York's current supply imbalances to be corrected only by growing sales of sparkling wines, even though they should be a good product category for New York State in this decade.

It appears very likely that New York State will continue to lose sales of dessert wines in the 1980's, thus forcing additional grapes such as Concords back into the market for other wine or unfermented uses. This category is partly responsible for declining winery demand for grapes in the late 1970's and it will continue to create imbalance in New York grape growers' markets during the 1980's. This bleak outlook is further compounded by excess New York State inventories of these wines in 1981 that will require several more years to bring back into balance.

Summing up the outlook for New York, the best hope for better marketing today's variety mix lies in the "soft wine" category and it is too early to determine how successful New York State can be in this category. Sparkling wines also offer some promise for expanding the market for these grapes on a smaller scale, but the continued decline of dessert wines will be forcing some native American varieties back onto the market for other uses. It is very likely that New York State can and will make a move towards substantially greater production of white table wines in the decade of the 1980's, and to do so will require new white grape vines. Some growers are already gradually planting white grape varieties, but an accelerated planting pace will require a substantial commitment from one or more of the upstate wineries.

THE ALTERNATIVES FOR THE NEW YORK GRAPE INDUSTRY

During recent years of declining profitability, New York grape growers have investigated and discussed a number of alternatives for industry-wide action. They have looked to other industries locally and nationally for precedents and ideas. Many of these ideas are still under discussion today. For most there is no clearcut answer as to their desirability and several have become very political issues regardless of their desirability. This section will discuss some of these alternatives.

Supply Marketing Order for Concords

The precedent is the national cranberry marketing order which determines how much of the crop produced can be marketed each year. A marketing order such as this ideally would remove enough grapes from the market in surplus years to more than compensate growers' incomes through better prices. It would prevent the buildup of unmanageable inventories that hang over the market and are expensive to carry. The order mechanism could also establish and enforce minimum quality standards as part of its supply management program, e.g. setting a minimum Brix level, specifying a minimum percentage of Concord juice in grape juice products, etc.

To be effective at all, the order would have to cover all major Concord production areas including New York and Washington. It would also have to cover Concords used for wine in order to keep additional Concords from unduly depressing that market or allowing it to become a subterfuge to the market order for unfermented uses.

If enacted, such an order would undoubtedly take some of the downside swing out of grape prices, but given the competitiveness of orange, apple, and other fruit juices, it probably could not greatly enhance grower grape prices over normal market levels.

The most crucial complication to the effective operation of such an order is the availability of California juice and concentrate. It would be very difficult to bring these producers under a juice marketing order since they produce primarily for other markets, and yet their juice is especially likely to fill any void created by managing the supply of Concord juice.

There are three overwhelming factors that make a supply management marketing order an unlikely possibility:

1) The National Grape Cooperative is the best-organized and largest farmer group in the Concord grape industry. Their Board of Directors, which consists entirely of grape growers, opposes the market order concept on behalf of their members.

2) Washington State wants to expand grape production, not restrict it. They are unlikely to feel either the need or a desire to participate.

3) The current climate in the U.S. government is not to establish any more marketing orders for supply management.

Marketing Order for Research and Promotion of Unfermented Grape Products

The precedents for this type of marketing order are Washington apples, California table grapes, Idaho potatoes, Florida citrus fruits, potatoes, eggs, cotton, and a number of other fresh fruits and vegetables. With the exception of the Florida Citrus Commission's promotion of frozen orange concentrate, the precedents are largely in commodities where there are no dominant brands. All of the above examples are generally regarded as having been very successful in increasing consumer awareness and demand for these commodities, and ultimately contributing to growers' incomes.

Such an order would provide for a mandatory deduction by the processor which would be remitted to the market order. Depending on how it was structured, growers might be able to apply for a refund if they wished or it could be mandatory. It could be structured to exempt growers who deliver grapes to a co-op that spent the same or more on a per-ton basis for grape product promotion.

There are a number of factors that complicate the development of such an order. In terms of promotion, it would be extremely difficult to ensure that those who paid for the promotion reaped the benefits of it. Very little "New York Concord" juice is sold in a manner in which consumers could identify it and which could be targeted for promotion. If "grape juice" was promoted, then promotional efforts would be spread over not only Concord juice from other states, but over California juice as well. It is conceivable that the other Concord states could be involved in a federal market order if the enabling market order legislation were altered by Congress, but it would be extremely difficult to bring California into it.

If such an order were established, New York alone could generate the following sums based on the average 1976-80 utilization of grapes for unfermented products:

Assessment Rate	All Processors	Without National Grape/Welch
$ 1/Ton	$ 85,850	$ 40,779
$ 2/Ton	$171,700	$ 81,557
$ 5/Ton	$429,250	$203,894
$10/Ton	$858,500	$407,787

A one dollar assessment would not be a significant expense to most grape growers, but $10 certainly would be. The revenues from a one dollar assessment would be significant from a research standpoint, but not from a promotional standpoint. For comparative purposes, the Florida Citrus Commission spends $15.1 million on advertising of frozen orange concentrate and Minute Maid/Snow Crop spends $23.1 million on their products. It is generally accepted that a dollar spent for brand advertising, e.g. "Welch" or "Minute Maid" makes a much larger consumer impact than one spent on generic promotion, e.g. "Concord grape juice" or "Florida orange concentrate."

Such an order would have a much greater ability to generate meaningful funding for practical research in production, new product/market development, and new varieties. Such research is vitally needed if the New York grape industry is to remain healthy and viable over the long-term.

Another advantage of such an order would be the bringing together of diverse interests within the New York grape industry to work together on a common project. This would foster greater communication than now exists and perhaps lead to cooperation in other areas. Ideally, a coming together of diverse interests should include the New York wine industry as well.

The National Grape Cooperative/Welch opposes a marketing order for research and promotion. The reasons were stated in a May 22, 1981 letter from National President J. Roy Orton to all New York members:

1) "We believe it will be a waste of your money. Your company spent $8.5 million in 1980 to advertise your grape products which cost you approximately $49.00 per ton."

2) It would impose mandatory contributions.

3) It would be an invasion of growers' privacy.

4) "We want to keep government out of our business."

5) They wish to avoid the adverse publicity and scrutiny that other commodity marketing orders have encountered.

6) "Gives the Commissioner of Agriculture dangerous powers over our industry."

7) The order would duplicate members' expenses for market research already conducted by Welch. It could lead to the demise of the voluntary New York State Grape Production Research Fund.

Industry Level Bargaining

The concept of growers banding together to negotiate contract provisions and/or prices with individual proprietary processors is equally applicable to either grapes for unfermented purposes or wine. Examples of other farm industries with grower/processor bargaining include potatoes in Maine, Idaho, and Washington; cling peaches, tomatoes, and other processing commodities in California; and sugar beets in a number of states. To a limited extent, the New York State Wine Grape Growers Association is doing this in New York by attempting to negotiate a "model contract" with the Finger Lakes wineries and by annually preparing an excellent "cost of production" report.

To conduct grower-processor bargaining, an organization representing as many nonco-op growers as possible would have to be formed. This group would need to establish a dues structure with which to fund itself. Its primary function would be to develop a grower position and then successfully bargain with the individual proprietary processors for a contract and/or price as close to the growers' interests as possible. This would require accumulation, analysis, and presentation of relevant data and information. Negotiations would probably be protracted at times, and numerous meetings and time would typically be spent in arriving at negotiated settlements.

There are two important barriers to industry-wide bargaining. First, more than one-half of the New York grapes crushed for unfermented products are never priced by the market in that they are delivered to co-ops who pay on a net proceeds basis. While this is a necessary principle that lies at the heart of the entire concept of farmer marketing cooperatives, proprietary processors are likely to strongly resist being negotiated into a position in which their grape products must be priced above those of their co-op competitors because of their raw material cost for fruit. Even for a grower bargaining committee, it would be difficult to negotiate for grape prices that might endanger the proprietary processor segment of the industry over the long-term. One possibility that might avoid this problem would be jointly setting a "target price" for co-op grapes that would then provide a basis for prices paid by proprietary processors.

The second major barrier is that New York does not control enough of the supply in either unfermented products or wine to be the national price setter. For unfermented products, Washington is now the leading supplier, and there are five other Concord producing states and California as well. It would be extremely difficult for a New York processor to pass along grower price increases to his customers in such an environment. In wine, California obviously sets the price structure with one firm, E. & J. Gallo, being especially influential. Foreign wine sources are also increasingly important in the U.S. wine price structure as well. To a certain extent, this dilemma could be avoided by negotiating a price tied into some other factor, e.g. 10 percent over the average wine grape price for a particular California variety, or 20 percent over the Washington cash market, or 90 percent of the National Grape net proceeds per ton paid in installments. Many of the premium wine grapes being grown in Washington are being formula priced in this way - an agreed-upon percentage of the California North Coast price for that variety.

Again, it is unlikely that New York grape growers can significantly enhance their incomes through price negotiations. There is more hope for non-price negotiations such as those being conducted by the New York State Wine Grape Growers Association for a model, long-term contract.

Marketing Order for Research and Promotion of Wine

This has recently become a reality. Nonetheless, a review of what it can and cannot be expected to do is relevant to this discussion.

