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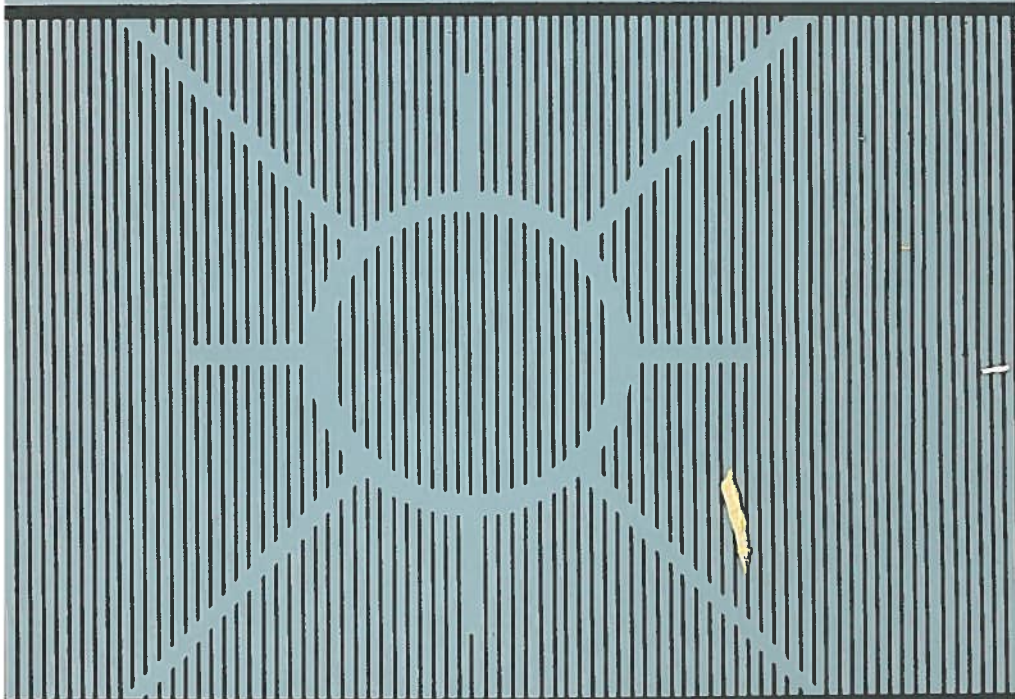
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THE TART CHERRY SUBSECTOR OF U.S. AGRICULTURE: A REVIEW OF ORGANIZATION AND PERFORMANCE



Agricultural Experiment Stations of Alaska, California, Cornell, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, New Mexico, North Dakota, Ohio, South Dakota and Wisconsin.

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Chapter 5

CONDUCT IN THE CHERRY MARKETING SYSTEM

Market conduct, performance, and structure in cherry marketing, as in other sub-sectors, are interrelated. For each major cherry market segment certain conduct aspects will be discussed. Behavior or conduct in each of various market segments, such as frozen, canned, or pie filling, is somewhat interrelated to behavior in the other product markets.

Some processors pack for two or three major processed cherry markets such as frozen or consumer-sized canned. At the grower level, the growers' cherries can usually be sold equally well for freezing, canning, or pie filling. Thus a substantial amount of interrelationship of conduct in the different market exists. There are, however, some unique features about conduct in each major market.

CONDUCT IN FROZEN CHERRY MARKETS

Frozen cherry market conduct is especially important since this market is regarded as the "barometer" market for tart cherries. Conduct which affects the pricing of frozen cherries will also have an impact on the markets for canned cherries and pie filling as well as on the grower level market.

Behavior in the frozen cherry market is influenced by the market structure on the buying side, which includes an oligopsonistic core with some significant ability to influence prices which they pay for cherries. The conduct and overall strength of these core firms is also influenced by the fact that they are mainly large food manufacturing companies with strong national labels or substantial regional brands for their finished products. In addition, there are a number of other smaller firms which may have significant brands in a local market area for their finished products but are not sufficiently large to exert oligopsonistic power in the national cherry market.

