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EVOLVING STRATEGIC DIRECTIONS OF THE
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EVOLVING STRATEGIC DIRECTIONS OF THE TART CHERRY INDUSTRY

By

Curtis B. Rowley

A THESIS

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ABSTRACT

EVOLVING STRATEGIC DIRECTIONS OF THE TART CHERRY INDUSTRY

By

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The main purposes of this thesis have been to summarize the evolving economic situation of the tart cherry industry, analyze the current industry status, and analyze future industry strategies. In recent years the U.S. tart cherry industry has been extensively and comprehensively involved in planning for needed strategic directions to improve their competitive position and economic viability. This coordinated strategic planning effort by the industry leaders with considerable university analytical assistance has involved substantial analysis, visioning for the future, planning for needed industry strategies, and implementing these developed strategic directions.

In this thesis an analysis and summary of various strategic aspects of tart cherry industry's planning efforts are analyzed and discussed. Key aspects of the thesis include: 1) historical evolving strategic planning efforts, 2) a broad based industry situational analysis, 3) in depth analysis of the industry's long-run acreage cycle, 4) future supply and demand projections, and 5) industry strategies for future competitiveness. These major areas of emphasis for future strategic directions and improved competitiveness are demand expansion, supply management, processed cherry pricing, and grower returns.

ACKNOWLEDGMENTS

First and foremost, I would like to thanks my wife for helping me get through the past years. Her continual guidance led me to realize that no matter what happened I would always have my family. This has been a long road for us to journey together and it has been very successful and beneficial for us in growing together. She has been so supportive and willing to help me with all the different revisions. She has blessed me with one of the most precious gifts of life, a little girl. Thank you Liz for being the one who I could lean on most.

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Many thanks to the dear friends we have made while being here at Michigan State University. Four families in particular who have made the journey so much more smooth were the Korson, Banderob, Robison, and Young families. Knowing that we had friends like you to help us and provide family-like support at all times was very reassuring that we were doing what we were supposed to. Thanks for the love, support, and friendship.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

THE U.S. TART CHERRY INDUSTRY - - PLANNING FOR THE FUTURE

1.1 Introduction. In recent years, the tart cherry industry has experienced many challenging circumstances. These challenges have accentuated the need for the industry to envision, analyze, and strategically plan for its future. Through the use of knowledgeable industry leaders and university expertise, the industry has been working on future strategic planning to help improve its performance and market position. This work on industry diagnostic analysis, problem solving, and planning for needed strategic direction can aid the industry in rapid adaptation to changing conditions, development of strategies for improved competitiveness, and hence increased economic returns in the future (Ricks 2000).

Because of the challenges faced by the industry and awareness of the need for planning for the future, industry leaders have been engaged in activities to analyze and plan for needed strategic directions for the industry. These efforts involve a partnering approach among several industry organizations and with analysis, research and extension partnering with the university. The key activities of these organizations working together are intended to provide the analytical basis for some of the key components that are important for strategic direction needed by the industry for the future.

1.2 Overall perspective of the tart cherry industry's need for strategic planning. The tart cherry industry has experienced uneconomical conditions for the past two decades. Due to these uneconomical conditions, growers especially, have been unable to cover their cost of production because of the low returns. Processors have also faced economic difficulties. Thus, the tart cherry industry came to the consensus that some industry

strategic planning was needed to develop future directions. During the last 15 to 20 years, the industry has undertaken a number of efforts to work together and develop new programs and strategies for certain problem areas. In addition, industry leaders decided in 1996 to undertake a more comprehensive approach to industry strategic planning and problem solving involving the entire industry. This was done to progress further in discussing a number of industry programs and problem areas.

During the later part of 1996, a comprehensive strategic planning process was initiated by industry leaders. This comprehensive strategic planning effort has been pursued since that time with considerable effort and progress on many aspects for the industry's needed strategic directions. A number of implemented strategies with some new programs have been successful in aiding the industry's movement towards the goal of a more positive future direction. Some of these accomplishments have been a federal marketing order (FMO) to help stabilize surplus supplies, a federated cooperative "CherrCo" to help rationalize and stabilize processor pricing, and an overall strategy planning council to continue an ongoing development of strategies to help move the industry in a positive direction in the future.

1.3 Overall perspective of thesis objectives. This thesis includes a broad based analysis of a number of important economic components related to the tart cherry industry. The result of this analysis will provide input for the important on going industry - university partnership efforts in developing industry strategic plans for the tart cherry industry.

Within the context of developing industry strategic plans, strategic direction have been discussed with industry leaders, and have arisen from consideration of a number of key categories. They include: 1) demand expansion, 2) supply management, 3) processor

pricing, and 4) grower returns. Each of these categories is a major focus area or key component of the future plans and strategic directions that are being pursued by the industry strategic planning process. Strategies will be analyzed in each of these areas in this thesis based upon continuing industry - university partnership efforts including the industry leaders with their visioning insight for these areas.

As a basis for the development of a needed strategic direction, important analysis of the industry's past and current situation is required. The situational analysis will include analysis of the industry's strengths, weakness, opportunities, threats (SWOT). The important demand / supply imbalance situation will be analyzed along with projected demand / supply levels for the next few years. Then, using the various analysis components together to understand the overall perspective of the situation, appropriate strategic directions for the tart cherry industry can be established or modified. The situational analysis and projections for future supply and demand summarized in this thesis are based in part upon the insights and visioning of industry leaders.

1.4 Methodology and approach for industry strategic planning. The methodology and approach for industry strategic planning as discussed in this thesis make primary use of a case study approach and secondary use of a conceptual industry strategic planning framework. Using the case study approach as the primary method, this thesis will establish an evolving history of events up through and including projected demand and supply outcomes in the future. The input of key industry leaders including visioning on projecting future supplies and demand will be incorporated. The use of the Industry Strategic Planning and Coordinating Framework (ISPCF) developed by Lyford (1998) will also be used as a reference to help guide the organization of certain chapters in this thesis.

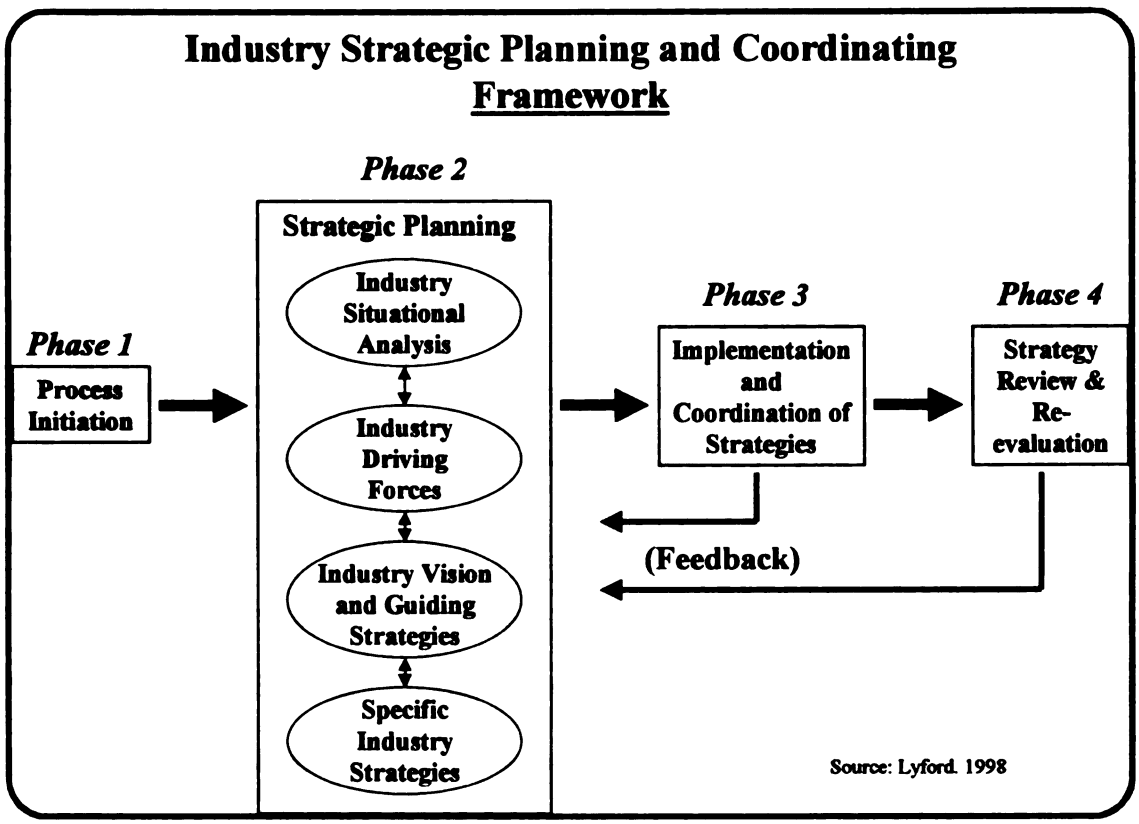
1.4.1 Tart Cherry Industry Strategic Planning - a case study of a broad based industry approach. The case study may be aided by an in depth analysis of key factors related to the history of the industry. Working closely with the industry and its leadership to understand what has caused the major driving forces of the past and today will increase the likelihood of achieving successful planning for needed strategic directions for the future. One way of working closely with the industry is by helping to analyze different issues and aspects pertaining to the overall industry's success. Another is by attending and participating in industry meetings which cover broad scope areas of interest and key aspects related to strategic planning for the industry.

The partnering relationship between the tart cherry industry and the university have created excellent opportunities for a useful case study. The tart cherry industry has had an effective partnership with the university providing continual analysis of the evolving changes, problem areas, and development of plans for needed strategic directions. The university serves as a source of expertise for the tart cherry industry in a number of areas. Some of these include economic analysis, horticultural research, and new product development.

1.4.2 An Industry Strategic Planning and Coordinating Framework. The analysis in this thesis will follow as an overall guide the analytical framework for industry strategic planning and coordination that was developed by Lyford (1998). This framework, as shown in Figure 1, can be categorized into four main phases: (1) process initiation, (2) strategic planning, (3) implementation and coordination of strategies, and (4) strategy review and re-evaluation.

A major part of this thesis will concentrate on what is designated as phase two

Figure 1: Industry Strategic Planning and Coordinating Framework.



"strategic planning" in Figure 1. The work related to phase two will include analysis of the industry's past performance, current situation, and future projections in order that effective strategies for each aspect of the industry can be developed. In addition, there will be ongoing work with industry leaders on certain aspects of phase three, the "implementation and coordination of strategies" phase.

Some aspects of this thesis can be related to Lyford's framework as a general guide in helping to organize the work. The tart cherry industry's strategic planning efforts, with university assistance, have in some ways been following the Lyford framework for developing industry strategies. Thus, incorporating the framework as a guide for some chapters will be useful in this thesis.

1.4.3 Main informational sources. This thesis will make use of informational input from many different sources. Much of the important information for this thesis is drawn from thoughts, ideas, input, and visioning of industry leaders during their ongoing industry strategic planning efforts during recent years. Also, included as informational sources will be university experts with their knowledge, analysis, and background.