The precedents for promotion and research marketing orders were listed in the discussion related to unfermented products. California's Wine Advisory Board was an important source of funds for generic marketing and promotion of California wines until its demise in 1975. The California Association of Wine Grape Growers is currently organizing an initiative for a grower-funded research and promotion order in that state. Several foreign countries also fund modest levels of generic wine promotion in this country.

Based on the volume of New York grapes crushed for wine, the average price paid for wine grapes, and the maximum assessment rate of one percent, the New York order would have raised funds as follows over the past five years:

1976	77,600 Tons	x	$1.87	=	$145,112 Raised
1977	52,100 Tons	x	2.40	=	125,040 Raised
1978	88,600 Tons	x	2.66	=	235,676 Raised
1979	68,500 Tons	x	2.62	=	179,470 Raised
1980	70,250 Tons	x	2.57	=	180,543 Raised
	Five-Year Average				$173,168

Compared to the $134 million spent on consumer advertising of wine in 1980 or even the $10.9 million spent on brands with New York State wine in them, the funding which will be generated by this order will be quite small. Even foreign countries' generic advertising in support of their wines was substantially higher - approximately $638,000.

Harry Teasley, President of the Wine Spectrum, characterizes the marketing of wines as being in a class with perfumes and designer clothing - heavily brand-oriented with strong consumer reliance on brands that they know. Given this type of product, generic advertising of a state's wines is not comparable to generic advertising of potatoes, apples, lettuce, or eggs. The advertising with the highest consumer sales response is that for brands that are heavily promoted and supported by their company. Furthermore, many wines that contain New York State wine do not have a New York appellation (origin) on them. Most of the success of California wines in consumer acceptance has been the result of advertising by Gallo, United Vintners, Wine Spectrum and other large consumer marketing firms, not due to the California Wine Advisory Board's past efforts. The success of Riunite, the Italian lambrusco success story, is due to the House of Banfi's imaginative marketing and heavy brand advertising expenditures, and is not due to the Italian Trade Commission's promotional support.

It is apparent that the funds from the new marketing order will not be sufficient to mount any sort of extensive consumer advertising program, and nobody has really argued for this. Because of its proximity to large urban markets, there are a number of promotional activities that do not require large expenditures which may be able to build local awareness of New York State wines. For example, New York grape growers could probably voluntarily staff wine tastings, trade shows, and fair exhibits within New York State with funds used to pay for wine, the display, promotional materials, and travel expenses. With modest expenditures, appearances on local radio and television talk shows and articles in local newspapers and magazines can be effective. California is, by far, its own best customer of wine. With prudent and imaginative use of grower funds, the New York State wine industry may be able to similarly develop the New York market and perhaps adjoining markets in New England, the Middle Atlantic, Ohio, and Ontario.

The New York State grape industry must also be realistic as to what the promotional efforts funded by the new order cannot do. A generally accepted principle in consumer advertising is that advertising cannot create demand, but only directs it towards a particular product from among the many that consumers have available to them. Thus New York cannot revive or create a demand for

sherries, ports, or Concord table wines that most consumers do not want. At its best, effective promotion may be able to overcome old stereotypes and educate consumers as to things that they might like. Further, it would be a mistake to believe that New Yorkers would buy a product they do not like or pay a significant premium just because it was produced in New York. On the positive side, a generic promotion program will be successful if it can convince significant numbers of consumers that:

1) Not all New York wines taste like Concord grapes or have a labrusca ("foxy") aftertaste.

2) That New York produces a variety of wines suitable for a variety of tastes.

3) That New York does produce dry table wines similar to the style of the California and European wines, with unfamiliar names such as Seyval Blanc, Cayuga White, De Chaunac, Baco Noir, etc.

Over the years, the Geneva Experiment Station has generated a number of practical research findings that have benefited New York grape growers. They have a number of promising projects underway in both new variety development and viticulture, and they have a number of promising projects that they would like to either begin or expand. Given the highly competitive climate in which the New York grape industry must compete and the continuing tightness of State budgets, research projects funded by the market order could pay large, future dividends to New York grape growers.

A final advantage to the market order is that, in a small way, it gives growers a tool to affect their future in the markets. Rather than to depend completely on decisions made in Atlanta, New York City, Modesto, Albany, or Rochester, it provides New York wine grape growers as a group with a positive role in shaping their industry's future.

Wine Sales in Supermarkets

The issue of wine sales in New York supermarkets has become a highly political issue with New York grape growers and supermarket interests arrayed against the State's powerful liquor store lobby, with the major wineries caught in the middle. Despite the strong efforts of the New York State Wine Grape Growers Association, the demise of the State's Fair Trade Laws regarding wine pricing in 1980, and a more favorable attitude by the Governor of New York, efforts to pass favorable legislation have once again failed in 1981.

Despite the protestations of the liquor store lobby, the case for supermarket wine sales leading to increasing wine sales is fairly well-established. California wine experts see New York as the first domino in the remaining major states that do not permit supermarket wine sales. Even by itself, the legalization of wine sales in New York's supermarkets is expected to lead to a significant increase in the overall level of wine consumption such as has occurred in other states that have made the change. In addition, there would be a substantial one-time surge in wine shipments to fill the supermarket distribution channels for the nation's second-most populous state.

A critical part of the supermarket wine sales debate relates to its potential impact on sales of New York State wines. The California Wine Institute and the California wine industry are eager for supermarket wine sales in New York for obvious reasons. The New York State Wine Grape Growers Association has proposed that supermarket wine sales start with a five-year trial period for New York State wines only. There are questions as to the political feasibility of such a provision, including the possibility that this would be seen as a restraint of interstate commerce or that other states such as Pennsylvania would take retaliatory measures.

Opponents of supermarket wine sales have argued that New York State wine producers and growers would actually be hurt since supermarkets would only stock and promote a few large, heavily promoted national brands from California and abroad. Since most of New York's wines do not fit this description, they might only be sold in liquor stores whose sales volume would be substantially reduced by the supermarkets. The experience of states with supermarket wine sales does not support this argument. It is probable that even the small New York wineries would find shelf space in some supermarkets. To the extent that total wine sales in New York State would increase, it seems likely that New York State wine would share in the increase as well, holding the same share of the market that they currently do. This presumes that the supermarket wine market would be opened to all wines. The five-year trial period for New York State wines, if passed, would presumably generate beneficial sales increases for New York State wines, although many supermarkets would probably not make a major effort in wine sales under this arrangement.

Regardless of how or when supermarket sales come about, they cannot be expected to "rescue" New York State wines which are not in line with consumer tastes. For example, supermarket sales will not generate large sales increases for Concord table wines, sherries, or ports that account for much of the Concords crushed for wine in New York State. They will not lead to a resurgence of popularity for Catawba table wines or to booming sales of red French Hybrid table wines when the current consumer emphasis is on white table wines. Supermarket wine sales will be very beneficial to New York State wine producers and growers for those wines that consumers want.

The issue of supermarket wine sales has become very visible and very emotional. However, this measure probably does not represent the "salvation" of the New York State wine industry. To overemphasize this issue's importance at the expense of other critical issues could easily result in further disappointments for the New York grape industry in the future.

Finally, it should be pointed out that the intensive work on behalf of this issue by the New York State Wine Grape Growers Association has had two very beneficial impacts. First, it has provided the State's wine grape growers with an issue around which they could unite and work closely together. Second, it has led to the "enlightenment" of many State officials as to the importance of the State's wine and grape industry.

Small Wineries

During the late 1960's and 1970's, there has been a mushrooming number of small premium wineries in California. Many of these can be characterized as "estate" or farm wineries in that they produce all or most of their own grapes, although some small premium wineries rely heavily on purchased grapes. During the last half of the 1970's, this has spread to other states including New York in which the 1976 Farm Winery Act cleared the way for sixteen new bonded wineries since then, a 42 percent increase. There are two separate sides to the farm/small winery issue - the industry impact to be discussed here and the business considerations to be discussed in the next section.

In California, the small premium wineries are generally credited with being instrumental in upgrading the overall quality of California wines and creating the beginning of the consumer awareness and demand for premium varietal table wines. Even the industry giant, Gallo, watched and learned from the small wineries before recently releasing its new series of popular priced varietals under the "Wine Cellars of Ernest and Julio Gallo" label. The small wineries, each operating independently, provide a competitive, innovative atmosphere where many wine-making and wine marketing ideas are tried, a few of which emerge as being successful. As a market for grapes, small wineries do not have a large impact in either California or other states. They do add a little more competition in markets and add a healthy degree of uncertainty for grape buyers in the market for premium grapes that are in limited supply. It should also be pointed out that some small premium wineries in California have grown to be substantial medium-sized wineries, e.g. Sebastiani and Robert Mondavi.

The same arguments for a healthy small winery component in New York State can be made. Some evidence of the leadership shown by this segment can be seen in the 1981 annoucement by Taylor that it was upgrading the quality and marketing of its Great Western premium varietal line. With a number of small wineries attracting tourists and competing in the market, the knowledge of New York State wine consumers is likely to improve considerably to the New York industry's benefit. It is to be hoped that many consumers might buy their first bottle of Seyval Blanc at one of the small wineries for $5-$7, and become a buyer of Great Western Seyval Blanc at their local liquor store (or supermarket) for $3 to $4 a bottle. The precedent for this type of development already exists from California.