The large national buyers of frozen cherries want fairly stable and dependable supplies of cherries as ingredients for their pies and desserts. They also desire fairly stable, and preferably relatively low, prices for cherry ingredients. Their orientation is to concentrate on merchandising and marketing their branded products to their best advantage in retail grocery and/or food service industries. They also are oriented to selling product *lines* in which cherries may be just one item. They may devote substantial efforts to new product development and introduction in which cherries may be included if they meet the firm's criteria for costs, market stability as an ingredient, and fit with consumer preferences.

On the seller side of the frozen cherry market conduct is influenced by the fact that the freezer-processors are small, essentially atomistic firms selling an unbranded commodity. The quantities of frozen cherries available for sale are highly variable from year to year and are heavily influenced by the effects of variable weather conditions on a geographically

concentrated and especially weather-susceptible crop. Conduct of the freezer-suppliers is influenced by the fact that cherries are often only one of the crops which they process, although cherries are usually one of their most important commodities.

Conduct on both sides of the frozen cherry market is influenced by high risks both to buyers and to sellers. To manufacturer-buyers substantial risks are posed by both wide price fluctuations and the danger to them of insufficient cherry supplies to meet established markets for their consumer products. The risk of insufficient supply can be especially important if the company has invested substantial funds in new product and market development, advertising, merchandising, etc. Risks to freezer-sellers occur from several sources including (a) widely fluctuating prices; (b) potential lack of sufficient markets, particularly in large crop years; and (c) squeezed profits arising from the simultaneous occurrence of high grower prices and low finished product prices. These risks to freezer-sellers are accentuated by (a) their lack of market power in the processed commodity cherry market, (b) increasing market power of grower bargaining groups with whom they bargain raw cherry prices, and (c) for proprietary freezers, the increasingly important percentage of the frozen cherries being packed by non-cash purchasing cooperatives.

The risks posed by large fluctuations in cherry crop size and hence prices from year to year could be substantially reduced by a manufacturer firm's strategy of purchasing substantially larger quantities than needed in large-crop, low-price years to have more cherry ingredients available in short-crop, high-price years. Because of the rather consistent and large fluctuations in cherry crop size and hence prices from one year to the next; this would in most cases be a profitable strategy for the manufacturer. It would also reduce certain kinds of risks through greater price stability. However, it appears that this strategy has been used very little by the manufacturer-buyers of frozen cherries.

One reason why manufacturer-buyers have not followed the above strategy is that occasionally there will be two large-crop, low-price years in succession, in which case this strategy would not be the most profitable one (even though the probability of this situation occurring is relatively low). The conduct of the manufacturing firms in this regard appears to be heavily influenced by their aversion to what they would consider "speculating in a commodity market." Thus even though these firms are in a relatively favorable financial position to be able to bear the risks of stabilizing cherry supplies, they have generally chosen not to do so. This results in the risks being borne primarily by the processor-suppliers of frozen cherries, which are relatively small firms with fewer financial abilities than the manufacturer-buyers.

Within-season pricing also poses risks to both buyers [4] and sellers of frozen cherries. Although there are common patterns of within-season price variations, exceptions to these patterns may also occur. The exceptions to the normal patterns provide major sources of risk to both buyers and sellers.

Within-season frozen cherry prices most commonly follow a pattern of rising from harvest to early the following spring, in part because of storage costs. Subsequently, in the typical season, prices in April, May and June respond to expectations for the size of the upcoming cherry crop —

especially if either a very short or a very large crop appears likely. With a short cherry crop, prices for frozen cherries generally start high at harvest time and rise within the marketing year (Table 5).⁶ Thus a common strategy for manufacturer procurement officers is to purchase most of their firm's yearly supplies at pack time which in most cases will be at the lowest price during the year. Occasionally, however, deviations from this most common short-crop pricing pattern occur and prices fall during the marketing year. If this happens when the manufacturer's procurement executive has purchased heavily at pack time, he will have made a "mistake." Then the risks to the procurement officer and the buying firm are especially evident.

Table 5. Within-Season Price Patterns for Frozen Tart Cherries

A. Short-crop Years		Changes in Frozen Cherry Prices		
		Number of Crops	Generally Rising	Mostly Steady
Period				
1955-1979	10 yrs.	6 yrs.	2 yrs.	2 yrs.
1970-1979	5 yrs.	2 yrs.	1 yr.	2 yrs.
B. Large or Medium Size Crop Years				
1955-1979	15 yrs.	4 yrs.	7 yrs.	4 yrs.
1970-1979	5 yrs.	2 yrs.	1 yr.	2 yrs.