Some of the methods for obtaining this information included attending many of the different industry organizations' meetings and participating in industry discussions with these leaders. Other methods for obtaining the research information was through reading university reports and other publications on various aspects related to the cherry industry and its evolving situation.. Another was through the used of USDA data related to dynamics of many of the key issues discussed in the thesis.

1.5 Outline of thesis topics. The overall outline for this thesis will be broken into five chapters. The following sub-sections are summaries of what each of the chapters will incorporate.

Chapter 2.

Chapter 2 addresses the historical evolution of the strategic planning process by emphasizing what has occurred in the tart cherry industry in recent history. The historical areas include demand and market expansion, the creation of the Tart Cherry Industry Strategic Planning Council (TCISPC), supply management and the new Federal Marketing Order program, and the stabilization of processors pricing through a new federated cooperative, CherrCo.

Chapter 3.

Chapter 3 includes an industry situational analysis including specifically a strength,

weakness, opportunities, and threats (SWOT) analysis. This in-depth analysis of the SWOT will help provide the basis for needed background understanding for developing strategies for the industry's future direction. Highlighting the major driving forces will help to put greater emphasis on the areas of greatest concern for the industry in recent years.

Chapter 4.

Chapter 4 will discuss the supply-and-demand imbalances which are issues resulting from the fundamental weaknesses of the tart cherry industry. Future projections for supply and demand will also be included in the analysis. This chapter will include an analysis of what might happen with supply and demand in the future as indicated by the recent trends. There will also be a section on a reconciliation of supply and demand and the potential balance in the future.

Chapter 5.

Chapters 5 will include strategies for market and demand expansion, supply management, continued stabilizing of processor pricing, and increased grower returns. This chapter will draw upon the analysis from Chapters 3 and 4 to help set the stage in developing these strategies.

Chapter 6.

Chapter 6 is a summary and overview of the thesis. This chapter will pull together an overall statement of the current direction for the tart cherry industry, the needed future strategic directions, and any additional implications. Also included will be, the overall implications of industry strategic planning for a commodity fruit industry.

Chapter 2

HISTORICAL EVOLUTION OF CHERRY INDUSTRY STRATEGIC PLANNING

2.1 Introduction. Tart cherry industry leaders have worked for a number of years with different efforts for strategic planning. Historically, these have been mostly directed towards one or a few major industry problems. In addition, during recent years, efforts have been undertaken to develop a broad-based and relatively comprehensive approach to planning for strategic directions that are needed by the industry as a whole.

This chapter summarizes both the efforts of the cherry industry in earlier years to plan strategies to solve certain problems and the more comprehensive approach during recent years. This more comprehensive approach includes the establishment of a special organizational arrangement to address and plan for needed industry strategies for the future. This chapter will explain the highlights and key components of strategic direction for expanding demand, managing supply, establishing processor prices, and increasing the returns to growers.

2.2 Demand expansion. Industry demand expansion activities have been very important for the continued growth in demand for the past two decades. These activities have been carried out by a combination of several different organizations and various processor and marketing firms coordinating and working together to increase the demand for tart cherry products. Of these organizations, Cherry Marketing Institute (CMI) has represented the tart cherry industry in a leadership role by coordinating, organizing, and establishing overall industry strategies for demand expansion activities for the past 11 years.

2.2.1 Organizations involved in demand expansion. Several different organizations and many industry firms have contributed to the success of expanding demand over the

past two decades. The efforts of these organizations occurs through a number of different venues, some include promotional money, direct marketing, and new product development. These organizations and industry segments include processors, cherry marketers, CMI, Cherry Industry Administrative Board (CIAB), CherrCo, and food manufacturers. Although these organizations and industry firms all participate in various activities related to demand expansion, some have contributed more than others. The following sub-sections emphasize the involvement of each of the different organizations or types of firms for tart cherry demand expansion.

Processors:

The tart cherry processors participate in demand expansion in a number of ways. Depending upon the processors product category mixes, their involvement may vary. However, the majority of processors are primarily responsible for: 1) processing a high quality demanded product ready for sale, 2) taking upon themselves the role of a cherry marketer in many cases by making contacts with and selling to the food manufacturers, and 3) in some cases participating in new product development or new market development.

Cherry Marketers:

Cherry marketers are either organizations representing many processors (i.e. Cherry Central Cooperative) or one processor who markets their own cherries or private sales agents. One of the cherry marketers' roles in expanding demand is to sell as many cherry products as possible through developing long-term relationships for future years sales. This has been accomplished by many different practices, some of which have been price cutting, provide adequate volume orders, and providing high quality products. Another

important and key role of cherry marketers is to coordinate their efforts with processors, food manufacturer customers, and grocery retailers to know what the consumers are demanding.

Food Manufacturers:

The food manufacturers have been a key segment for market and demand expansion for the tart cherry industry for many years. Much of the advertising, promotion, new product development, market testing, market analysis, and market establishment that has occurred for tart cherries have been accomplished by food manufacturers. This is because a number of these firms have strong brands and the financial resources to accomplish these important functions. By contrast, the tart cherry industry consists of many small processor firms with quite limited means and resources to accomplish many of the tasks listed above which food manufacturers have the ability to provide.

2.2.2 Historical role of Cherry Marketing Institute. The leadership role of CMI and its similar predecessor organizations in the industry have provided a major focus on industry demand expansion for the growers and processors for a number of years. The various demand expansion programs of CMI have been accomplished through effective staff with the goal of providing the best programs possible for the industry. The major program areas of emphasis for CMI have been domestic market expansion, export expansion, facilitating the development of new products, and other research.

Various industry segments such as processors and cherry marketer work closely together with CMI including its programs, strategies, and areas of emphasis for the major industry demand expansion and market growth efforts. Through coordinating and partnering efforts of CMI, along with other industry segments and organizations, these

major areas of emphasis have helped to expand demand for the industry during some very economically difficult times of the early to mid 1990s. Then, during the late 1990s with the initiation of the Federal Marketing Order and CherrCo, CMI's demand expansion and market growth strategies have also been coordinated with these new related programs. The following sub-sections describe these areas of emphasis somewhat more for CMI and the industry during the past 11 years.

Domestic Market Expansion:

The tart cherry industry has relied on the domestic markets for a majority (80 to 95 percent) of its sales each year. Major product categories for domestic markets have been frozen cherries (5+1 and IQF), pie fill, cherry juice, and dried cherries. CMI has worked with processors and cherry marketers to promote these products into many different markets. The major markets' emphasis has been food manufacturers, consumer grocery retailers, restaurant / food services, and USDA purchases.

Export Markets:

CMI has devoted considerable amounts of resources to expanding the export markets. These export marketing programs have been aided by supplementary MAP funds from USDA-FAS. The two main export markets have been the European countries and Japan. For more than a decade CMI has participated and funded the development of the Japanese market for U.S. cherries using MAP funds primarily for this target market country. During this time, the past 10 years, less emphasis was given to developing or expanding the markets in the European countries. Recently, CMI has developed plans to refocus their efforts in export expansion primarily toward the European markets.

New product and market development:

CMI has been a major contributor to certain kinds of research toward developing new products and markets for tart cherry uses. One of the most recently developed new products was the use of cherries to make cherry brandy. They have also stimulated and contributed to research on cherry paste. Although CMI has put significant emphasis in this area, there have been relatively few new products that have successfully made it to market in volume over the past decade.

CMI's coordinated efforts.

CMI has done a significant amount of work to build markets with coupons, target advertizing, and with a consistent presence at trade shows and other venues. Working together to develop partnerships with food manufacturers, processors, grocery retailers, restaurant / food services organizations, and USDA, CMI has been able to leverage their resources for the industry. One way CMI has been able to work with these various food marketing firms is by serving as a major informational source and a facilitator between the different industry segments in developing new products and carrying out promotional and advertizing campaigns.

2.3 Comprehensive cherry industry strategic planning efforts. Due to the many challenges and economic difficulties from which the tart cherry industry has suffered, especially during the late 1980's and early 1990's, there was an increasing need, awareness, and interest by industry leaders to work on a number of industry improvement strategies to help the industry to effectively address future planning and problem solving. A major reason for the collective urgency to address these challenges by the industry was related to the imbalance between supply and demand which has caused many difficult years for

growers and processors since the mid-1980s

It was decided by some industry leaders, with university assistance, that a concerted, broad based, and comprehensive approach to industry strategic planning could contribute considerably to improving the industry's situation. Thus it was decided to undertake a comprehensive approach to industry visioning, strategic planning, and problem solving. An important initial step as a part of this process was the development of a "Summit Conference" for industry leadership.

Many industry leaders came together at this Summit conference in the fall of 1996 to participate and discuss in a tart cherry forum for future visioning, planning, and coordination regarding industry problem areas and improvement needs. Some of the key issues which were discussed and agreed upon at this conference were:

1. The need to develop a round table organization of industry leaders to serve as a broad industry core group for industry strategic planning and problem solving.
2. Identifying, defining, and prioritizing major industry problems, issues, and opportunities.
3. Two top priority areas of need that received major attention at the forum were:
    a. The new marketing order program for supply management and facilitating demand expansion.
    b. The idea of a federated super co-op.

This industry discussion, analysis, and problem solving conference was a productive and positive step for industry leaders to share concerns, discuss future changes needed by the industry, and prioritize for next steps for strategic planning and industry improvement. Key areas of discussion and overall outcomes from this conference included an agreement among most (although not all) of the participant leaders regarding:

1. The importance of the new federal marketing order (FMO) program for the industry - and a priority need to get it organized and making sure it works effectively to benefit the industry.
2. A priority need for establishing a "super co-op" to help rationalize, strengthen,

and stabilize processor pricing for tart cherries.

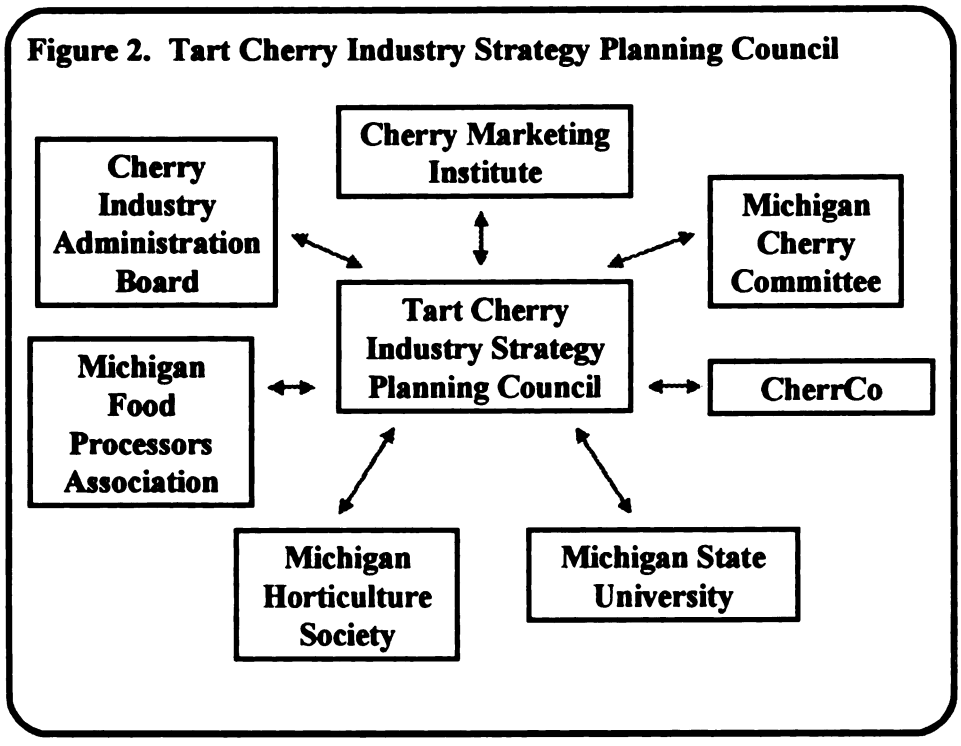
3. A need for a comprehensive industry visioning and strategic planning process on an on-going basis.
4. The formation of a national tart cherry industry planning council including representatives from all segments of the industry.