Small wineries cannot be expected to solve New York State's grape supply imbalance. As a 1981 study by Richard Cooper of Cornell University stated: "The amount of established grape acreage directly utilized by small wineries has been limited. In addition, the small wineries did little to solve the surplus situation that has existed for certain varieties."

So it is the spinoff effects of the small winery segment rather than their demand for grapes that might ultimately benefit the entire grape industry. Because of this, it makes sense for State and industry (market order) research and Extension support to be supportive of this segment. Geneva is currently in the process of hiring an individual who can work with winemakers at the practical, applied level and with Geneva's specialists at the more scientific, academic level. While expenditure of market order funds for small winery research and promotion could be construed as directly benefiting only a select few growers, a wider view that recognizes the spinoff benefits may be more appropriate.

The small wineries in New York have had a good history of informal cooperation with each other and also with the large, established wineries, especially within the Finger Lakes region and the Grape Belt region. As the number of small wineries grow, there may be a need for more formal cooperation in order to promote this segment of the industry:

1) There may be a need to safeguard the integrity of the industry from wineries who produce an inferior product. While the marketplace will ultimately weed out such businesses, it is possible that they could hurt the entire industry's image in the meanwhile. The industry might consider a voluntary program run by the industry itself to establish a "seal of approval" that would guarantee the consumer a quality product.

2) There may be opportunities to cooperate on certain essential business services such as consolidated orders for bottles and corks, a mobile bottling line, and/or a cooperative warehousing/shipping facility. Again, some small California wineries have banded together to provide such services through a cooperative or corporate form of business. In California's Sonoma County, the local small winery group collaberates on an annual promotional tour of major American cities during the winter.

3) There may eventually be a need for a formal group to organize seminars and meetings and to make public policy stands before the State legislature and other authorities. To date, these activities have been on an informal basis, but the industry could eventually outgrow this. This is especially important in fostering cooperation with small wineries outside of the respective regions, e.g. the Finger Lakes and the Grape Belt. These two areas have much in common with each other and stand to gain from cooperation with each other, as well as nearby areas in Ontario and Pennsylvania, and even areas more distant such as Long Island, the lower Hudson Valley, and Southern New England.

There is a dilemma in the small winery situation in that a large amount of financial resources, risk, and work is required of the individual businesses, and yet they will probably generate spinoff benefits for the entire industry. It is this analyst's conclusion that New York's small wineries will provide leadership to the entire State industry in both the technical and marketing aspects of French Hybrid table wines - this is an important factor in the future return to profitability for the New York grape grower. However, they will not be a good solution to the basic supply imbalances that exist today in the New York grape industry.

Cooperatives

Cooperatives dominate the unfermented/Concord side of the New York grape business with four different organizations and marketing strategies - National Grape/Welch, Westfield Maid, Growers, and Keystone Foods. There is certainly little need to look for further cooperative activity in this segment of the industry.

In contrast, New York has no cooperative wineries such as California has. The issue of growers buying an existing winery on a cooperative basis has been raised in both the Finger Lakes and the Grape Belt in the past. The issue has never reached an earnest stage of negotiation or planning, however.

There is no magic in the cooperative form of ownership that would enable New York wine grape growers to somehow avoid the business/market problems that the Upstate wineries have already encountered. It would undoubtedly be a mistake for growers to buy an unprofitable winery simply to preserve the market or for the sake of owning a winery. It would also be a mistake to think that a cooperative could readily sell red table wines, or sherries, or other dessert wines on a profitable basis when existing wine producers are having problems doing so. Finally, the nature of the wine marketing environment must be fully appreciated.

Because of the prospects for substantial growth during the remainder of this century, the wine business has attracted many of the giants of the food, beverage, and liquor industries of this country - Coca-Cola, Joseph E. Seagram, Heublein, National Distillers, Brown-Forman, Standard Brands, Dart-Kraft and others. Most of these companies have extensive experience in the production and marketing of other beverages and foods, as well as the financial resources to make large, long-term investments in the production and marketing of their wine brands. This is probably not the environment in which a local farmer cooperative might wish to begin operating.

These considerations do not rule out all types of cooperative activity. In fact, grape producers or existing co-ops might find it very worthwhile to investigate a joint venture with either an existing New York winery or with a large consumer products company from outside of the New York State wine industry. What might farmers be able to offer in a joint venture that would attract a consumer products company?

1) Quality grapes on a dependable basis over the long-term. The joint venture would not be prone to the volatility and uncertainty of the cash market.

2) Financing of wine inventories to some degree through accepting payment for the grapes over a period of time or through retaining title to the inventory and using it as security for a loan with which to make partial payment to individual farmers.

3) Financing of working capital, inventories, and/or fixed assets (winery and equipment) through farmer equity and possibly borrowings.

Of course the grapes are the foundation of the joint venture and the other areas are attractive (to the marketer), but not essential ingredients. The details would have to be tailored to the specific situation, but have been worked out in other situations between Curtis Burns/Pro Fac, Hood/Agrimark, Seneca/Agco and the original National Grape arrangement back in the 1940's.

What would the grape growers who participated in such an arrangement be able to expect in return?

1) Obviously a stable, long-term market for their grapes of the specified variety(ies) and quality level. As with the marketer, grape growers would prefer to avoid the volatility and uncertainty of the cash market on a portion of their crop, given an acceptable return.

2) A professionally managed processing and marketing firm that would aggressively market the wine with the objective of good returns to the joint venture participants and a growing market for the wine.

3) A share of the profits of the joint venture depending on the method of paying for the grapes originally, and the amount of farmer/cooperative resources contributed to the joint venture. Obviously the farmers' share would need to be much higher if they owned the winery and leased it to the operating company.

There are precedents for this type of arrangement. A number of U.S. firms have wanted to enter the wine business, but did not want to capitalize a new winery or buy an existing one. Most of these companies took the route of becoming exclusive importers for European wine brands, e.g. Brown-Forman, Foremost-McKesson, Moet-Hennessy, and House of Banfi. The joint venture between Riunite and House of Banfi previously discussed is very instructive. There may still be others who want to enter the wine industry, but who do not want to pay the high price of buying an existing winery.

Because of the disappointments of the past, New York grape growers are justifiably very reluctant to make any serious, long-term planting decisions without a solid arrangement for the future marketing of those grapes. Yet many New York grape growers may be faced with an unprofitable mix of varieties currently in their vineyards. New York, as an industry, needs to align its grape acreage more closely with the needs of the market. It needs innovation and aggressiveness in the marketing of its own wines. The joint venture concept offers an alternative whereby growers might be able to take significant steps towards a more profitable future.

Perhaps a group of growers could informally organize to develop a "prospectus" for a joint venture of this type in New York. In addition to the growers, it might include the Extension Service, Cornell/Geneva, the State Department of Agriculture and Markets and financial institutions. The prospectus would address the issues of grower willingness to participate, viticultural/technical considerations such as varieties that could be provided at varying raw material cost levels, organization of the joint venture, timing, financing, and other appropriate areas. If it was determined that such a project was feasible and desirable from a grower standpoint, a professional presentation might be made to selected target firms in order to ascertain interest in it.

This same development function could conceivably be internally performed by an existing cooperative if it wished to investigate this on behalf of its members.

As with the other alternatives discussed in this section, the realities of this type of approach must be recognized. There is probably little chance that such a joint venture will come to pass:

1) Many growers may not be enthusiastic about making such a substantial marketing commitment.

2) California and Italy are fashionable origins for mass-marketed wines in this country. New York lacks this being in fashion and may be "too small" for many marketing companies to be attracted to it.

3) The leadership and the logistics for the upfront development of the joint venture may be too complex and/or lacking.

4) The time lags may be insurmountable if the joint venture were to require a major planting program.

5) The "critical mass," the volume of grapes needed for success, might be too large.

As with the other possibilities, this one is not easy, simple, or a "sure thing". Unlike some of the others, this alternative does more directly address the basic causes that underly New York's current situation.

Table Grape and Chilled Juice Sales

In the late 1800's and early 1900's, New York was a large shipper of Concords for fresh market use. The advent of reliable refrigerated rail transport from California, as well as the desirable handling characteristics of California varieties, eventually all but eliminated Concords from the fresh market. California varieties shipped better, held up longer, had a longer season and could be stored, and the Thompson Seedless had no seeds in it.

Because of distressed Concord markets in recent years, some growers and marketing firms have once again merchandised Concords and other varieties for fresh use, with mixed results. Most of these efforts have been through roadside stands, farmers markets, and local supermarket chains. The County Foods Division of Agway attempted to do this on a more widespread basis in eastern metropolitan markets during 1979 and 1980 before abandoning its efforts. Venture Vineyards of Lodi has been shipping fresh grapes for five years, increasing its volume every year and achieving a first in 1980, a load of Concords destined for Los Angeles.