With a short cherry crop and a typical within-season pricing pattern, the profit maximizing strategy for the seller of frozen cherries would be to sell few cherries at pack time and hold most of his supplies for sale at higher prices later in the year. This strategy can, however, be fairly risky, since in some years, e.g. 1979, prices fall during the marketing season. In that event, the freezer-seller will wish he had sold heavily at pack time. In view of this risk, many freezer-sellers will sell a substantial portion of their cherries at pack time even in short-crop years, despite the fact that this is not the short-run profit maximizing strategy for most short-crop years. This behavior illustrates one impact on the processors of their low risk-bearing abilities. Selling at pack time in a short-crop year also helps serve the processors' customers' needs which is likely to aid the processors' position in subsequent years.

In large-crop years the typical within-season pricing pattern is for frozen cherry prices to start low at harvest time and generally remain fairly steady, or perhaps even decrease, until January or February. Data in Table 5 shows that pattern occurred in 11 of the most recent 15 large-crop years. After February, prices may rise somewhat more significantly until the spring freeze danger period in late April and May. Thus a typical strategy for the procurement officer of a manufacturing firm in a large-crop year is to buy part of his needs near harvest and to purchase more

⁶Both 1978 and 1979 crop years were exceptions to this common pattern. This is probably related, in part, to the fact that 1978 and 1979 were the third and fourth short-crop years in succession. This is a very unusual crop fluctuation pattern since previously the industry had not experienced more than two short crops in succeeding years.

later in the year — the amounts and timing of these later purchases to be determined by the company's needs and specific behavior of the cherry market that year. This "hand to mouth" buying strategy poses substantial risks to the cherry sellers if the market continues weak. It can also pose risks to the buyer if prices rise substantially during the season, even though this is not a normal pattern in a large-crop year. If prices do rise substantially during the season, the procurement officer who adopts a "wait and see" strategy will have made an "error" in that year.

If the procurement manager makes an incorrect market prediction and follows what turns out to be a "wrong" buying strategy (ex post) this can have serious consequences for the cherry user firm. Making a wrong purchase decision from the manufacturer's point of view has caused more than one procurement officer to lose his job.

In some cases both buying and selling firms try to establish long-term relations whereby they may trade heavily at pack time each year recognizing that this poses some risks for both firms and may reduce a firm's maximum profit-making potential somewhat for that year. However, this working relationship status is designed to mutually aid both buyers and sellers over a period of years in view of the risks impinging on both.

As a result of both within-season and season-to-season price risks there are considerable incentives for the pie and dessert manufacturer-buyers to exert buying power to try to transfer price risk to frozen cherries processor-sellers. This has been accomplished to a degree. However, the industry experience to date indicates that manufacturers-buyers of frozen cherries have not been as successful in forcing the processor-suppliers to carry almost all the price risks as have buyers in the grocery trade.

Market behavior of the freezer-processors is also influenced by the fact that many of these relatively small commodity firms are not particularly strongly financed. Poorly-financed processors need a fairly assured margin between the price they pay for raw cherries and the price at which they sell frozen cherries each year. This fact forecloses the ability to speculate with their frozen cherry packs. One result of the above situation is that some of the weaker firms attempt to reduce their risks by selling a large percentage of their pack at harvest time almost every year. One strategy which has sometimes been used, especially in earlier years, is for processors to agree on a frozen price with buyers and then deduct the processing margin that they need and pay the grower the resulting raw product which is comparable to the agreed-upon frozen product price. This risk-reducing processor strategy can permit the buyers to use their market power significantly to keep cherry prices somewhat lower than would otherwise be the case.

Another risk-reducing strategy for the processor is to pack on a cost plus basis. The processor tries to sell cherries at pack time at a price equal to the grower price plus the necessary processing margin to operate the plant and cover his costs. With grower bargaining this has been a fairly common strategy, although one that is sometimes not satisfactory for the processor. Cost plus pricing can provide substantial risks to the freezer-processor if the market for frozen cherries is not sufficiently high to return the processor a price equal to the grower price plus

the needed processing margin. The freezer-processor's weak market power position is a definite hinderance in achieving a sufficient price— particularly in a year of substantial supplies.