About the same time as this industry visioning conference was held, the federal marketing order was approved in an industry referendum by growers and processors. Thus, the initial establishment of the FMO occurred and many related issues received considerable attention by industry leaders as a priority area for attention as a strategic direction for the industry. This was a significant accomplishment for the industry to continue the development of the new marketing order which included the entire U.S.

2.3.1 Tart Cherry Industry Strategic Planning Council (TCISPC). After the tart cherry visioning forum in 1996, the idea of creating a national tart cherry council to address future strategic plans and directions was further developed and modified. During 1997, with the assistance of Michigan State University (MSU) extension staff, industry organizational staff leaders worked together in development of effective ways to proceed for industry analysis, visioning, problem solving, and development of needed strategic directions for the industry's future.

The TCISPC included representatives from the following industry organizations: Cherry Marketing Institute (CMI), Michigan Cherry Committee (MCC), Cherry Industry Administration Board (CIAB) or FMO, CherrCo, Michigan Food Processors Association, Michigan Horticultural Society, and Michigan State University. Figure 2 is a diagram illustration of the TCISPC and the industry organizations represented on this council.

Through the collective visioning of industry leaders on the council, analyses needed for development of strategic directions for the industry's future were worked on



extensively. The TCISPC continues an on-going analysis of the major driving forces impacting the industry, major problems, and to develop overall strategies to guide the industry in the direction it needs to go. The council combines the insight of each of these major industry organizations to help develop a broad, industry wide scope in their discussions. These key industry organizations, representing all segments of the industry, are also very important for facilitating, initiating, and implementing programs and strategies developed by the council and the industry's leadership.

2.3.2 TCISPC's purpose and goals. Within the broad scope of the council, purposes and goals have been established to help guide the council to improve the industry in its entirety. These are summarized in Table 1. These include important areas for building common grounds to establish directions for the overall industry as well as to help the individual organizations meet their more specific respective goals.

Table 1. Tart Cherry Industry Strategy Planning Council Goals and Objectives

Purpose:

To analyze current and future needs of the tart cherry industry. The council is also involved in analyzing and discussing various strategic directions which may help the cherry industry to achieve higher performance levels.

Goals/Objectives:

1. Strengthen the economic viability of the tart cherry industry.
   - Increase grower returns.
   - Increase processor profits.
   - Increase industry sales through demand expansion.
   - Increase grower information.
2. Strengthen the industry's competitiveness.
3. Strengthen the communications within the industry.
4. Effectively serve the needs of the industry's customers to aid in returning positive returns to growers and processors.
5. Strengthen the coordination of efforts and programs of various industry organizations and segments for the greatest effectiveness and benefit to the industry.

2.3.3 Issues and concerns discussed by the TCISPC. The actions of the TCISPC have corresponded to the goals of the council which have been summarized in the above section. The initial meetings of the TCISPC centered around the prioritizing issues concerning the industry at that time. Some of the key areas of council discussions were centered on the importance of collaborating and coordinating strategies to best solve the immediate challenges. Development and continued progress on the FMO for supply management and the CherrCo federated cooperative were rated as top priorities to aid in the needed strategic directions for the future of the industry.

The TCISPC has been able to analyze a number of key issues and develop strategies and plans for future direction. The following are some of the issues discussed and some the council continues to discuss:

- Establish future industry market growth goals for the next few years.
- Develop an industry situational and SWOT analysis. (Strengths, Weaknesses,

Opportunities, and Threats)

- Analyze and update information on the long-run acreage cycle and the best way to present the information to the industry.
- CMI's plans for a processor oriented export expansion program with partnership arrangements with CherrCo and the exporting processors.
- The FMO program strategies and its interrelationships with other industry programs and amendment plans.
- Most effective and coordinated approaches for the School lunch programs.
- Increase the communications between processors, growers, and various industry segments on key problem areas and needed strategies.

2.4 Supply management. Supply management for the U.S. tart cherry industry has been a difficult challenge historically for the industry to effectively balance supply with the quantity demanded. Because of this continuing major problem, the industry discussed during the late 1980s and early 1990s several alternative strategies and organizational approaches which might be used for an industry supply management program. The overall goal of these industry discussions was to find a way to reduce the surplus supplies available on the market and provide a closer balance with the industry's demand quantity at break-even prices.

The industry considered several possible programs or approaches to reduce some of the supply problems. For example, to try and reduce the over supply problem, the industry worked on plans to have an industry wide tree-pull to somewhat reduce the excessive acreage. Although this would have helped to reduce the acreage, this would not have solved the problem in the long-run. This would have been a short-run solution to the problem which may have returned at some future point.

As part of the industry discussions on how to remedy the industry's supply management problems, CMI, through its established leadership position, helped the industry to focus on the development of a new FMO to help manage the surplus supplies. Processors and growers both encouraged the establishment of such an order. Thus, as a

result of many different areas of discussion and attempts to start some kind of program to help the supply management needs, industry leaders with leadership by CMI developed a new FMO supply management program for the industry.

A major industry goal for this supply management program has been and remains to reduce excessive supply surpluses, hence, obtaining a closer balance between the quantity supplied and the quantity demanded. Other goals for the supply management marketing order include stabilizing somewhat the annual supply fluctuations when these occur and encouraging long-run market growth. This supply stabilizing aspect of the program is intended to enable the industry to have somewhat more stable processor prices and grower returns.

2.4.1 Federal Marketing Order. After several years of work to develop sufficient industry consensus, the provisions of the program, the hearings, the referendum, etc., the tart cherry industry succeeded in establishing a federal marketing order program in late 1996. This new, key industry program was established with the goal of helping to provide an improved balance of supplies with demand. In order to successfully establish a balance between the supplies and demand, the FMO needed to provide somewhat greater stability of market supplies by aiding the industry through its supply management provisions.

The new FMO program was an important example of successful industry strategic planning that focused on a major problem area of supply management. The successful development of the FMO program provided an important foundation component that helped to set a positive stage for a more comprehensive industry strategic planning effort.

CMI led the planning processes for the development of the FMO with its leadership role in the industry. Processors and growers' input were all important contributions to

this program development. Although the discussion and planning stages for the FMO were long and drawn out, the industry successfully continued to pursue the need for a FMO to help stabilize the balance between supply and demand.

When the comprehensive industry strategic planning effort was undertaken in 1996, the FMO had just been passed in an industry referendum. Therefore, one important priority that was quickly agreed upon as a part of the comprehensive planning efforts was to work further on the needed next phases for the marketing order. This included plans to do the specific organization of the board, staff, and needed board policies for the program. This was a transitional phase from strategic planning focused mainly on initial program development to program implementation and broader interrelationships of the FMO as part of the comprehensive industry planning efforts.

In conjunction with the FMO, the Cherry Industry Administrative Board (CIAB) was organized as the industry governing board of the FMO. The CIAB includes representatives from each of the seven major producing states to serve on this Board of Directors. These board members are elected by the growers and processors in their specified districts. The CIAB has discussed, evaluated, and made decisions related to the policies and rules under which the FMO program operates.

The FMO's primary purpose and program actions have been to manage the supplies of the tart cherry industry. This has been accomplished by controlling the supplies which have been available for the primary markets, specifically the domestic markets.

When the surplus supplies occurred due to over production in 1997 and 1998, the marketing order was used to reduce the surplus supplies somewhat by requiring processors and growers to remove a surplus percentage of supplies from the primary

markets. Compliance with the surplus reducing regulations are accomplished through different alternatives that were available to the processors and growers. These alternatives include: 1) an inventory reserve, 2) if approved by the board, sale into designated secondary markets such as for exports and new products, 3) leaving some surplus unharvested, and 4) charitable donations or gifts.

The marketing order program has served, in an overall view, as an affective program tool for the tart cherry industry for surplus supply management. Working together in a coordinated partnership effort with other industry organizations, the FMO successfully helped to improve the industry's situation during the 1997 to 1999 seasons. The FMO was able to stabilize the supplies on the primary markets somewhat, providing a greater opportunity for CherrCo to be successful in influencing processor pricing. The marketing order has been used to encourage market expansion such as for exports and new products. This is done by allowing some surplus supplies to be used for these "secondary" markets as designated by the board. These aspects of the FMO emphasize the relationship of the FMO to demand expansion efforts of CMI and other industry segments. These interrelationships for the most effective demand expansion for the industry are some of the aspects which are being dealt with as part of the industry's comprehensive strategic planning process.

2.4.2 FMO performance in the first three years. For the past three years, supply management has been analyzed, and in 1997 and 1998 influenced by the FMO. During 1999 there was no surplus restriction and influence on supplies by the FMO. This section will compare the progress of the industry for each of the three years and illustrate the importance of the FMO to the industry for future success.

The key components of the FMO's surplus supply calculation's and program alternatives for the surpluses will be discussed and explained. These include the following total available supply, optimum supply, surplus, a market growth supply allowance, secondary market diversion, reserve pool, and non-harvest. These key components will be discussed in the following sub-sections.

The information used in each of these six areas has been compiled from the CIAB final summary for each of the three years. Table 2 illustrates the amounts which went into each of the these FMO allowed categories for the industry supplies and shows a numerical comparison. Each of the following sub-categories will refer to Table 2 as the source of the data.

Total Available Supply:

The total available supply for 1997, 1998, and 1999 were 355.0, 382.8, and 289.0 million pounds respectively, as shown in Table 2. This was calculated by adding together the U.S. crop size for that year to the carry-in supplies. The 1997 supply was really high, in part, due to a large new crop and, in part, because of the large amount of carry-in from the previous year. In 1998, the supply was even larger, and this was primarily due to the large new crop production which occurred that year. In 1999, the carry-in was 38 million pounds and the production was 251 million pounds. The supply was just a little bit over the estimate for necessary demand quantity based upon the industry's sales the three previous years. The CIAB voted not to have a regulation because the supply was in approximate balance with demand.