Over the past few years, the Geneva Experiment Station has released a number of promising new table grape varieties, some seedless, but all better suited for fresh shipment than Concords. Examples are Himrod, Interlaken, Suffolk Red, Canadice, and Remailly Seedless. To date there are no large commercial plantings of these grapes since no large commercial markets exist for them. The markets are impossible to develop until the grapes are available.

It appears that table grapes have a relative bright market future in this country because of their product characteristics and the promotional efforts of the California Table Grape Commission. Since the early 1970's, table grape shipments have been trending upwards after several decades of decline. A 1981 consumer attitudes survey conducted for the California Table Grape Commission found that 72 percent of those surveyed mentioned "fresh fruit" as the top snack, and when asked which fresh fruit they ate as a snack, more respondents indicated grapes than either oranges or peaches. The California Table Grape Commission's 1982-83 budget is $3.6 million, of which $2.2 million will be spent for television and merchandising activities, $220,000 for consumer public relations, and $190,000 for food service marketing. As a result of these trends and promotional activities, New York State may be able to successfully expand as a specialty supplier of table grapes in future years.

A combination of factors have come together in recent years that have resulted in a growing market for chilled New York State grape juice of various varieties. These include distress in the grape markets, growing consumer interest in fresh and natural products, increasing numbers of farmers markets in cities, growing numbers of home winemakers, and increasing availability of wine presses at small wineries that could crush a quality grape juice. Most of these sales have been at local farm stands and in nearby cities' farmers markets. However, several Finger Lakes growers are hauling juice into New York City farmers markets and several growers are delivering juice in quantities (up to the legal limit of 200 gallons) to home winemakers. The Venture Vineyards operation also introduced a chilled grape juice product for supermarket sales in 1981.

It would be easy for the New York grape industry to "write off" these marketing efforts which involve only a few growers and a relatively small percentage of the total State crop. These outlets provide additional marketing channels that help to avoid glutting established unfermented and wine marketing channels. These outlets will very likely continue to grow in the future, although they are unlikely to soon replace the established markets or justify plantings of more of the traditional varieties. They may buy time, especially on the Concord variety, and some growers may "speculate" on some of the newer table varieties.

These specialized markets deserve the entire industry's support, perhaps including market order funding for promotion. There probably is not a need for an organization or cooperative that specializes in this area.

Brandy Production

Some individuals have raised the question as to whether New York State might be able to solve its surplus problem by getting into brandy production. At least one New York State winery has indicated intentions to produce brandy.

There are two types of brandy that are distilled from wine or wine by-products:

1) Beverage brandy is distilled from fermented juice or mash, and is then aged in oak for a minimum of two years prior to bottling. It is initially distilled to 170° proof, but is then diluted with water and caramel syrup prior to the aging process. At bottling, the product ranges between 80° to 100° proof.

2) Wine spirits or fortifying brandy range between 140° and 190° proof, are generally neutral in flavor, and are used to fortify other wines, e.g. the dessert wines.

Raw material quality and processing practices are much more demanding for beverage brandy than for wine spirits, which often uses grapes with quality problems or those in excess supply.

Beverage brandy is typically made from white wine varieties that are picked immature - high acid ratios are favored. In California the desired variety is Thompson Seedless, although French Columbard, Tokay, and Emperor are also used. Apparently any grape that will make a sound, clean table wine, including red varieties, can be used for beverage brandy distillation. Processing and aging practices are very important in terms of the final product quality.

The U.S. produced 17 million gallons of brandy in 1980 and 99.7 percent of this was produced by California. Sales of brandy are far less than this, but have been enjoying a healthy rate of growth in the last ten years. The industry leader in sales is the Christian Brothers, although Gallo has been growing the fastest and is now in second place. Interestingly, there is a distinct regional pattern to brandy sales with California and Wisconsin as the leading sales areas and the Northeast as the weakest sales area.

While beverage brandy is basically an unknown for New York State, it appears that the white French Hybrids might have potential for this product, but red wine varieties and especially Concords have large question marks attached to them. Wine spirits might be an attractive means of disposing of surplus New York State grapes, but this would involve a large fixed investment in modern distillation equipment and low grower returns. (The average price per ton for distilling material in California during 1980 was $69.00).

While beverage brandy may prove to be an attractive specialty product for some New York State wineries during the 1980's, growth in this uncharted area is likely to be slow and have no impact on surplus red varieties or Concords.

A New York Grape Institute

At the 1963 meeting of the New York State Horticultural Society, Professor Max E. Brunk of Cornell University made the following observations:

> "There is a need for the collection and dissemination of better market information among growers, processors, and handlers in the Concord grape industry. Our final report will likely recommend that steps be taken to create a self supporting organization directed to this end. It will be patterned somewhat after the structure of the Florida Citrus Mutual. Such information is essential to all marketing decisions and is basic in determining the need to establish marketing programs such as promotion, bargaining, marketing orders, legislative, new handling firms, or firm mergers."
>
> "To some degree, our study has been hampered by the lack of statistical information usually common in most agricultural industries."
>
> "To a very great extent, growers and processors produce and market in a knowledge vacuum."
>
> "Grape growers in general feel that there is a lack of cohesiveness in the grape industry which only a strong industry trade association can fulfill."

Today, eighteen years later, this analyst can only echo the above comments. The need for timely, sound market information to growers is even more acute given the risks and uncertainties posed by today's levels of inflation and interest rates. The lack of information regarding normal Concord production levels in the late 1960's and early 1970's, the Cold Duck fad, and the trend towards white table wines have all had a major impact on the New York State grape industry.

Ironically, much of the data regarding wine trends presented earlier in this report was compiled by the California Wine Institute. New York has no comparable source of information or industry leadership. New York has no statewide grape organization, only pieces of the total industry such as the New York Wine Grape Growers Association, the Finger Lakes Wine Grape Growers Association (processors), and the New York State Grape Production Research fund. National Grape represents a high proportion of the Concord growers in the Grape Belt, but it is national in membership and it is a business that should be devoted to the interests of its own members. The other two New York-based co-ops represent much smaller numbers of Grape Belt growers in both New York and Pennsylvania.

The New York State Crop and Livestock Reporting Service annually publishes data on the size of the grape crop, average prices paid by processors, processor utilization, and its vineyard census (every five years). Cornell and the local Extension Service publish periodic grape farm business summaries and the New York State Wine Grape Growers Association publishes an annual cost of production survey. The Finger Lakes Wine Grape Growers Association publishes limited annual data on its members' winery operations. Basic consumer market information relevent to unfermented products or wines in New York State is either published by other states or not published at all. Very little of it reaches the New York grape grower in a usable or timely form. The California Wine Institute publishes data on New York's wine industry - under the heading of "Other States."

There is a need for a New York Grape Institute representing all facets and regions of the State's grape industry. Perhaps it should be a federation of all grape industry interests and the existing organizations. While different organizations have different purposes, which may at times conflict with each other, there are areas of mutual concern - good information, promoting the industry's overall image, and certain types of legislation. Collecting and disseminating good market information throughout the New York grape industry would be a useful place to begin this type of mutual effort. Building on the good information already available, a complete program of relevant, timely information could be built.

The two principal stumbling blocks to this type of industry effort appear to be:

1) Funding. Ideally, this type of program should be funded by a statewide, industrywide market order deduction from both growers and processors. However, the politics of such an order become difficult and this could be difficult to attain.

2) Politics. The different segments of the New York grape industry are sometimes on different sides of the table. It is difficult to keep these issues from interfering with areas of agreement. The California Wine Institute has had this same problem.

Long-Range Projections of New York Processors' Grape Needs

There is a significant amount of uncertainty on the part of both processors and growers as to the future supply/demand balance of the various varieties of grapes grown in the Grape Belt and the Finger Lakes. The 1980 "New York Orchard and Vineyard Census" conducted by the New York State Crop Reporting Service will provide valuable information as to the future supply of New York grapes. Other sources of information suggest that processors have been adjusting both the quantity and varietal mix of grapes used, especially in the wine area. However, there is no data that projects how grape needs will change in the next several years.

In the course of conducting this study, one winery executive officer suggested the idea of a study that would provide the New York grape industry with long-term projections on grape needs. His suggestion is that each processor supply their individual projections by grape variety to an independent third party such as a public accounting firm, that would maintain the confidentiality of individual processor's data. Because of the significant overlap on such varieties as Concords and Niagaras, the study should include both sweet juice and wine processors. The data would be totaled by variety for industry-wide publication so that the integrity and confidentiality of individual processor's projections would be maintained. These figures could then be analyzed in terms of future grape availability and both processors and growers would be in an improved decision-making position.

Ideally such a study would include all processors that purchase commercially significant quantities of New York grapes, including those in Pennsylvania. However, such a study could still be useful with less than 100 percent participation. In order to protect the confidentiality of individual processor's data, at least three major processor's cooperation would be essential. The study could be done under the auspices of a New York Grape Institute, Cornell University, or some other organization with a public accounting firm actually receiving and compiling the data.

Even if such a study were done only once in the immediate future, the information would be very helpful to processors and growers. It could also contribute to better communication and cooperation within the New York grape industry. If successful the first time, it might develop into a periodic survey.