With grower-owned cooperative processors seasonal pricing risk is borne mainly by growers. Typically cooperatives sell the frozen cherries for prevailing market prices, deduct the necessary processing margin to cover costs, and return the balance to their growers. Thus under certain short-run circumstances the return to growers may be less than what the proprietary cash-buying processors pay to growers. Under other circumstances, primarily a strongly rising within-season market, the cooperatives can pay greater returns to their growers than do the proprietary processors. Either way, the co-op strategy passes more pricing risk back to the growers. However, in the long-run the cooperative processor will need to return about the same net return to its growers as the proprietary processor. If the co-op does not do this, the growers will tend to gradually drop out of the cooperative and sell more of their cherries to proprietary processors. Although precise data is not available, in a number of recent years cooperatives have apparently returned somewhat higher average prices to growers than the cash market at harvest time.

A processing cooperative may be able to maintain a somewhat lower price (grower return) over a long period of years if the cooperative provides special services to the grower that the proprietary processors do not. Such special services of a processing cooperative might include items such as (a) guaranteed processing capacity in both large-crop and short-crop years, (b) a willingness by the co-op to process an entire crop and market over a 2-3 year period rather than force the grower to let part of a crop drop on the ground, (c) an assured market outlet for other fruits raised by the grower, (d) reduced costs for growers' purchased inputs, (e) more convenient receiving stations, (f) providing a more "just" raw product grading system, (g) operating the plant over a longer season to accommodate growers, (h) more convenient daily delivery schedules for the grower, and (i) providing unusual financing to growers under certain conditions. Another possible selling point for cooperatives with growers is the value which growers may give to having some influence over processing firm decisions and operations. Aside from these considerations, however, cooperatives would be expected to have to return to growers approximately the same amount or more than a noncooperative processor over a period of years.

Processing financing, or the lack of it, can have an important effect upon the early season price for frozen cherries as well as upon the grower price. The cost of raw cherries to the processor often constitutes about 50 percent or more of the total cost of the frozen cherry pack. When raw cherries are bought for a cash price, the freezer-processor usually borrows most of the operating funds to pay growers for the raw cherries and for other processor expenses. Making substantial sales of frozen cherries at a firm cash price at pack time is important for many of these processors to obtain financing for the pack, especially if the processor has had an unprofitable year previously and/or has short-term loans outstanding at the time of the new crop. Banks may be reluctant to extend financing to the processor without substantial early season cash sales

for frozen cherries. Without financing the processor may not be able to open the plant. Both factors may put downward pressure on early frozen cherry prices and on grower prices. This would be especially likely in years of a large crop. This phenomenon is not likely to be important in years of unusually short cherry crops with the expectations of strong markets for frozen cherries.

Because of the financial position of many freezer-processors, if they are forced to sell much of their frozen cherry pack for a price 2-3¢ less than the grower price which they pay plus their necessary processing margin, some processors can go bankrupt in one year. If this situation occurs two years in succession, *many* freezer-processors will be threatened with bankruptcy. Because of this, if many freezer-processors pay growers 2-3¢ a pound more than the comparable sales price achieved for frozen cherries, such as happened in 1974, there will be strong incentives and concerted actions by processors to reduce the price paid to growers the next year sufficiently to try to recoup some of the losses experienced by the processor the previous year. These phenomena were clearly experienced in 1974 and 1975 and again in 1979 and 1980. When the year following a processor loss year provides a large crop, as occurred in 1975 and 1980, there will be especially substantial downward pressures on the grower price. Under these conditions the market weaknesses are generally sufficient that grower bargaining efforts will not likely to be very effective in obtaining a price for that year which is commensurate with grower costs.

FROZEN PIE MARKETS

Frozen pie manufacturers usually sell to both retail grocery markets and food service firms. Food service markets have grown because of the trend for consumers to eat more meals away from home, and rising labor costs in restaurants and cafeterias.

Frozen pie firms market on a "total line" basis. Their line usually includes cream pies and sometimes other frozen desserts in addition to frozen fruit pies.

The typical quality of frozen pies sold in grocery stores changed drastically several years ago. Most pie firms had been competing strongly on a price basis with a small, low quality pie with little fruit in it. The fierceness of the competition was enhanced because retail grocery chains often used these pies as specials and sometimes as loss leaders.