Optimum Supply:

The optimum supply for the first three years of the FMO were 269.9 million pounds

Table 2. Optimum Supply Formula Summary 1997, 1998, 1999

	1997		1998		1999
	Mil. Lbs.	Percent	Mil. Lbs.	Percent	Mil. Lbs.
Total Available Supply	355.0		382.8		289.0
Optimum Supply	269.9		288.6		285.0
Surplus	108.1	45%	125.6	41%	
Market Growth	27.0	11%	29.8	10%	
Market Diversion	51.3	21%	40.8	13%	
Reserve	19.9	9%	8.5	3%	
Non-harvest	9.9	4%	47.3	15%	

Source - CIAB

for 1997, 288.6 million pounds for 1998, and 285.0 million pounds for 1999, as shown in Table 2. The three year average optimum supply increased somewhat after the 1997 sales year due mainly to the unusually large amount of exports sold during that year.

Surplus:

The surplus shown in Table 2 for 1997, 1998, and 1999 are 108.1, 125.6, and 0 million pounds respectively. This is calculated by subtracting the optimum supply from the total available supply and then adding an economic adjustment. The economic adjustment is an optional addition which the CIAB opted to use during the 1997 and 1998 crop years. The economic adjustment is used to off-set the estimated tonnage to be sold into the export market during the marketing year. This makes it so there is a greater restriction percentage and more tonnage removed from the market.

The initial surplus restriction percentages are shown in Table 2 as 45 and 41 percent for 1997 and 1998 respectively. During the 1997 and 1998 crop years, there was over 100 million pounds of surplus which needed to be removed from the domestic market. During 1999, there was no surplus and hence no FMO supply regulation.

Market Growth Factor:

This is a provision that USDA inserted into the marketing order to guarantee that the industry would always have at least 10 percent of the total previous sales averages available for market growth. This is calculated by multiplying the previous three year industry sales average by 10 percent. Then, the market growth is subtracted from the surplus to give an effective restriction percentage. The market growth quantities for 1997 and 1998 were 27 and 29 million pounds respectively.

Market Diversion:

Market diversions are alternative market uses designated by the CIAB which can be used for surplus cherries. These are options for the industry to help restricted districts to comply with their surplus percentage other than leaving some surplus cherries unharvested. Export markets and new products have been two of the most commonly used market diversions permitted by the CIAB. They are also beneficial and helpful to the industry because of the opportunities and incentives to expand demand, build new markets, and develop new products.

The market diversion for 1997 and 1998 were 51.3 and 40.8 million pounds respectively, as shown in Table 2. The market diversion amount was calculated by adding the exports and new products' volumes which received diversion credits. In 1997, there were considerably larger amounts of exports sold into that market than in 1998. The new products and new market development volume increased by four million pounds from 1997 to 1998.

Reserve Inventory:

The reserve or "controlled inventory" cherries are defined by the marketing order as cherries that are kept in reserve to be marketed at a later time when supplies are short and they are needed for the market. These reserve cherries are for sales in years of shortages to help in stabilizing supplies. During the first two years of operation under the FMO, the reserve was used to some degree. For the 1997 and 1998 seasons, the reserve cherries were 19.9 million pounds and 8.8 million pounds respectively, as shown in Table 2.

Non-harvest cherries:

The non-harvest quantities for 1997 and 1998 were 9.9 and 47 million pounds respectively, as shown in Table 2. The non-harvest cherries are those surplus cherries that are left in the orchard or destroyed at the plant in compliance to the surplus regulation percentage. These are usually lower quality cherries. The reason for more unharvested cherries during the 1998 crop was because of the overall low quality of the crop that year, and processors did not want to participate extensively in the reserve.

2.5 Processor pricing and grower returns. Low processor prices, a pattern in some years of decreasing processed prices within the marketing year, and low grower returns have caused a considerable amount of concerns within the industry for a number of years. These low prices and returns have been influenced by a number of different factors. Some of the factors include: the surplus supplies from excessive production related to the long-run bearing acreage cycle trends, abnormally large carryover stocks, large food manufacturers using their substantial buying power to influence cherry prices down, and commodity processors using price cutting as their primary marketing strategy.

Because of the frequent problems with weak pricing for processed cherries, the industry made a number of attempts to analyze this problem area and to develop improvement strategies.. Some of the attempts include identifying and considering alternative improvement strategies and to try to develop action plans to implement certain strategies to improve the industry's performance in this regard. These efforts involved a significant amount of industry strategic planning which was directed toward this important problem area.

One of the significant results of the earlier industry efforts directed at this problem was the formation of the federated sales and marketing co-operative - - Cherry Central. This large co-operative has had as many as 17 members, each of which is a co-operative or grower owned processor. Cherry central has served as a major marketing organization for cherries and certain other fruits since 1973.

During the past two decades, there have also been a number of efforts within the industry to develop additional strategies, including new organizational arrangements to improve the industry's situation in regard to pricing of processed cherries. Some of the alternatives which have been considered and analyzed in this regard include: 1) a new federated "super co-op" of cherry processors, 2) a large grower cooperative with a strong national brand such as Ocean Spray, 3) a substantially expanded Cherry Central, 4) a grower cooperative associated with the MACMA grower bargaining-pricing association which would deal with processed cherry pricing, 5) a cooperative similar to the Michigan Celery Promotion Cooperative, 6) a futures market for processed cherries, 7) a Webb-Pomirire export association, 8) a return to bargained grower prices by MACMA as was

done during the 1960s, 9) the use of target grower prices as influenced by MACMA, and 10) various other ideas to accomplish improved pricing arrangements.

Although this area of concern and these possible organizational strategies for improved performance received considerable discussion and analysis by industry leaders over the years, many of these ideas did not come into actual fruition. Three exceptions to this, which to a degree, dealt with processed prices were the formation of an export trading company, CherreX, the expansion in volume over 20+ years of the Cherry Central Cooperative, and the formation by MACMA of a new cooperative for processing and processed cherries. In addition, MACMA attempted for a number of years to either bargain for grower prices or to influence grower returns by establishing target grower prices. One goal of these approaches on grower returns was to help "set a floor" for processed prices as well.

The above developments were logical approaches for improving the industry's pricing arrangements, but their limited impacts did not alleviate the problems. Nevertheless, the many industry discussion on the problem area of processed pricing and the above steps to improve the situation helped significantly to set the stage for later strategic planning and concrete developments.

Throughout the many discussions of ways to improve the industry's pricing arrangements which occurred during the 1970s to early 1990s, there was general recognition that a major element affecting industry pricing was posed by the surplus supplies when these occurred. The interrelationships of surplus supplies, processors' patterns of severe price reductions as a primary means to increase sales volume, and the industry's evolution to the practice of basing grower returns upon processed cherries

market prices minus processor costs were particularly evident after the first marketing order was discontinued in 1986. Therefore, a majority of industry leaders evolved to a consensus by the early 1990s that development of a new supply management marketing order was an important and necessary step prior to establishing improved pricing arrangements.

As discussed and stated earlier in this chapter, the FMO was established by late 1996 through significant efforts of industry leadership. The devolvement of the FMO had very important implications for pricing arrangements within the industry. Since the new FMO program could be used to reduce the large surplus supplies, thus achieving a close balance with supply and demand, this provided a much improved setting for new approaches for the pricing of processed cherries.

2.5.1 Historical methods for processor pricing. Most processed cherries are sold as industrial ingredients to food manufacturers primarily as 5+1 frozen and IQF cherries. This is a commodity market with processor sellers all competing in the market with a very similar commodity - - frozen cherries. Therefore, the most common practice by the tart cherry processor marketers to obtain sales for their company has been to cut prices under the current market prices. Then competitor processors would further cut the price to obtain sales for their firm. To a degree some of this pattern was logical and justified as a part of the price discovery process for the market-influencing supply and demand conditions. But there was a widespread perception among industry leaders, including many processors, that there was often considerable undue price cutting which was not warranted by the industry's supply and demand conditions.

This tendency for undue price cutting was especially pronounced after the industry evolved to the practices of basing grower returns on processed prices received minus the processors cost margin. Because of this practice, if a processor cut price below the market price to increase their sales volume, most if not all of the reduced price could be passed on to growers as a lower grower return. While the growers would get a lower return, the processors would maintain their processor's margin per pound.

2.5.2 CherrCo's initiation and accomplishments of the past three years. During the spring of 1997, the industry successfully implemented a "super co-op" to help strengthen and stabilize processed cherry prices within the season. This federated cooperative, CherrCo, has through its cooperative processor members a majority of the industry's production. CherrCo has, along with the operation of the FMO's supply management program, successfully helped the tart cherry industry to increase the processed cherry prices during the past three seasons.

During the first year of operation, CherrCo worked to stabilize and strengthen the processor prices to avoid the common price cutting practices of the past. This was a very difficult task to accomplish, but because all the member processors were willing to abide by CherrCo prices, they were successful in making substantial progress. Also, the significant role of the FMO in controlling supplies was beneficial and essential to the success of CherrCo for pricing of processed cherries.

CherrCo was successful in somewhat influencing processor prices during the 1997 and 1998 season. Although there were two very large crops in 1997 and 1998 resulting in large surplus supplies and carry-over stocks, the new FMO substantially reduced the

amount of surplus supplies available to the market. This greatly aided CherrCo in their successful endeavors related to pricing approaches.

The prices are set by CherrCo for their members' sales at levels which the licenced sales agents of the organization must return to the cooperative. The results in 1997 and 1998 were significant progress for the CherrCo organization and its membership toward some of CherrCo's key goals. However, there was still a need for the processor prices to increase still further to help increase the grower returns to be nearer to their costs per pound.

The 1999 crop was considerably different from the previous two years. The crop size was significantly smaller and there was no need for the FMO's supply management program to be used in 1999. CherrCo increased the processed cherry prices even more than the previous year to higher opening prices than had been experienced since 1991. This was very positive for the growers knowing that processors were working to increase the processed cherry prices to higher levels.

During the first month of the 1999 marketing year, considerable sales volume for the year were made. The tart cherry industry with leadership by CherrCo has continued to increase prices for processed cherries since then by six cents per pound. The estimated sales volume for 1999 is expected to be close to 270 million pounds which is a small decrease from the previous few years. However, the industry will be much better off because of the increased prices in the domestic markets, and on average processors will be able to pay the growers more positive returns than have occurred the past few years.

2.5.3 Historical struggles in establishing grower returns. The need for profitable grower returns to cover their costs has been a major problem for growers for many years.

Some of the reasons for needed higher, positive returns to growers include: 1) grower returns have been substantially below their typical costs per pound for most of the last 15 years, 2) the higher cost of key farm inputs, 3) growers have felt the economic difficulties from other commodities, such as apples, combined with the economic difficulties of the tart cherry industry, and 4) re-investment into the farm operations have been very low for a number of years.