THE ALTERNATIVES FOR THE NEW YORK GRAPE GROWER

Given the facts and conclusions in this report, what can the individual grower do, if anything? There are about as many different answers to this question as there are grape growers. It will depend upon if the grower is a low-cost producer or a high-cost one, if he is young or old, if he has good vineyards or poor ones, if he has a favorable marketing arrangement or not, and ultimately, whether he is an optimist or a pessimist. The economic realities of the New York grape industry may ultimately leave very little choice for some growers, especially those that are high-cost producers or those that feel that income potentials in the grape business are inadequate. In the absence of some dramatic turnaround in this industry, there may well be a decline in the number of grape farms and the amount of grape acreage in both the Grape Belt and the Finger Lakes. To what extent and when this could happen is beyond the scope of this report, however.

The purpose of this section is to discuss the pro's and con's of different grower alternatives. The fact that an alternative is discussed does not necessarily mean that it is relevant to all growers - some of them are not. Only the individual grower can ultimately sort out what the outlook for the grape industry means to him and how he can best respond to that outlook.

Improving Productivity and Efficiency

Some people, especially in the processing community, feel that this is the only answer to the current lack of profitability in the New York grape growing enterprise. Most knowledgeable individuals and many growers agree that there are opportunities for many growers to further improve their viticultural practices and their overall business management. For some growers, there still remain substantial opportunities to increase productivity and efficiency because they are not up to the norm of their better neighbors. For most growers, however, the current cost/price squeeze is far too tight to be solved by productivity increases. When costs are rising 5 to 10 percent faster than prices for a sustained period of years, it is impossible for productivity gains in a biological process to offset them.

People who work closely with growers have noted a significant, noticeable deterioration of vineyard management during the past five years. Growers who have taken such cost-cutting approaches justify it on a cash flow basis, but this approach also reflects a profound sense of grower pessimism about the future. Many of these shortcuts may not even be justified in the year in which they are taken in that income is reduced more than costs are cut, but most of them will certainly have significant impacts on future income levels two to five years later. While each grower should analyze all of his practices for their short and long-term cost effectiveness and then proceed accordingly, the growers who best survive the current squeeze will probably be those who continue a sound viticultural program.

There are entire vineyards and certain sections of vineyards in both the Grape Belt and the Finger Lakes that are very inefficient producers due to poor site, poor soil, or other natural factors. In some of these situations, it may make good business sense to abandon, pull them out, or continue cropping them for whatever they will produce in the next several years with little or no maintenance. For the grower with a large proportion of his acreage in this category, this poses a severe dilemma. For the grower who has less than one-quarter of his operation in such marginal vineyards, this may be a very sound way to proceed.

Given the uncertainties about the future, the current levels of interest rates, and the fact that Geneva Double Curtain will ultimately produce more grapes per acre which will have no home, it is not very likely that this will prove to be the way to survive in grape production. However, for certain producers and/or at a future time, this or other alternative vine training systems may once again become a very attractive alternative.

Expansion

Expanding grape acreage for the sake of increasing farm income and thus better surviving the current unprofitability has little appeal to most growers today. For growers who are currently losing money, it can only increase the level of losses. Even for those with positive net returns, purchasing additional acreage and financing it could aggravate already tight cash flows. Any grower who buys established vineyard, especially Concords, may be limiting his future options within the grape business by buying established vineyard now.

Growers who feel that they are low-cost producers and can out-last today's depressed cycle may conclude that this is a good time to make a good buy on grape vineyard. Those with a sense of optimism and the ability to survive the next several years may also see this as a good time to acquire some of the better vineyard sites in anticipation of future opportunities.

Capital Expenditures and Credit

The grape growers who have the least or no debt are, and will continue to be, in a favorable position to cope with the depressed profitability of the New York grape business. Capital expenditures for new equipment or buildings should be analyzed more closely than ever. As many growers have already learned, it may be cheaper to use custom services for certain types of specialized equipment.

Planting

Only the most optimistic grower would be interested in planting Concords or red French Hybrids at the present time. To plant any large acreage of any single variety would be highly speculative and might further strain or endanger the current operation, unless there was a solid, long-term contract commitment from a processor. If processor planting programs become a reality, individual growers may have a good opportunity to begin realigning their variety mix, depending of course on the details of the planting program.

Some growers have chosen to make small-scale plantings of white grape varieties on a speculative basis, a few acres at a time each season. This may be a realistic approach, especially for growers who are still heavily dependent on Concords. To be justified, the grower would have to own high quality sites and plant at a scale that would not involve large increases in his debt level. Almost all of these varieties require the better sites in the Finger Lakes or the Grape Belt, and it would be a mistake to start planting on marginal sites or to replant marginal vineyards with new grapes. Because of the "replant" problem, a grower might begin to remove vines at a rate of several acres a year on sites which have the most promise for other varieties and then make the decision as to what to plant two years later. Growers who contemplate taking this conservative approach to changing their variety mix might develop a five to ten year plan that shows how they expect to proceed in this conversion process. Such a plan could be evaluated each year thereafter, and where appropriate, updated. This planning would be most helpful to the grower himself, but would also be very useful in "selling" his program to his lender. The grower who replants to white varieties must recognize and make the commitment to the fact that these varieties must be managed differently from Concords and will involve more complex farm management.

And what of the Eurpoean or Vinifera grape varieties? As the debate over whether they can or cannot be a significant part of the New York variety mix continues, there are several conclusions that are fairly well accepted for the upstate grape areas:

1) New York still has a great deal to learn about successful growing of Vinifera types in areas such as best rootstocks, winter hardiness management, site selection, etc.

2) Successful culture of Vinifera will require the most careful and intensive management of New York's best growers.

3) Vinifera will not become a major part of the commercial grape variety mix in the foreseeable future.

4) Some varieties such as Chardonnay and White Riesling can apparently be grown commercially on the best sites by some of the best managers. To do so requires a higher cost per acre and involves a greater risk of crop loss or reduction from cold weather problems. Hopefully, the price for these varieties will justify these costs and risks.

It appears that the acreage of Vinifera has been gradually increasing in recent years, especially around the southern end of Seneca Lake. Much of the impetus for this lies in the rise of the small wineries who are in a position to achieve much higher returns on Vinifera wines, and who need such wines to attract attention and develop a reputation.

Again, conservative plantings of selected Vinifera varieties on the best sites by growers who are willing to be patient and learn as they go may be a realistic option. This is especially true for growers who either have wineries or can work out a good arrangement with a winery. Given the uncertainties of Vinifera production, it does not appear to be prudent for any grower to depend on them to the extent that his entire farming future depends on their success. Vinifera types will probably generate very high returns some years, and little or no returns in other years because of their greater susceptibility to adverse weather.

The Role of the Concord

It is not this analyst's conclusion that the Concord grape is no longer economically viable in New York State and/or that growers should abandon it. The Concord's strengths are:

1) During the past 100 years, the Concord variety has proven its adaptability to New York conditions. Many Grape Belt growers have little or no experience growing anything else, and many growers in both the Finger Lakes and the Grape Belt prefer to grow it if they can do so profitably.

2) It makes high quality juices, drinks, and spreads as well as certain types of dessert and sparkling wines. There will continue to be a market for all of these products in the foreseeable future.

3) Many growers have the security and stability of cooperative ownership of businesses which process and market Concord products.

These strengths are offset by:

1) Concords do not have to be grown in New York State and, in fact, Washington State can produce them cheaper than can New York State, on average. Furthermore, Washington State has both the desire and the resources to expand its Concord acreage.

2) Concord juice is a specialty fruit juice product that is consumed by a relatively small proportion of the American population and is not widely available in restaurants, and institutional feeding.

3) Bottled grape juice is a relatively high-priced product in a very competitive market, even with currently depressed levels of grower returns.

4) The Concord's strong distinctive flavor is both an advantage and a disadvantage. The disadvantage is that relatively high proportions of neutral-flavored grape juice can be blended with Concord without destroying the Concord character. California has demonstrated its ability to supply inexpensive, neutral blending juice for this purpose on an ongoing basis.

5) Concord-based wines are in categories with declining sales. It may be possible to put Concords in nontraditional wine uses by picking green and cold-pressing, by stripping the red pigmentation, and/or neutralizing the Concord flavor. While such uses may provide a home for excess Concords, it is likely to be a home of low grower return.

6) There is currently an excessive inventory imbalance of both unfermented Concord juice and certain types of Concord-based wines which will have to be brought back into balance in the future. Given today's high interest rates, these inventories are extremely expensive to carry.

Balancing these factors, it is very questionable as to whether grower returns for Concords can be very profitable until either demand catches up with supply over a number of years, or the supply is reduced to a level that justifies a higher price.

Given these findings, the New York State grower who stays with the Concord to a heavy extent may be tieing the future of his farming career to today's uncertain Concord outlook. The grower who begins or continues to diversify away from the Concord in a cautious, planned manner may have better protection against future market adversity and more opportunities for profitable markets than he would by keeping a heavy Concord mix. Of course, this consideration depends heavily upon the capabilities, resources and goals of the individual grower.