The low quality resulted in generally dissatisfied consumers while strong price competition resulted in low profits for pie manufacturers. After analyzing this situation some pie manufacturers decided that consumers might prefer a distinctly higher quality pie—in part because of rising consumer incomes. These leader firms began marketing a "quality" pie containing substantially more fruit at a higher price. These "quality" pies gained substantial market shares at the expense of other firms emphasizing low-price, low-quality pies. Therefore, these other pie firms also added higher-priced, quality pies to their lines. Overall consumers reaction demonstrated a distinct preference for the higher-quality pies. Today the bulk of frozen pie sales has shifted to the higher-quality pies, which is apparently in agreement with consumer preferences even though the higher-quality pies sell at higher prices.

Large fluctuations in cherry supplies and prices pose significant problems for frozen pie manufacturers. These firms would generally benefit from more stable supplies than are often experienced by the cherry industry. Frozen pie manufacturers generally offer cherry pie in their lines even in years of short cherry supplies. In a year of high-priced cherries, however, frozen pie manufacturers will usually: (1) price cherry pie considerably higher than some of the other fruit pies, (2) devote little or no advertising to cherry pie, (3) not give a special push to cherries through other marketing and merchandising activities, and (4) not have cherry pie available at some times. The reverse is just the case in years in which cherries are plentiful and cherry prices are low.

Some of the frozen pie manufacturers also produce and sell frozen desserts, including cherry items. In a year of high cherry prices, these manufacturers may reduce considerably the volume of certain cherry desserts or even discontinue certain cherry items altogether. Once the item is discontinued for a year, or even if not available to grocery stores at certain times, it is often very difficult for the manufacturers to get the grocery store to put the item back in the store in another year when cherry supplies are large.

Frozen pie manufacturers and dessert manufacturers do some advertising and have some research and development. Emphasis is often given in the advertising to use of the printed media such as magazines. Since some of the frozen pie manufacturers are large firms, they are generally in a more favorable financial position to undertake effective advertising, research, and development than are most freezer or canner-processing firms. Some manufacturing firms have developed and successfully marketed certain new cherry products, including frozen cherry tarts and turnovers, frozen cherry danish cake, frozen cherry cheese cake, cherry strudel, and semi-prepared cherry desserts requiring mixing and baking by the consumer. If supplies and prices of cherries were more stable, these firms would likely to do substantially more development and marketing of new cherry products.

CANNED CHERRY MARKETS

There are two markets for canned cherries, the consumer pack and institutional pack. Many canners pack for both markets. Conduct and market behavior vary significantly in the two markets.

Consumer Size Canned Cherries

Processors of consumer size canned cherries are primarily price takers. The majority of canned consumer cherries are packed under the private labels of grocery buyers. A few are marketed under packer labels, but these are generally not well-recognized brands.

Grocery buyers usually canvas the sellers for the lowest possible price for the quality desired. They may give the processors approximate yearly orders at pack time. The retail chains require the canned cherry processor to accept the storage responsibilities and costs. If the chains' demand for canned cherries is less than expected during the market year, or if he gets a better deal from another supplier, the grocery buyer may

cancel part of his tentative earlier order and the processor must market the unwanted portion elsewhere. This practice places the risk on the processor who has little or no ability to reduce the risk and limited ability to bear it.

Even though the consumer size canned cherry market is moderately concentrated considering firm numbers alone, canners have little or no market power. The general lack of strong processor brands and the declining market tend to more than offset any pricing advantages derived from small numbers of sellers. Canned cherries are such a minor item in retail stores that buyers and merchandisers tend to give cherries very little attention. Canned cherries are stocked by grocery retailers primarily to provide a service to a relatively few consumers. Small cherry canners with little or no advertising, product development, or marketing budgets are not in a position to promote or push the product through the retail store. With no promotion by the processors or by retailers, canned cherries generally languish on the retail shelf. This illustrates grocery retailers' crucial "gate-keeper" position for shelf space.

Standard grocery buying practices, which almost universally prevail for private label canned goods, place almost all of the market risk, financing and storage cost on the processor-suppliers. Since these firms are small, often not well financed and operate in a very unstable market situation, their business is one of very high risk. As a result they have at times attempted to shift some of the price or market risk to growers through price discounting or buying raw fruit at an unspecified price.