2.5.4 Grower price influencing organization. One of the largest tart cherry grower organizations in the industry was for many years until 1999 the tart cherry division of Michigan Agricultural Cooperative Marketing Association, Inc. (MACMA). MACMA was organized to help the growers bargain with the processors for higher returns. MACMA also served as a voice for the growers in many different circumstances over the years. MACMA was moderately successful in bargaining during its early years starting in the late 1960s, and became very influential during the short supply, high-priced period of the late 1970s and early 1980s when there were often high processor prices.

Then, during the late 1980s when surplus supplies occurred and the grower returns declined again, MACMA could not be nearly as effective because of the surplus supplies which burdened the industry in most years. In addition, an increasing percent of the growers' tonnage became affiliated with cooperatives who did not have to participate in negotiating or bargaining with MACMA for the grower returns. Although this occurred, the influence of MACMA on grower returns was honored in earlier years by some of the cooperatives helping to some degree to increase the returns to growers. However, during the late 1980s and early to mid-1990s, the large excessive supplies resulted in extremely low grower return levels. The impact of the supply surpluses on the market resulted in a

situation that was beyond the capability of MACMA to influence returns to a great degree.

The tart cherry division of MACMA was dissolved in the spring of 1999 when the tart cherry industry's growers in Michigan voted not to continue to fund the program. The Red Tart Cherry Information Program (RTCIP) had been established to collect the funds from the growers to support the cherry division of MACMA. Without the support of the growers through RTCIP, the MACMA program did not have a source for funding, thus, ending the cherry division of MACMA.

2.6 Overview of the historical evolution of the strategic planning process. The industry efforts for strategy development and future planning have been strengthened through the efforts of the industry leaders including their joint efforts through the TCISPC with its broad, industry-wide scope. The TCISPC has effectively brought together leaders from the industry organizations with insight and visioning to jointly work on solving the challenges. Through the coordinated efforts of supply management, demand and market expansion activities, and price establishing, the historical difficulties in the past can potentially help to strengthen the industry in the future.

Chapter 3

INDUSTRY SITUATIONAL ANALYSIS

3.1 Introduction. An industry situational analysis is intended to develop a comprehensive understanding in key areas for strategic planning as discussed later in this thesis. This chapter relates to the first component of the strategic planning phase of the industry strategic planing and coordinating framework developed by Lyford (1998). The situational analysis of this chapter will use a common practice taught in business school firm management courses of analyzing the strengths, weaknesses, opportunities, and threats (SWOT). Although, the analysis in this thesis is for a broad industry approach, some of the same techniques may be used as for a firm along with appropriate adaptations for the broader industry setting.

This chapter will be broken into the following four sections: 1) industry strengths, 2) industry weaknesses, 3) industry opportunities, and 4) industry threats. The SWOT analysis completed for this thesis has been accomplished with substantial input of industry leaders working together in the TCISPC.

3.2 Situational Analysis - SWOT. SWOT analysis is commonly a major part of a situational analysis related to strategic planning. In this case the SWOT analysis is for the broad U.S. tart cherry industry.

Strengths are, in this case, areas which give the industry positive capabilities in gaining a competitive advantage over competing industries. Weaknesses are areas where an industry does not perform as well as it needs to and lacks essential abilities to compete with other industries. Opportunities are areas which can be improved upon and exploited to increase performance in competitiveness, market growth, and economic viability.

Threats are areas which negatively affect the industry's performance or may become major negative factors in the future. These topics are generally discussed in the context of needed strategic directions for the tart cherry industry as it strives to improve its competitiveness and economic viability for the future.

3.2.1 Industry Strengths. The strengths of the tart cherry industry are those features that add to the industry's ability to be competitive, progressive, and profitable. These provide a foundation or base to build upon in order for the industry to continue to progress and strengthen its economic position. The industry needs to take advantage of its strengths in developing strategies for future improvement.

The following sub-sections include discussion of a number of strengths of the tart cherry industry with brief explanations of each.

The inherent nature of the tart cherry fruit.

Tart cherries have an inherent natural bright red color with a pleasing tart taste. These characteristics provide desirable appeal for many consumers in a number of cherry products. These two characteristics combined help cherries to be well suited as an ingredient for many food manufacturer product lines. They are also positive attributes for marketing cherries as dried cherries or cherry pie filling in retail grocery markets.

The healthful properties of tart cherries are another built in inherent characteristic that provide a strength of increasing importance as supported by recent research findings. Research has indicated that tart cherries contain many desirable and healthful characteristics of compounds which come from the bright red color found in the skin of the fruit. The potential of extracting the beneficial compounds from the cherries could

have substantial potential for increasing overall demand for cherries along with developing further research on these healthful properties (Nair et al. 1998).

A low-cost, efficient cost leader industry.

The industry has many knowledgeable growers who are effective managers in putting together all the necessary managerial components to be highly efficient in all operations. For example, mechanical harvesting, IPM, and new orchard technologies have all contributed to this continuing and progressing strength which provides a foundation for competitiveness in U.S. and export markets.

Efficient, low-cost processors.

Efficient, low-cost processing is a continuing and progressing strength which has an important foundation for the industry's competitiveness. Through the use of top-notch and continually improved technologies in the processing plants, along with effective management, processors are quite efficient and effective in their processing operations. They are also continuing to progress on even more advanced techniques, improving their managing skills, and reducing the overall costs of production. Another aspect which has helped processors to be efficient and low-cost is through combining the processing of tart cherries and other fruits such as apples to help spread overhead costs over a much larger volume base and hence reduce overhead costs per pound.

Effective vertical linkages.

Effective vertical linkages have been developed between growers and processors to help strengthen their relationships. These stronger relationships have helped to coordinate the communication between processors and growers. Effective vertical linkages are especially vital during the harvesting season for on time delivery of quality fruit. This

involves coordination of the harvesting, cooling, delivering, and processing for this highly perishable fruit which has exacting quality requirements.

Technologically advanced industry.

The U.S. tart cherry industry is more technologically advanced compared to other countries through the use of an up-to-date and integrated set of technologies available to growers and processors. This is an ongoing and continually progressing strength for the industry and can continue to help the U.S. tart cherry industry be more efficient and effective.

One example of where technological advances have helped the tart cherry growers to obtain better fruit quality is through IPM programs. IPM programs have helped obtain effective plant protection through the control of insects and diseases.

Technological improvements to increase the fruit quality at the processor level has been emphasized by reducing the number of pits in the processed products. This has been accomplished through a combination of a number of technologies including the use of electronic eyes for sorting after the cherries have been pitted.

University research and extension.

Michigan State University plays a substantial role with informational assistance to the tart cherry industry through research and extension in technological progress, economic analysis, market analysis, new product development, and other areas of research. The integrated set of research and extension for technological and economic aspects, as well as the close university - industry partnerships, seem to be the best in the world for tart cherries.

Industry Leadership.

The industry has a core of capable, dedicated industry leaders who are willing and committed to working together for industry improvement and further progress. This is an area which recently has become an increasing strength as shown by effective leadership in establishing the new FMO program and CherrCo. Also, the industry leadership has been successful by implementing strategies in recent years to help specifically address many controversial issues related to the FMO and to continue to progress and adapt the industry demand expansion programs to changing conditions.

Industry organizations.

Within the cherry industry there are a set of industry programs and their related organizations which are well-developed and appropriately targeted toward critical areas of need for the industry such as demand expansion, supply management, and processor pricing. Tart cherry demand expansion programs include those of the Cherry Marking Institute and related state organizations such as the Michigan Cherry Committee. A relatively new supply management program which is administered by the Cherry Industry Administrative Board helps to manage available supplies for domestic markets and hence reduce surplus supplies on the market through a federal marketing order. Federated co-operatives have helped with effective sales, marketing, efficient supply chain management, and stabilizing and rationalizing processed cherry pricing.

Industry visioning.

Industry visioning, problem-solving, coordination, and organization of needed industry strategic directions through the work of the Tart Cherry Industry Strategy Planning Council have recently aided the industry in developing strategic direction for the

future. This visioning by the council is being undertaken in part to help the various industry organizations to work together, improve coordination, to analyze the areas of greatest industry need, and strategically plan for the future.

3.2.2 Industry Weaknesses. The industry faces a set of interrelated weaknesses which have resulted in some major areas of undesirable performance. The industry leaders regard to these areas of weak performance as negative driving forces. The weak performance areas include the persistent imbalance between supply and demand (surplus supplies) and the low grower returns as a result of the supply and demand imbalance. The underlying weaknesses which have contributed to the poor performance areas have been discussed and analyzed considerably within the TCISPC. These weaknesses include the following: 1) industry's lack of ability to avoid over-plantings, 2) failure to develop a number of products which fit the changing consumer preferences, developing and gaining effective consumer access, and industry must rely to a substantial degree on food manufacturers. This thesis will put major emphasis on the key poor performance areas (driving forces), the supply and demand imbalance and low, unprofitable returns to growers.

Driving forces are the forces with the greatest influence on the most important changes that have taken place and will take place in the industry's environment (Thompson et al. 1995). The major driving force or poor performance areas of greatest importance facing the tart cherry industry has been and continues to be the imbalances of supplies in relation to demand, i.e. persistent surplus supplies, and resulting low, unprofitable grower returns.

3.2.2.1 Imbalances of supplies in relation to demand. The imbalances between tart cherry supplies and demand with substantial surplus supplies has been a continual problem of the tart cherry industry since the mid 1980s. These imbalances are caused by a number of different factors including 1) over planting which causes excessively large production capacity, 2) large carry-over supplies from a previous year of excessive production, and 3) slow growing demand for tart cherry products.

Because the supplies of cherries have been so greatly influenced by the number of acres planted, the excess supplies occur in notable fashion during the phases of the long term acreage cycle with excessive bearing acres and large production. When the long-run acreage cycle is in a phase of excessive over-planting of acres, and more than one large crop occurs in succession, there is also a greater potential for large carry-over inventories as well. This is due to the very large crops which are not completely sold each year and the unsold inventories are carried over to the next year often adding to excessive or surplus supplies.

The slow growing demand can be attributed to a number of different challenges which the industry is facing at this time. Some of these include the following: 1) changing consumer tastes and preferences away from traditional cherry uses such as in pies and sweet desserts, 2) large investment requirements for new successful product development and market establishment, and 3) some substitution of products such as apples slices and blueberries by food manufacturer customers. These are all weaknesses and threats which will be discussed later in this chapter.

The relationship between total supply and total demand is important in illustrating the large surpluses which have occurred. Table 3 illustrates trends in this supply and

Table 3. Tart Cherry Industry Supply and Demand Trends

	Total Supply	Total Demand	Surplus
		Mill. Lbs.	
1980 - 1983	233	185	48
1984 - 1987	347	236	111
1988 - 1990	308	242	66
1992 - 1995	395	276	119
1996 - 1999	348	279	69

demand balance by showing the four year averages for the past 20 years. The total supply column shows the average supplies for each time period. In several years, since the early 1990s, the average total supply exceeded the total quantity demanded by about 100 million pounds on average. These surplus supplies have also resulted in very low grower prices that in most years are well below typical costs per pound. The overall change in total supply from the early 1980s to the late 1990s has shown a substantial increase of 115 million pounds on average. The surplus supplies have also increased from the early 1980s to the late 1990s to approximately 71 million pounds extra.