Diversification and Marketing

Many New York grape growers have historically depended on only one variety (the Concord) and/or one market (Welch, Taylor, etc.). Most New York growers have not had to do any marketing of their product as they relied on the same processor year-after-year. The wine industry has gradually broken down Concord's varietal dominance and the unstable markets of recent years have broken down reliance on a single processor. Some growers have had to spend significant time and effort finding new markets when traditional proprietary outlets failed them in recent years.

I conclude that the trends towards greater diversity of varieties and markets, and growers having to spend more time on marketing will continue. The successful grower of the future may not have "all of his eggs in one basket" and he may be an aggressive marketer of at least portions of his crop. My reasons for these conclusions are:

1) Fads and changes will continue to occur in the wine market as they have in the past. The diversified grower will be in the best position to take advantage of these when they do occur, and will be hurt much less when the fad goes away than the grower with heavy dependence on one variety.

2) The number of possible outlets for grapes is increasing. Not only are there more wineries in New York State, but there are sales opportunities in grapes for table use, fresh chilled juice, juice or grapes for home winemakers, and grapes for wineries in New England, and other states. As outlets for grapes, none of these may take large tonnages, but they could be very important to an individual grower.

In the Chautauqua area, some grape growers have also tried to diversify into other crops with varying degrees of success, e.g. strawberries, cherries, and tomatoes. For the most part, alternative crops require additional machinery, development of new markets, and do not have the same potential for profitably employing the farm operator's land and labor as grapes once had. This study has not investigated the feasibility or profitability of conversion of vineyards to other uses. In the Grape Belt, there are many alternative crops, but markets and profitability are unanswered questions. In the Finger Lakes, the alternatives are fewer and lie primarily in lower value per acre uses such as corn and small grains.

Small Wineries

Nearly all knowledgeable people agree that a small winery is not the answer to a grower's grape marketing problems or an unprofitable grape enterprise. This is especially true in New York where the primary variety, the Concord, has virtually no home in small wineries. In fact, most small wineries seem to be riding the white table wine boom with white French Hybrids, and to a lesser extent, native American whites and Viniferas. Where a farm business is strained by poor profitability and cash flow, a winery may, in fact, only add to the financial strain with its large up-front investment needs and its tremendous cash flow reduction in its early years.

Furthermore, there are very few situations in New York where all of the necessary conditions exist for a successful winery:

1) There is a tremendous up-front investment required to build a winery and an ongoing cash flow drain to build working inventories and develop markets in the initial years. There are probably very few grape growers with these amounts of resources readily available. Even those with substantial net worths may be reluctant (and certainly should question) to put their net worths "at risk" in this type of enterprise.

2) There are very few growers who would have a current variety mix in their vineyards such that if they built a winery, they would not have to sell grapes to other processors or buy grapes for their own winemaking. Thus a winery is not likely to solve their marketing problem, and could make the problem more complex.

3) A successful small winery requires much different and expanded skills than the normal grape farm operation in the areas of wine production, financial management, and most significantly, marketing. The marketing skills needed for a successful small winery are in an entirely different category than what the grape grower needs to sell his crop. These almost always include selling directly to consumers and may often include working with liquor stores, distributors, restaurants and others in the wine trade. Most grape growers would be in another vocation already if these were the types of things they liked to do. In addition to the fact that most grape growers would have to develop the necessary skills, it is questionable as to how many would be happy even if they did.

It is beyond the scope of this analysis to determine how many small wineries the Finger Lakes and the Grape Belt can have before there will be "too many." The experience of California and other states is that tourists and the local market can support a few wineries. The next few wineries help bring in more tourists and attract more attention, to the entire local wine industry's benefit. At some point, a saturation level may be reached where another new winery only takes sales away from the existing ones, and forces more wine into wholesale channels within New York State. Where this saturation level lies should be a concern to each prospective winery owner and to the entire industry.

In "Some Economic Aspects of Small Wineries in New York," Richard C. Cooper recently concluded that: "The overall increase in total volume being marketed raises the question of how easily the small wineries will be able to find markets for this increased production." Having noted this, he concluded that "New York small wineries have a healthy, but likely a more competitive future ahead of them."

The decision to start a small winery should be a positive one based on the desire to build this type of business, rather than a negative one stemming from frustrations and disappointments in grape farming. There are and will be very few grape growers who are attracted to the winery challenge and who have the necessary financial and management resources to make it happen.

There may be opportunities for other grape growers to develop profitable, long-term marketing arrangements with small wineries for either current production or for grapes to be planted. Not all small wineries will be farm wineries vinting wine from their own vineyards, and the nonfarm winery may be an especially good market opportunity for the grower who can develop it.

FINAL THOUGHTS

The intent of this report has been to develop a perspective on the future of the grape industry in the Finger Lakes and Grape Belt regions and the alternatives for growers to make the most of that future. There are many discouraging factors and there are no easy answers for any of the problems. A report such as this does not dwell very much on the positive factors such as growers' ability and desire to grow grapes, the good grape sites in both the Grape Belt and the Finger Lakes, the research and Extension program of Geneva and the local Extension Specialists, the strong brand names of Welch and Taylor, and other positive factors. In the broad perspective of over 100 years of history, the grape industry has endured periods of difficult problems, undergone declines, and then recovered and grown to what it is today. The Concord grape is a good grape and will continue to play a very important role in New York for many years. New York should not develop an inferiority complex in light of what California and Washington can do, because New York grape growers can do things that these other regions cannot.

It would be a mistake for the New York grape industry to ignore the lessons of the 1970's and to sit back and wait for a return to the prosperity of earlier times. The inevitable adjustment may be that some farm businesses will not survive and that at least some of their acreage will go out of production. This is certainly not an appealing alternative for individual growers or for the industry, even though it is probably the surest way to correct some of today's supply imbalances. For some growers who are very inefficient, heavily indebted, opposed to any change, or about to retire, this may be the inevitable solution. Not all growers are faced with this inevitability. Many growers face the decision of how to survive, above all, and how to best take advantage of the opportunities for the future. The answer and the program will not be the same for each grower. Many growers are already making changes, and the rest should be taking a long, hard look at the future of their industry and their own business, and proceeding accordingly.

Jim Putnam II
Farm Credit Banks
Springfield, MA
May, 1982

GLOSSARY

A LAYMAN'S GLOSSARY

NOTE: Some of the terms defined in this section are technical and/or scientific in nature. The following definitions are intended only as general ones for the layman's understanding of certain sections of this report.

Amelioration - Water, sugar, and/or grape concentrate are sometimes added to wine during the wine-making process in order to correct for certain attributes of the grapes crushed such as high acidity, insufficient sugar, etc. This also has the effect of extending the wine yield of the grapes crushed. Most major wine countries and California have strict regulations on amelioration - California prohibits any use of sugar and closely limits the use of water. In New York State, both sugar and water amelioration are commonly used by the large wineries up to the maximum legal limit of 250 gallons of wine per ton of grapes.

Appellation - This is a recognized geographic area with very similar climatic, topographical, and soil conditions which tend to make the grapes/wines similar. Appellations can cover a local area within a wider appellation, all the way down to a specific vineyard appellation, e.g. Finger Lakes, east shore of Seneca Lake, Gold Seal Vineyard. Appellations can be thought of as a "truth-in-advertising" program for wine labeling. The U.S. has historically allowed the use of traditional, loosely defined appellations, but the Bureau of Alcohol, Tobacco, and Firearms has mandated an intensive process of establishing appellations in order to bring the U.S. in line with Europe's stringent appellation requirements. This is necessary in order to export American-made wines to Europe.

BATF - The Bureau of Alcohol, Tobacco, and Firearms of the U.S. Department of the Treasury is the Federal agency responsible for collecting the Federal excise tax on wine and for administering most Federal regulations for wine. The Reagan Administration has recently attempted to abolish BATF and to transfer most of its wine-related activities to the Customs Bureau of the Treasury. Congress has thwarted these plans thus far and the issue is still unresolved at this writing.

Crush - This refers to the amount of grapes processed for juice or wine. It is used in the same way as the word "pack" is used for other processed commodities.

Finger Lakes - This region has different boundaries depending upon who is using it and for what purpose. In this report, it refers to the large commercial vineyard acreages along Keuka Lake, the southern end of Seneca Lake, and the southern tip of Canandaigua Lake. There are smaller vineyard acreages along Cayuga and some of the smaller western lakes. While there is considerable variability within this region, the common characteristics are the climatic effect of Lake Ontario to the north and the good air drainage created by long slopes along the lake shores. Eventually, the Finger Lakes will be an approved appellation by the BATF.

French Hybrids - Also referred to as French American hybrids, these varieties are the result of French plant breeders' work in the late 1800's. They crossed native European varieties with American varieties in order to develop resistance to a devastating insect known as phylloxera. The resulting new varieties had wine characteristics more similar to their European parents, but had the resistance to disease, insects, and winter damage typical of their American parent(s). In the late 1940's and 1950's, New York State and other Eastern wineries began experimenting with these varieties for suitability to Eastern growing conditions and quality of wine made for them. Commercial planting began in the early 1960's and boomed in the late 1960's and early 1970's. Major white wine varieties are Aurore and Seyval Blanc, while major red varieties are De Chaunac, Baco Noir, Rossette, and Chancellor. The Geneva Experiment Station is developing new hybrids bred and selected especially for New York State conditions - Cayuga White is the first of these to be named and will be followed by others.