Growers have developed bargaining efforts in part to try to shift some pricing risk back to the processors. Successful bargaining from the growers' point of view can place the processor in a very difficult position with opposing strength in both the market for their processed product and in their raw cherry input market. This situation is especially difficult for processors of canned cherries because they face a long-term declining market trend for their product. Processors have reacted to the combination of these facts in several ways including:

1. Switching part or all of their business to frozen cherries or pie filling which have experienced long-term market growth
2. Going out of the cherry business
3. Selling the firm to a grower cooperative (which is one way to shift more risk to the growers)
4. Diversifying into new product lines

Institutional Size Canned Cherries

The institutional size canned cherry market is also composed of firms who are primarily price takers with little individual market power. These are mostly the same firms who process consumer-size canned cherries. Brands are not strong in this market and little, if any, advertising is done. Institutional size canned cherries are often handled by brokers who service smaller institutional buyers.

The export market is a major outlet for No. 10 canned cherries since domestic usage has declined to low levels. Although certain processors specialize in the export market more than others, most will sell for export when there are favorable opportunities to do so.

Obtaining accurate market information for realistic price determination is especially difficult in the export market. This noticeably influences market prices in certain time periods.

In the export market, cherries may be handled by an export agent in the United States and usually by an import agent in the receiving country. These agents specialize in providing market information, documentation, transportation, and knowledge of regulations.

COMMODITY DEMAND EXPANSION AND MARKET DEVELOPMENT

Demand expansion for tart cherries is undertaken on an industry-wide basis supported financially by the growers. Funds for the demand-expansion program are collected from growers through the use of state marketing orders in Michigan, New York, Wisconsin, and Pennsylvania.

Some of the demand-expansion work is done through state promotional organizations through most is done through a national organization, the National Red Cherry Institute, to which funds are contributed from each state marketing order. The various promotional organizations and their relationships to one another are diagramed in Figure 6.

The cherry subsector has a much smaller budget for generic demand expansion than do certain other commodity subsectors. For this reason the mix of activities undertaken with the cherry program is by necessity considerably different from the larger commodity programs such as for Florida citrus and Washington apples. The limited cherry budget often precludes the use of extensive media advertising.

Because a high percentage of tart cherries are sold as an ingredient for manufacturers of branded food products, much of the cherry demand-expansion efforts are aimed at increasing the emphasis on cherries in product-line and merchandising decisions of food manufacturers and at including more cherries in the menus of food service and institutional establishments. The demand-expansion efforts also involve attempts to: (1) stimulate development of new manufactured products using cherries, (2) determine obstacles to expanded use of cherries and (3) work with food companies to overcome those obstacles to expanding demand.

Some demand-expansion activities are also undertaken by processors. For freezer processors who sell an unbranded frozen commodity, market expansion activities primarily involve seeking out new customers and cooperating with established customers such as food manufacturers to expand cherry usage. Pie filling manufacturers do a limited amount of brand advertising and provide periodic "promotional allowances" to grocery retailer-wholesalers to stimulate consumer "specials" on pie filling with newspaper ads and in-store displays. Despite this intent for greater retail merchandising, these promotional allowances from processors often become primarily a means of price competition.

Demand-expansion activities are usually substantially curtailed in years of a short cherry crop since there are not sufficient supplies to back up an expanded demand. When demand-expansion activities by the industry promotional groups and processors are disrupted by a short cherry crop, this greatly reduces the long-run effectiveness of such pro-

grams. For this reason the cherry industry promotional organizations have supported the relatively new industry storage program under a federal marketing order which is intended to make more cherries available to the market in small-crop years.

SUMMARY OF TART CHERRY SUBSECTOR CONDUCT

Cherry subsector behavior is dominated by how the various segments attempt to deal with uncertain price and supply situations. Each segment has developed or has tried to invoke strategies to shift risk to someone else in the system. Some segments have succeeded at the expense of others. Some food manufacturers have responded by gradually shifting away from or downplaying tart cherry products. Consequently, tart cherry producers are in jeopardy of losing some of their markets. This a major element which the demand-expansion activities in the subsector strive to overcome.

Figure 6. Tart Cherry Marketing Organizations