The total demand quantity, as shown in Table 3, has had an upward trend since the early 1980s, but a relatively slow growing trend. This upward trend in demand quantities began in the early 1980s with an average of 185 million pounds and continued through to the late 1990s with an average of 279 million pounds demanded. This was a significant growth of 94 million pounds or about 45 percent in approximately 15 years (an average growth of 3 percent per year).

The surplus column in Table 3 shows the difference between the total supplied and total demanded. Over the past 20 years, the surplus has exceeded the demand considerably on average. In addition, because the industry has had considerable annual

fluctuations in supplies, which are not shown in Table 3, there have been some years when the surpluses were even larger an exceeded more than 130 million pounds. This comparison of the supply and demand relationship with its persistent surpluses helps to emphasize the importance of reducing the surpluses to obtain a closer balance with demand.

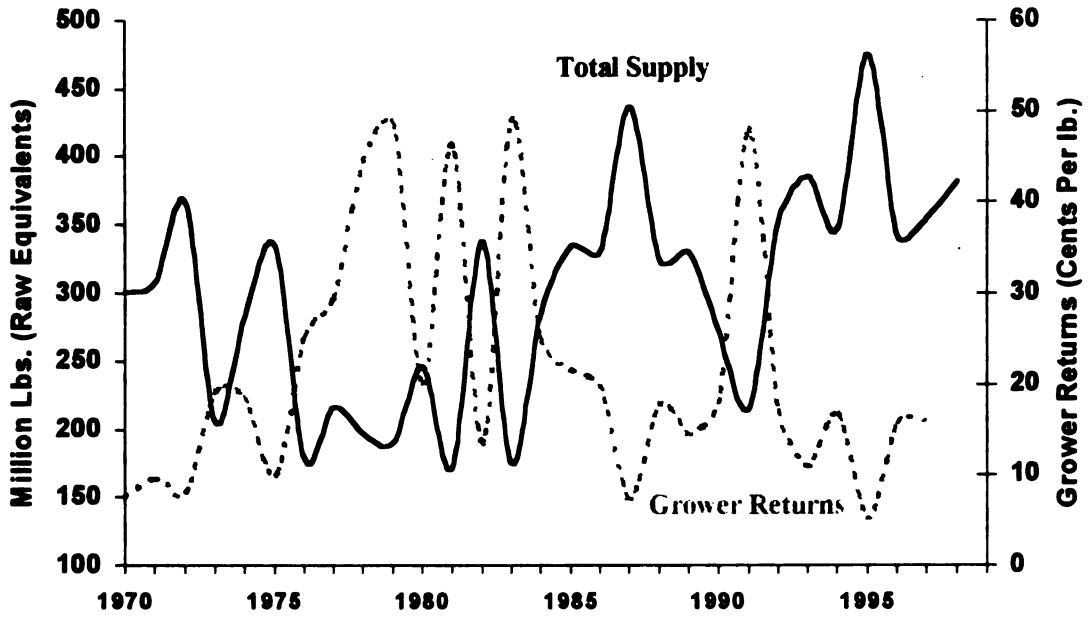
The supply and demand imbalance driving force has had a very large negative impact on the tart cherry industry for most of the last 15 years. This driving force has impacted or even caused many of the other weaknesses the tart cherry industry has faced and continues to face. The industry has taken some action steps through the newly developed FMO program with a goal of overcoming this industry weakness in the future.

3.2.2.2 Generally, low unprofitable grower returns. The continuing situation of generally, low unprofitable grower returns is also considered by the industry as another major driving force. This poor performance area is also a result of the imbalance between supply and demand.

Growers have had low returns which were generally less than their typical costs per pound of production, in almost every year since the mid 1980s. Growers have experienced relatively low returns for most of the past 15 years due to the effect of both the large surplus supplies and slow growing demand. In the short-run, because the overall demand for tart cherries is both inelastic and difficult to expand rapidly, the tart cherry industry has had difficulty in maintaining grower returns which are sufficient to cover their typical costs even in years of relatively small surpluses.

This important relationship between the total supply and grower returns is illustrated graphically in Figure 3. This figure shows the relationship of total supply and grower

Figure 3. Tart Cherry Industry Total Supply and Grower Returns



Source: NASS/USDA, Various Years.

returns from the early 1970s through to the late 1990s. This figure helps to illustrate the substantial variations in both supplies and grower returns which occur from year to year. Also, this emphasizes how much of a change may occur in grower returns when there are either large supplies or short supplies in a given year.

The 1991 and 1995 crop years are two examples that illustrate and explain the large variations in total supply and its impacts on grower returns. In 1991, there was a significant freeze and the total supply for that year was close to 200 million pounds, as shown in Figure 3. This created a substantial but temporary, shortage of supply on the market and resulted in quite high prices. This increased the grower returns to an extremely high level of 48 cents per pound for this one year only. In contrast, the 1995 new crop production and large carry-in created a total supply of close to 400 million pounds available for sale which was a large surplus of supplies. This decreased the grower

returns substantially to one of the lowest returns growers have received for many years of only 5 cents per pound. This grower return was substantially less than their typical costs of 20 to 25 cents per pound.

The low grower returns have been and continue to be a driving force for the industry to over come. The impact of the imbalance between supply and demand upon the low grower returns has been reduced due to the influence of the FMO over the past three years. Even with the influence of the FMO, the low grower returns on average have not increased sufficiently to levels to cover the typical cost of production in recent years.

3.2.2.3 Underlying weaknesses of the poor performance areas. The following sub-sections include discussions of those weaknesses which are the major causes of the industry's poor performance in regard to imbalances of supply and demand and persistently low grower returns. The following sub-categories are weaknesses that are considerably important for the industry to overcome to help improve performance.

Industry's lack of ability to avoid over-plantings:

The tart cherry industry lacks the ability to influence growers to avoid over-plantings in times of high prices which later lead to overcapacity and persistently large surplus supplies. Tart cherry growers are primarily influenced to plant or remove acreage depending on the returns they are receiving. When the returns are high and profitability is quite positive, growers tend to plant considerably more tart cherries. This leads later to surplus production and very low prices which can be persistently less than typical grower costs.

Failure to develop a number of products which fit the changing consumer preferences:

The industry needs to develop a number of products which fit the changing consumer preferences. But relatively few new products have been successfully introduced. The industry continues to market a substantial portion of their sales as pies and sweetened desserts which face declining consumer demand. This has been and continues to be a difficult weakness to overcome because of the large investments required in developing new products and establishing these in the markets. A contributing factor is also that the industry has experienced so many consecutive years of poor returns that few processors have had sufficient net returns to be capable of investing the money for new products. These weaknesses contribute to slow-growing demand that has not grown as rapidly as the large production capacity.

Developing and gaining effective consumer access:

Developing and gaining effective consumer access through grocery stores and food service retail outlets for new products is very expensive, risky, and difficult. This is a weakness in part because the cherry industry is one with many small processing firms with limited financial abilities to push consumer cherry products through the market channels. Therefore the cherry industry has had to rely on large established food manufacturers with large financial resources and strong customer brands for much of the marketing of final consumer products which use cherries. This is another weakness which contributes to slow growing demand.

The tart cherry industry must rely to a substantial degree on food manufacturers:

The industry must rely substantially on the food manufacturers with strong consumer brands to build the demand for cherries in their consumer products. This building of

cherry product demand cannot always be assured by large food manufacturers because these firms are not always dedicated to cherries on a long-term basis. Thus, many tart cherry products are promoted, marketed, and sold primarily at the discretion of the food manufacturers who are not particularly oriented to cherries. This raises substantial risks to the cherry industry if food manufacturers drop cherries or substantially cut back on their usage.

3.2.2.4 Additional kinds of industry weaknesses. These weaknesses are also important for the industry to overcome. The following sub-categories have significantly impacted the economic welfare of the industry.

Lack of profits from apple processing.

Many processors also pack other commodities such as apples along with cherries in order to minimize overhead costs for both the other commodities and the overhead costs portion of the processor margin for tart cherries. Some of the these other commodities, particularly apples, have recently experienced economic difficulties for processor returns. Thus, processors are in some cases trying to spread their losses to all commodities within the company. For example, apple processing has had some substantial difficulties in being profitable for the past two years.

Historically weak pricing at the processor level.

The weak pricing at the processor level has historically been an important weakness area for the industry because of the tendency for processors to cut prices as a primary means of obtaining sales of their products. Price cutting practices were especially prevalent during the years of surplus supplies. Even when these surpluses were relatively small, processors would cut prices substantially to obtain sales for their cherries. This was

done as a primary competitive marketing approach and as a means to avoid accumulating unsold inventories at the end of the marketing year.

A number of other factors within the industry contribute to the industry's historically weak pricing tendencies. Some of these include: 1) an industry structure of many, small processors, 2) selling fruit commodities to food manufacturers who are much larger in size and buying power, and 3) many processors market the same commodities as each other such as frozen 5+1 cherries. Progress has been made during the last three years on this historic weakness in strengthening, rationalizing, and stabilizing processed cherry pricing with the new CherrCo cooperative.

Inherent tart cherry quality weaknesses.

Tart cherries have inherent quality weaknesses which include a fruit with pits, soft cherries, and wind-whip. These challenges in turn make it difficult for processors to maintain high quality processed products to meet the needs of their customers. Poor quality from pits is a weakness because of the difficulty of removing every one from the fruit during the processing.

Soft cherries have often been a problem especially in large production years with a result that the fruit is more difficult to pit effectively. Wind-whip cherries are marked up with defects that make the appearance of the cherries not as appealing as they should be for consumer acceptance.

The industry has made substantial progress on improved performance on pit counts and the sorting for wind whip defects. This area remains, however, as a challenging area in which the industry needs to make further progress.

Potential weaknesses related to the federal marketing order.

The relatively new FMO program has had and continues to involve some controversial issues. The threat of having the order not renewed by the industry (or by USDA) if some of these controversial issues are not adequately resolved is possible.

If certain controversial issues related to the FMO were to lead to a negative industry vote in the next renewal referendum, this important program would be lost. If this were to occur, returns to growers in surplus-supply years would return to quite low, unprofitable levels for growers. Uncontrolled surplus supplies with no marketing order program, would also pose substantially increased difficulties for CherrCo to continue its positive roles in the industry, thus causing further major weaknesses within the industry.

3.2.3 Industry Opportunities. There are many important opportunities for further tart cherry industry progress and continuing improvement for the future. These arise from: (1) recent industry progress in a number of key areas, (2) opportunities to build onto and take advantage of the industry's strengths, (3) changing markets and demand expansion opportunities, (4) new industry programs and approaches, and (5) the evolving trends with the long-run acreage-production cycle (Ricks et al. 2000).

Dried cherries.

Markets for dried cherries seem to have substantial opportunities to expand, including into retail grocery, food service, food manufacturing, and export markets. The market growth opportunities for dried cherries are aided by their unique tart-sweet taste and their common perception as an enjoyable and healthy snack.