Geneva Double Curtain (GDC) - This is a vine-training system developed by Dr. Nelson Shaulis of the Geneva Experiment Station in the 1960's. Trunks are trained to two top wires which are extended outward from the posts by metal arms. Canes then form two "curtains," which maximize their exposure to sunlight. Where exposure to sunlight is a crop-limiting factor, GDC can dramatically improve yields. Concord has been the principal variety converted to GDC, although this system has not been widely adopted in New York State.

Grafting Over - Mature vines are converted to another variety by severing the original trunk and transplanting (grafting) a bud of a new variety onto it. If successful, this greatly shortens the conversion process from what would be involved in replanting, and avoids "the replant" problem and the need for trellis reconstruction. It is a skilled labor-intensive process that must be done within a limited time period when plant conditions are suitable. While it has found moderate commercial acceptance in California, no commercially acceptable grafting procedure has been found for New York State conditions as yet. This is a result of a lack of sufficient research on this topic in New York State.

Hudson River Umbrella (HRU) - This is another of the newer vine-training systems in which the "arms" of the grape plant are extended along the top wire half way to the next vine. Canes then grow downward to the bottom wire from the arms. This system facilitates good cane distribution over the trellis in order to maximize exposure to sunlight. Of the important training systems, HRU is the most suited to mechanical pruning and, for this reason, is becoming more common for Concords in the Lake Erie Grape Belt.

Labrusca - This is the species name for native American grape varieties such as Concord, Niagara, Delaware, Catawba, Elvira, Ives, Isabella, etc. that form the bulk of grape production in states other than California. Most of these varieties share a "foxy" taste, resistance to phylloxera, and tolerance to cold winters. These varieties are the result of chance and deliberate hybridization of the wine grapes growing in America prior to the arrival of Europeans and the European (vinifera) varieties that they brought with them.

Lake Erie Grape Belt - This grape-growing region extends from the southwestern tip of Erie County, New York through Chautauqua County into Erie County, Pennsylvania, and then into the northeastern corner of Ohio. It lies between the southern shore of Lake Erie and the escarpment to the south, a natural feature which extends only several miles inland at its maximum. It has the climatic advantage of a "lake effect" which moderates weather extremes in the Spring and Fall. In this report, this term is used in reference to the Chautauqua County portion of the Grape Belt, although conditions are very similar throughout the Grape Belt.

Mechanical Pruning and Grooming - Annual pruning of canes while the plants are dormant is a major cultural operation - traditionally done by skilled hand labor. Considerable research has been conducted to develop a mechanical substitute for hand labor to reduce costs and the need for hired labor. A few commercial growers are using mechanical systems to varying degrees at the present time, although hand pruning is still the norm. Mechanical systems are not thoroughly refined and are controversial at present. They seem to work best where the vineyard and existing management are already optimal.

Grooming refers to the positioning of the shoots and canes so that they are well dispersed throughout the plant canopy - this is especially important in the Geneva Double Curtain and Hudson River Umbrella systems. While this can be done by hand labor during the growing season, machines have been developed that will do most of this positioning.

Overcropping - All of a grower's cultural activities must balance the development of the current season's crop with the development of canes which will produce next year's crop. If this year's crop is favored at the expense of next year's, it is referred to as overcropping. This may result not only in smaller future yields, but greater susceptibility to disease and winter-damage. Overcropping may be deliberate, or a consequence of circumstances and/or poor management.

Own-Rooted - When the entire grape plant is the same variety as it grew from a rooted cutting, it is own-rooted. This is the case for the majority of New York State's labrusca and French Hybrid grapes. Such plants are cheaper to propagate, are more winter-hardy, and are more easily renewed (new trunk grown) than is the case otherwise. Grafted grape plants are widely grown in other regions and, to a small extent, in New York State. These consist of a rootstock with desirable cultural characteristics to which a bud of the desired variety has been grafted. A common reason for doing this in New York State and many other regions is to grow varieties susceptible to phylloxera on a resistant rootstock, e.g. Vinifera on a labrusca rootstock. There may also be advantages in adapting to certain soil types/conditions, plant vigor, and winter hardiness. Vinifera varieties must be grafted on a rootstock to survive in New York State because of the phylloxera problem.

Phylloxera - This is a type of aphid (insect) that attacks the roots of certain grape varieties, feeding on the plant juices. This results in reduced vigor and/or plant death. Phylloxera are native to North America, but were accidentally introduced to Europe in the mid-1800's. This caused severe damage to the European wine industry and was the reason behind the development of the French Hybrids and resistant rootstocks. Phylloxera occur naturally in all soils of the Northeastern U.S., although they are especially concentrated in sites with grapes currently on them.

Replant Problem - Practical experience and research have established that new grapes planted on ground that recently had grapes on it will suffer from a combination of soil-borne diseases that will stunt growth of the new vines. A one-year follow period is considered inadequate, two years is commercially adequate, and three years will minimize the replant problem.

Rill Irrigation - Water flows across the natural slope of the vineyard (field) from the supply canal or pipe at the end of the field. This may require additional investment in land-leveling at the time the vineyard is developed, but it has minimal operational costs during the life of the vineyard.

Still Wine - Regardless of alcoholic content, still wines are those with a low carbon dioxide content, e.g. technically less than 0.256 grams of carbon dioxide per millileter. This includes both table and dessert wine, but does not include sparkling wines.

T-Budding - A technique for grafting over that has found moderate commercial acceptance in California. A T-shaped slip in the bark of the trunk is made in mid-to-late Spring, a bud of the new variety is inserted, and the wound is wrapped. The new plant produces a limited crop in the following season and a reasonably full crop the next season after that. So far, this technique is not suited to New York State.

Vinifera - Also known as European varieties, this is the species of classic grape varieties widely grown in Europe and other major wine regions including California. It includes hundreds of varieties including Cabernet Sauvignon, Petite Sirah, Pinot Noir, Chardonnay, White (Johannisberg) Riesling, Sauvignon Blanc, Chenin Blanc, Gewurztraminer, etc. While different varieties are suited to different climates and growing conditions, all are very susceptible to phylloxera and to cold winters. Chardonnay and White Riesling appear to have the most promise for Upstate New York growing conditions, and then only on the better sites with the better viticultural management.

Viticulture - The art and science of growing grapes.

FIGURE SOURCES

SOURCES FOR FIGURES IN THIS REPORT

Figure 1. Average Grower Price for New York Grapes, 1956-81

Source: "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years. (page 6)

Figure 2. Average Gross Returns Per Acre of New York Grape Production, 1956-81.

Sources: Average price from "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years. Yield per acre developed by J. Putnam II based on data from U.S. Department of Agriculture, New York Crop Reporting Service, and Bureeu of the Census. (page 7)

Figure 3A. Index of Gross Returns Per Acre and Production Costs, 1956-81.
Figure 3B. Index of Grape Farm Profitability, 1956-81.

Sources: Production cost index developed by J. Putnam II based on data from "Agricultural Prices," Statistical Reporting Service, U.S. Department of Agriculture, various years. Profitability index calculated by J. Putnam II. (page 8)

Figure 4. U.S. Retail Sales and Estimated Raw Grape Utilization of Principal Unfermented Grape Products, 1980.

Source: Figures developed by the author based on data in "Chain Store Age Supermarket Sales Manual. (page 12)

Figure 5. Cost Per Serving for Canned/Bottled Juices, 1979-80 - Wholesale Prices for Private Label.

Source: "Report on Food Markets," Copyright © The Food Institute, various years. Used by permission. Converted to "Per Serving" basis by the author. (page 18)

Figure 6. Cost Per Serving for Canned/Bottled and Frozen Concentrate Fruit Juices - Wholesale Prices for Private Label.

Source: "Report on Food Markets," Copyright © The Food Institute, various years. Used by permission. Converted to "Per Serving" basis by the author. (page 19)

Figure 7. Fruit Price As a Share of Wholesale Price for Private Label Consumer Packages of Fruit Juice, 1978-80.

Sources: Developed by the author based on data from "Report on Food Markets," Copyright © The Food Institute, various years; and "Noncitrus Fruits and Nuts," "Citrus Fruits," and "Vegetables," all by Statistical Reporting Service, U.S. Department of Agriculture, various years. (page 23)

Figure 8A. Retail Sales Per Person of Unfermented Grape Products
Figure 8B. Total Retail Sales of Unfermented Grape Products

Source: Figures developed by the author based on data in "Chain Store Age Supermarket Sales Manual. (page 60)

Figure 9. Florida Sales of Orange Juice Products, 1965-80.

Sources: "Fruit Situation," Economic Research Service, U.S. Department of Agriculture, various years. (page 64)

Figure 10. The Unfermented Grape Product Crush in the Seven Major Concord States, 1956-80.

Source: Developed by the author based on data from "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years; and miscellaneous other sources. (page 68)

Figure 11. New York State Inventories of Grape Juice, 1973-81.

Source: "Cold Storage," New York Crop Reporting Service, various years. Compiled by "Eastern Grape Grower." Seasonal adjustments by the author. (page 76)

Figure 12. Inventories of Florida Orange Juice, 1965-80.

Source: Figures developed by the author based on data in "Fruit Situation," Economic Research Service, U.S. Department of Agriculture, various years. (page 77)

Figure 13. Wholesale Price Indexes for Bottled Grape Juice, Frozen Grape Concentrate, and All Consumer Foods, 1960-81.

Source: "Producer Prices and Price Indexes," Bureau of Labor Statistics, U.S. Department of Labor, various years. (page 78)

Figure 14A. Average U.S. Grower Price for Juice Grapes, 1969-80.
Figure 14B. Grape Price Indices - U.S. Grower Price and Wholesale Prices for Bottled and Frozen Concentrate Juice, 1969-80.

Sources: "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years.

"Producer Prices and Price Indexes," Bureau of Labor Statistics, U.S. Department of Labor, various years. (page 80)

Figure 15A. Average Price for Florida Valencia Oranges Delivered to Processing Plant, 1965-81.
Figure 15B. Orange Price Indices - Florida Valencia Price and Wholesale Prices for Canned and Frozen Concentrate Juice, 1965-81.

Sources: "Fruit Situation," Economic Research Service, U.S. Department of Agriculture, various years.

"Producer Prices," Bureau of Labor Statistics, U.S. Department of Labor, various years. (page 82)

Figure 16. Wholesale Cost Per Eight Ounce Serving of Orange and Grape Juice, 1960-81.

Sources: Calculated by the author based on data from "Producer Prices and Price Indexes," Bureau of Labor Statistics, U.S. Department of labor, various years. (page 84)

Figure 17A. Grower Returns Per Ton - U.S. Average for Juice Grapes and Florida Average for Valencia Oranges, 1969-81.
Figure 17B. Index of Grower Returns - U.S. Average for Juice Grapes and Florida Average for Valencia Oranges, 1969-81.

Sources: "Fruit Situation," Economic Research Service, U.S. Department of Agriculture, various years.

"Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years.

Indexes calculated by the author. (page 85)

Figure 18A. Wholesale Price Indices for Grape Jelly; All Jams and Jellies, and All Foods, 1960-81.
Figure 18B. Price Indices for Raw Grapes and Grape Jelly, 1969-80.

Sources: "Producer Prices and Price Indexes," Bureau of Labor Statistics, U.S. Department of Labor, various years.

"Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years. (page 86)

Figure 19A. Wine Consumption Per American Adult, 1961-80.
Figure 19B. Wine Consumption Per American Adult by Alcohol Content, 1961-80.

Source: "Wines and Vines," Copyright © The Hiaring Company, 1981. Used by permission. (pages 88 & 91)

Figure 20. Wine Entering Commercial Distribution Channels in the U.S., 1961-80.

Source: "Wines and Vines," Copyright © The Hiaring Company, 1981. Used by permission. (page 92)

Figure 21A. Total Wine Shipments to the U.S. Market, 1961-80.
Figure 21B. Regional Share of Total Wine Shipments to the U.S. Market, 1961-80.

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Figure 22A. California Wine Inventories as of December 31, 1969-80.
Figure 22B. "Other States" Wine Inventories as of December 31, 1969-80.

Source: "Wines and Vines," Copyright © The Hiaring Company, 1981. Used by permission. Converted to "Days in Inventory" by the author. (page 105)

Figure 23A. Consumer Price Indices - All Consumer Items and All Wines, 1963-81.
Figure 23B. Consumer Price Indices - All Food, All Alcoholic Beverages, and All Wines, 1967-81.

Source: "CPI Detailed Report," Bureau of Labor Statistics, U.S. Department of Labor, various years. (page 107)

Figure 24A. Wholesale Price Indices for Table and Dessert Wines, 1956-81.
Figure 24B. Price Indices for Table and Dessert Wines, 1963-81.

Sources: "Wholesale Prices and Price Indexes" and "CPI Detailed Report," Bureau of Labor Statistics, U.S. Department of Labor, various years. (page 108)

Figure 25A. Wholesale Prices and Inventory Levels of Dessert Wines, 1969-80.
Figure 25B. Wholesale Prices and Inventory Levels of Table Wines, 1969-80.

Sources: Inventory data from "Wines and Vines," Copyright © The Hiaring Company, 1981. Used by permission.

Price indexes from "Wholesale Prices and Price Indexes," Bureau of Labor Statistics, U.S. Department of Labor, various years. (page 109)

Figure 26A. New York Grape Crop Utilization, 1956-81.
Figure 26B. The New York Grape Crop - Share Utilized by Unfermented Products and Wine, 1956-81.

Source: "Survey of Wineries and Grape Processing Plants - New York," New York Crop Reporting Service, various years. (page 116)

Figure 27A. Approximate Grape Plantings in the Finger Lakes Region, 1956-80.
Figure 27B. Approximate Grape Plantings in the Finger Lakes Region, 1956-80.

Source: "New York Orchard and Vineyard Survey," New York Crop Reporting Service, various years. Adapted by the author. (page 120)

Figure 28A. Approximate Grape Plantings in the Chautauqua Region, 1956-80.
Figure 28B. Approximate Grape Plantings in the Chautauqua Region, 1956-80.

Source: "New York Orchard and Vineyard Survey," New York Crop Reporting Service, various years. Adapted by the author. (page 121)

Figure 29A. New York State Bearing Grape Acreage, 1950-81.
Figure 29B. New York State Average Grape Yield, 1950-81.

Source: Developed by J. Putnam II based on production estimates in "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years. Acreages based on "Census of Agriculture," Bureau of the Census, U.S. Department of Commerce, various years; and "New York Orchard and Vineyard Census," New York Crop Reporting Service, various years. (page 139)

Figure 30A. Welch Foods' Sales, 1956-81.
Figure 30B. National Grape/Welch Member Tonnage, 1956-81.

Sources: "National Grape Cooperative Association, Inc. & Welch Foods, Inc. Annual Report," various years.

"CPI Detailed Report," Bureau of Labor Statistics, U.S. Department of Labor, various years.

Conversion to $1956 by the author. (page 145)

Figure 31A. National Grape/Welch Tonnages as a Percent of the Total U.S. Unfermented Product Crush, 1956-80.
Figure 31B. National Grape/Welch Tonnage Shares for the Eastern and Western Pools, 1956-79.

Sources: "National Grape Cooperative Association, Inc. & Welch Foods, Inc. Annual Report," various years.

"Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years. (page 146)

Figure 32. Welch Foods - Major Costs and Net Proceeds Available for Distribution, 1960-81.

Source: "National Grape Cooperative Association, Inc. & Welch Foods, Inc. Annual Reports," various years. (page 149)

Figure 33. Welch Foods - Selling, General, and Administrative Cost Per Ton, 1958-81.

Sources: "National Grape Cooperative Association, Inc. & Welch Foods, Inc. Annual Report," various years.

Conversion to $1956 by the author using the "Implicit Price Deflator for GNP." (page 150)

Figure 34. Welch Foods - Grower Investment Per Ton, 1958-81.

Source: "National Grape Cooperative Association, Inc. & Welch Foods, Inc. Annual Report," various years.

Conversion to $1956 by the author using the "Implicit Price Deflator for GNP." (page 151)

Figure 35. Welch Foods - Distribution of Net Proceeds, 1960-81.

Source: "National Grape Cooperative Association, Inc. & Welch Foods, Inc. Annual Reports," various years. (page 153)

Figure 36A. National Grape/Welch Foods - Concord Payments from Eastern Pool Compared to New York State Average Concord Price, 1956-79.
Figure 36B. National Grape/Welch Foods - Concord Payments from Western Pool Compared to Washington Average Concord Price, 1956-79.

Sources: "National Grape Cooperative Association, Inc. & Welch Foods, Inc. Annual Report," various years.

"Survey of Wineries and Grape Processing Plants - New York," New York Crop Reporting Service, various years.

"Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years. (page 155)

Figure 37A. The Taylor Wine Company - Net Sales, 1962-76.
Figure 37B. The Taylor Wine Company - Net Income, 1962-76.

Source: "The Taylor Wine Company, Inc. Annual Report," various years.

Conversion to $1962 by the author using the "Implicit Price Deflator for GNP." (page 158)

Figure 38. Washington State Grape Production, 1956-81.

Source: "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years. (page 166)

Figure 39. California Grape Production and Utilization, 1956-81.

Source: "Noncitrus Fruits and Nuts," Statistical Reporting Service, U.S. Department of Agriculture, various years. (page 170)

Figure 40. Wine Varieties Crushed for California Wine.

Source: "Final Grape Crush Report - 1980 Crop," California Department of Food and Agriculture, March, 1981. (page 172)

Figure 41. Location of California Wine Districts

Source: "Final Grape Crush Report - 1980 Crop," California Department of Food and Agriculture, March, 1981. (page 176)

Figure 42A. Approximate Plantings of California Wine Grapes, 1967-80.
Figure 42B. California Wine Grape Plantings - Percentage in White Varieties, 1967-80.

Source: "California Grape Acreage 1980," California Crop and Livestock Reporting Service, May, 1981. (page 180)