Dried cherry markets have been growing significantly over the past five years. These dried cherry markets increased from approximately 10 million pounds of raw product to

40 million pounds of raw product during this time period. With this growth, dried cherries seem to be at a stage with excellent opportunities to achieve substantial additional growth during the next few years. Industry leaders estimate that there are sufficient opportunities so that the dried cherry market could grow to over 60 or 70 million pounds during the next few years.

Export market expansion.

Exports have shown a considerable growth trend since the late 1980s with a potential for continued substantial growth for future exports (although the substantial annual fluctuations in this market segment will likely continue). This potential for growth in export markets is significant in both traditional commodity packs (i.e., canned water pack) and newer packs such as dried. Further market expansion to help increase growth needs to be developed in the current export countries as well as new receiving countries.

Healthful properties of cherries.

The healthful properties found in cherries are becoming even more an opportunity than perceived earlier because of documentation by some recent research. These recent research results at MSU indicate substantial potentials from the health benefits from cherries–including antioxidants and anti-inflammatory properties. Pharmaceutical companies are also doing research to help clarify the healthful properties in hopes to use these properties to build demand for their products. The industry will be able to use these findings as another basis of promotion and in developing new products, along with selling more of the existing products.

Cherries in meat.

There seems to be an increasing potential for market growth of cherries in meat products such as hamburger and sausage. These are particularly related to the resulting healthful properties such as less fat which are obtained by adding cherries to meat. Cherries in meat seem to be especially encouraging if these products are marketed in partnership with large meat firms with strong brand names. However, cherries in meat have been a small, slow growth market segment. One major obstacle has been due to a patent which has prohibited its apparent potential growth by a number of firms in the industry who would like to take advantage of this opportunity but are precluded from doing so by the key patent.

Tart cherries in ready-to-eat form in single-serve size packages.

Single-serve sizes are a substantial market for a number of other competing fruits such apple sauce, cling peaches, fruit cocktail, and puddings. These packs offer substantial convenience as well as healthful fruit products to consumers in retail grocery markets and for food service customers such as School Lunch. There seem to be moderate to substantial opportunities for market growth in the single-serve sizes for tart cherries.

Cherry paste.

If cherry paste can be developed and adapted to the needs of snack bar manufacturers, this food category and the marketing strengths of the strong brand names of the snack bar manufacturers could provide large opportunities for market growth for cherries. Breakfast and snack bars are a major market-growth food category in retail grocery markets. Because of the nature of cherry paste, this type of product has the

potential to use large quantities of soft or over-mature cherries that might otherwise be left unharvested.

Cherry brandy.

Research at MSU has, in recent years, been able to distill high quality cherry brandy for retail markets. Several commercial companies have begun to make and market cherry brandy based upon the research information provided by MSU. Although the cherry brandy market is in a small, initial-growth stage, there seem to be opportunities for moderate demand growth for cherries in brandy in the future. Cherry brandy can use, and even has preference for, cherries which are over-mature for pitting, as well as soft fruit and those with wind-whip.

Cherry juice.

Cherry juice markets have been growing considerably over the past 10 years. Industry leaders estimate that markets for U.S. cherries for juice could grow from a recent 30 million pounds to 50 million pounds within the next few years. The growth in the juice markets would be especially important to the industry if there are higher prices for juice cherries returned to growers than has traditionally been the case. Cherry juice provide opportunities for sale of marginal quality cherries which would otherwise be left unharvested.

Trends in the long-run acreage-production cycle.

Continuing changes and trends in the long-run acreage-production cycle will provide substantial opportunities for higher prices and improved net returns to growers in future years. Bearing acreage in the U.S. has been declining significantly and can be expected to decrease even further during the next few years because of the aging of existing orchards.

This is expected to cause a more favorable balance of supply and demand resulting in higher prices in more of the future years and providing improved income opportunities to growers and processors.

3.2.4 Industry Threats. There are a number of threats that potentially can affect the tart cherry industry. These originate from a number of different areas: 1) future market risks, 2) global markets, 3) competing industries' product lines, 4) economic difficulties of certain other commodities such as apples, and 5) governmental influences.

Changing markets, technologies, and competitive situations.

Changing consumer tastes and preferences could potentially cause further reduction in sales for the traditional tart cherry products such as pies, pie filling, and other sweetened desserts. Changes in consumers tastes and preferences are shifting demand for many consumers to more directed at the low calorie and health conscience aspects. Also, more emphasis is being put on products that are convenient, meaning less preparation time, ready to eat on the go, and little to no clean-up required. If the cherry industry does not respond adequately to these changing consumer needs, the potential loss of demand could pose a considerable threat to the industry.

Because of the above changes in consumer preferences, the industry needs to develop new value added products which meet the changing consumers preferences. However, the industry has not been very successful at developing many new products and effectively bring them to market rapidly. Developing new consumer oriented products and establishing markets for them requires considerable time and a lot of money which pose difficulties for the cherry industry.

Government regulations.

These include the possibility of banning key pesticides through the FQPA which could be very detrimental to the production of high quality fruit. Migrant labor is very important to the tart cherry industry and governmental regulations could potentially hinder the supply of needed laborers. Other governmental regulations on specific activities, such as processing plant waste disposal, could place unnecessary burdens which could be costly to processors.

Substitute Products.

The competition provided by competing industries is continually trying to shift consumers preferences from tart cherry products to substitute fruits. (i.e. blueberries, apples, peaches, other berry products, raisins, and cranberries.) These competing industries compete in a variety of ways, including in some cases by trying to be the lowest cost producing industries. They also compete by adopting their products to effectively meet the changing needs and preferences of consumers and commercial customers at various stages in the supply chain. To the extent that competing industries are successful in capturing larger markets, especially if they make major, rapid gains at the expense of cherries, this can provide a continuing threat to the cherry industry.

Threat of expanding world tart cherry production which might be imported into the U.S.

China may be one of the greatest future concerns to the U.S. tart cherry industry for potentially flooding the U.S. markets because of similar market flooding which recently took place in the apple industry. China might in the future substantially expand tart cherry production.

If Europan production were expanded considerably, these supplies might also enter into the U.S. and under cut the domestic prices, lowering grower returns. On the other hand, this does not seem highly likely to occur in the near future. Yugoslavia was a former large competitor which has declined because of wars and economic difficulties. Several Eastern and Western European countries or Southern Hemisphere countries such as Chile could become major competitors at some time in the future.

Long-run acreage cycle and potential overplantings.

In the future another round of over planting of tart cherries could occur in the U.S. due to higher, more profitable prices and returns to growers which seem likely during an expected low acreage and production phase of the industry's cycle within a few years. If overplantings occur, this would eventually cause another imbalance in supply and demand with another future period of supply surpluses and low prices. The threat of overplantings in future years might be accentuated by the low returns to apple growers during the last two years if these were to continue. That is, apple growers in many states might shift more to tart cherry production if the poor economic conditions and grower returns in the apple industry continue.

Economic difficulties for processors.

Tart cherry processors who also process apples and other fruits could continue to face substantial economic difficulties because of the situation in the apple industry. Negative economic impacts caused by the apple markets could continue to reduce processor returns. This is important for tart cherries because of the overhead costs which have in the past commonly been partially borne by processing apples along with tart cherries. This has caused economic difficulties for processors recently and could continue

to reduce the ability of processors to provide high profitable returns to their cherry growers. Thus, this situation is a continuing threat to the tart cherry industry.

Technological Advancements.

Compared to the rest of the world, many of the technological advancements used in other countries have been developed by universities, input firms, growers, and processors in the U.S. Continued progress will be needed as well, in part, because other countries can and do also adopt the U.S. industry's technologies which helps to increase their competitive position. Therefore, what has been a strength of the U.S. tart cherry industry could become a competitive threat if competing industries in other countries are able to use U.S. technology to catch up and surpass the U.S. tart cherry industry.

3.3 Overview of the industry situational analysis. The industry SWOT analysis is an important analysis phase to help provide a base for industry planning concerning the areas in which performance has been relatively effective and the areas which are priority for needed improvements. The analysis of strengths and weaknesses of the tart cherry industry shows some internal analysis for the industry. As well, the opportunities and threats analysis provides some external analysis for the industry.

As a part of the SWOT analysis to give an important time perspective, a separation into past, present, and future industry directions may be helpful.

Prior to the 1996 cherry summit conference, the industry's weaknesses and threats were predominant in their overall effect on the economic conditions of the industry. The industry's weaknesses and threats were effecting the very low returns to growers and the extreme lack of profitability of the industry. The underlying aspects of numerous years of overproduction and slow growing demand influenced the industry to want changes for the

better. An important change in the industry's strategic directions came when the leaders of the industry agreed that a more comprehensive strategic planning approach was desirable.

Following the cherry industry summit conference in 1996, efforts by industry leaders, and organizations formed the TCISPC for the purpose of providing a core group to develop strategies on how to overcome some of underlying weaknesses and threats of the industry. The TCISPC has continued to address many of the weaknesses and threats and have successfully helped to position the industry in a much more positive position. Through the strong working relationship of these industry organizations, some of the industry's major weaknesses are being reduced and the opportunities are more positive and prevalent. In some cases, threats have been reduced in significance and do not impact the industry as much as they have in the past. Therefore, during the last three years, the industry has evolved to a position of more predominance of opportunities and strengths with less overriding predominance of surplus supplies, low prices and their causal weaknesses.

In the future, the industry will most likely be able to take much more advantage of their opportunities and strengths. This is because of the position the industry will be in as a whole. The long-run acreage cycle will be at the a low acreage and production phase of the cycle causing supplies to be reduced. This will most likely increase processed cherry prices and grower returns substantially. The industry will hopefully be able to experience positive profits and help strengthen the industry even more.

However, in the distant future, there is a likelihood that the industry may return to a similar position as they have been since 1985 with negative economic impacts. Because of

the potentially higher prices and returns expected during the next 5 to 10 years, growers will be more encouraged to plant cherries and another round of substantial over planting could take place. If this occurs it could cause overproduction and surplus supplies again in the more distant future. This could happen, but the visionary industry leaders would like to find way to avoid another round of over-plantings, and hence, avoid a return to surplus production and low prices at some time in the future.

Chapter 4

THE EVOLVING SUPPLY / DEMAND BALANCE FOR TART CHERRIES

4.1 Introduction. The supply and demand imbalance for tart cherries, discussed in the weakness section of Chapter 3 as a major driving force, is a culmination of several key and important components. Of these components, the most significant ones are the long-run acreage cycle and its impact on the production and the demand for tart cherry products. These two components, as discussed in Chapter 3, have contributed in the past and continue to contribute to the supply and demand imbalance which has emphasized the need for the industry's strategic planning process. The analysis of the industry's major driving force is a component of the second phase of Lyford's framework discussed in Chapter 1 (Lyford 1998).

This chapter will analyze the long-run acreage cycle and the demand for tart cherries in relation to the imbalance between supply and demand. The analysis of these two important components will be much more detailed and in depth than was discussed in Chapter 3. Chapter 4 will be broken into three sections: 1) tart cherry supply analysis and projections, 2) tart cherry demand analysis and projections, and 3) balancing supply and demand in the future. This chapter will help to set the stage for future strategy planning as discussed in Chapter 5.

Major sources of information for this chapter were the analyses done with the industry leaders as a part of the coordinated efforts of these industry leaders working together through the TCISPC. Also, an important source of data is provided by published material from the Michigan Agricultural Statistic Service on Michigan's acreage for the early to late 1990s. In addition, the author conducted a survey of processors for all the

other (non-Michigan) states included in this chapter's analysis of the acreage trends and future projections.

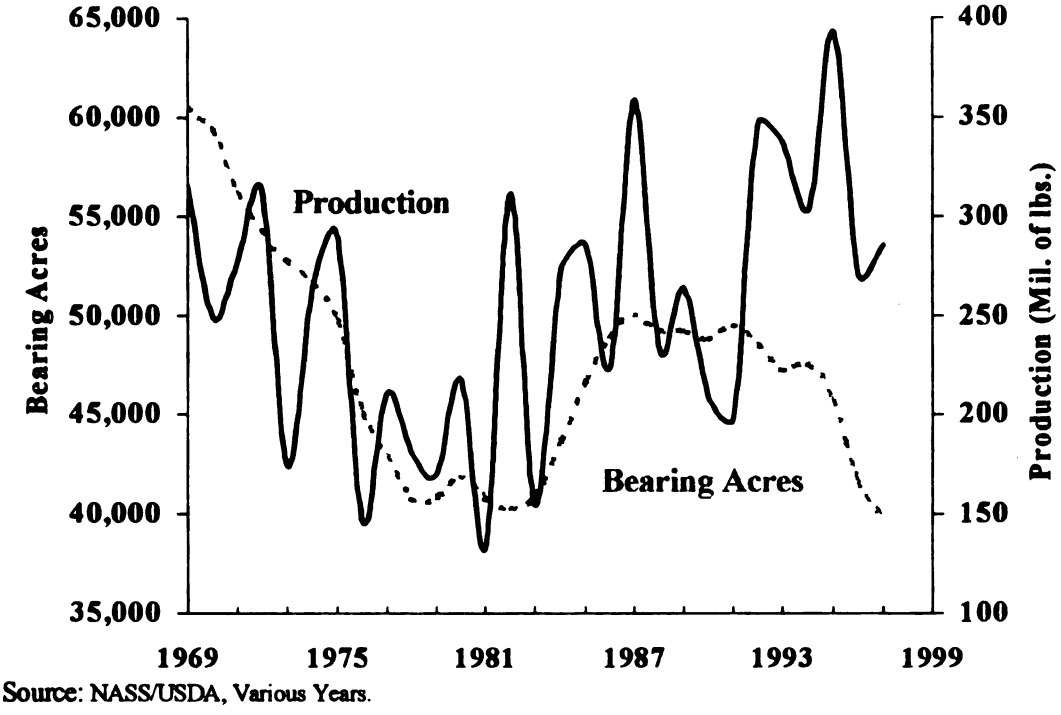
4.2 Tart cherry supply analysis and future projections. The tart cherry supply analysis and future projections section will discuss the relationship of total U.S. production to the long-run acreage cycle. This relationship will focus on an analysis of each major producing states' recent acreage trends with projections to 2003 and the projected total production for the U.S. by the year 2003.

4.2.1 Overview of the long-run acreage cycle. The tart cherry industry has experienced a number of positive and negative changes over the past thirty years, many of which are closely related to the effects of the long-run acreage cycle. During an earlier low-acreage, short-supply phase of the long-run cycle, the industry experienced supply shortages and very high grower prices. Then, later the industry experienced a prolonged period of high production and supply surpluses with the resulting very low grower prices.

Some of the key relationships in analyzing the industry's excessively large production capacity which occurred from the mid 1980s to the present are the industry's bearing acres and production. Figure 4 shows total bearing acres as the dotted line and total production as the solid line. During the early 1970s, bearing acres were in a downward phase of the cycle. A low acreage phase of the cycle occurred from the mid 1970s through the early 1980s. The bearing acreage then rebounded and increased through the late 1980s into the early 1990s. This occurred because of the large plantings caused by very high prices in the earlier low acreage phase of the cycle.

The industry's trends in production tend to move with the changes in the bearing acreage cycle, but sometimes with a lag in time. Production is also characterized by large

Figure 4. Tart Cherry Industry Bearing Acres and Production



Source: NASS/USDA, Various Years.

annual fluctuations which can make it more difficult to clearly discern the long-run trends in production related to the cycle.

In the early 1970s, the production cycle decreased until the mid 1970s. Then, the production cycle remained in the low supply phase of the cycle until the mid 1980s. At that time the production increased along with the bearing acreage cycle. Both bearing acres and production were high until the mid 1990s. Although the bearing acreage cycle has since decreased in recent years, the production aspects of the cycle has continued to remain high, but seem likely to trend downward more similarly to the bearing acreage during future years.

One of the explanations for the continuing relatively high production and hence relatively low grower returns are increasing yields per acre. The average yields per acre

have increased in part because there currently has been an unusually high percentage of orchards in their peak bearing ages. The peak bearing age for a cherry tree is approximately from 14 years to 22 years old. Interestingly enough, over 50 percent of the total U.S. acres are between these ages.

Many growers in the tart cherry industry have also increased average yields per acre through a combination of cultural practices, improved technology, and effective management. Some of the more particular areas of success for increasing yields per acre include: 1) gibberellum sprays, 2) improved harvesting machinery that do not damage the tree, hence prolonging the productive life of the tree, and 3) increased trees per acre.

4.2.2 Long-run acreage trends and projections analysis of each state. An analysis was made of the long-run acreage trends and its relationship to each of the major producing states within the industry. The results are summarized in this section.

The major tart cherry producing states include: 1) Michigan, 2) Utah, 3) New York 4) Wisconsin, 5) Washington, 6) Pennsylvania, and 7) Oregon. The information used for the analysis has been compiled from Michigan Tree Fruit Surveys, other individual state orchard surveys, and an extensive survey of processors in certain states by the author regarding the latest acreage changes in those states.

Table 4 is a summary table illustrating total acreage and bearing acreage changes from the early 1990s to the late 1990s, as well as, projected changes to 2003. Each of the following states analysis uses data summarized in Table 4 for that state.

Michigan

The 1998 publication of the Michigan fruit orchard survey report from the Michigan Agricultural Statistics Service shows that Michigan's tart cherry acreage is continuing to

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Table 4. U.S. Tart Cherry Industry Acreage

	Total Acres		Change from Early 1990's to 1998		Projected Acres to	Change from 1998 to 2003	
	Early 90's	1998	Acres	%	2003	Acres	%
Michigan	38,200	33,500	- 4,700	- 12%	29,690	- 3,810	-11%
Utah	4,030	2,910	- 1,120	- 28%	2,470	- 440	-15%
New York	4,230	2,100	- 2,130	- 50%	1,690	- 410	-20%
Wisconsin	2,760	2,310	- 450	- 16%	1,900	- 410	-18%
Washington	1,500	1,130	- 370	- 25%	1,100	- 30	-3%
Pennsylvania	1,350	870	- 480	- 36%	650	- 220	-25%
Oregon	1,850	1,350	- 500	- 27%	600	- 750	-56%
Total Acres	53,920	44,170	- 9,750	- 18%	38,100	- 6,070	-14%

	Bearing Acres		Change from Early 1990's to 1998		Projected Acres to	Change from 1998 to 2003	
	Early 90's	1998	Acres	%	2003	Acres	%
Michigan	34,370	29,230	- 5,140	-15%	25,420	- 3,810	-13%
Utah	3,550	2,470	- 1,080	-30%	2,030	- 440	-18%
New York	3,810	1,840	- 1,970	-52%	1,420	- 420	-23%
Wisconsin	2,560	2,130	- 430	-17%	1,720	- 410	-19%
Washington	1,400	1,060	- 340	-24%	1,000	- 60	-6%
Pennsylvania	1,180	760	- 420	-36%	540	- 220	-29%
Oregon	1,730	1,300	- 430	-25%	550	- 750	-58%
Bearing Acres	48,600	38,790	- 9,810	-20%	32,680	- 6,110	-16%

decline. This is not surprising in view of the economic difficulties that tart cherry growers have experienced for a number of years with the frequent surplus supplies that have occurred since the mid-1980s.

Michigan's total tart cherry acreage for 1998 decreased by 4,700 acres compared to the orchard survey that came out in the early 1990s. Michigan's bearing acreage declined by 5,140 acres or 15 percent since the early 1990s. This substantial decrease in tart cherry acreage, which is likely to continue for several years, can be expected to result in a decreasing production trend and hence a closer balance of the industry's supplies with the growing demand during future years.

The latest Michigan orchard survey also indicates relatively low levels of non-bearing[1] age tart cherries. The latest figure of 4,270 acres of non-bearing age are equal to only 13 percent of the total acres. By contrast, in earlier periods when the industry's acreage was expanding, as during the late 1970s and early 1980s, non-bearing ages were equal to 30 to 38 percent of total acres. The relatively small amount of young and non-bearing acres that are now planted, coupled with the advancing ages of many existing orchards, are important reasons why Michigan's bearing acreage is likely to continue to decline during the next several years.

Projections[2] have been made for Michigan's bearing acres to the year 2003. These projections indicate that Michigan's bearing acres can be expected to decrease further from the current 29,230 acres shown in the 1998 survey down to approximately 25,420 acres by 2003. This would be a decrease of 3,800 acres or another decrease of 13 percent by that time. These projections are based upon: 1) growers' future removal rates by orchard age category that are similar to what they have done during recent years, and 2) an estimate based on the evolving age distribution of the existing cherry orchards.

Utah

Utah is the second-largest tart cherry producing state in the United States with an average production during the last five years of 25 million pounds. Utah's record high production was in 1998 with 33 million pounds of tart cherries. Utah has had large

[1]Non-bearing acres are zero to five year old.

[2]Projections are based on growers continuing to remove and plant as they did between the latest two orchard survey years for Michigan. Some special adjustments have been made to the projections based on the input from processors and grower leaders in all states other than Michigan.

fluctuations in production from year to year because of the unfavorable growing conditions that sometimes occur during the spring time.

Similar to Michigan acreage, Utah's tart cherry acreage has been decreasing. Utah's total tart cherry acreage has decreased from 4,030 acres in early 1990s to the current 2,910 acres (Table 4). During the same period, bearing acres decreased from 3,550 acres in the early 1990s to 2,470 acres as indicated for 1998. This was a decrease of approximately 1,080 acres or a 30 percent decrease in Utah's bearing acres in approximately five years. Utah's bearing acreage decrease has caused great concern among that state's processors due to the needed production quantities to help sustain the cherry markets which Utah processors have developed.

There are several reasons for the recent decline in Utah's tart cherry acreage. These include poor net returns to growers for tart cherries. Also, many growers have continued to remove tart cherry acreage on marginal sites and from old orchards. The greatest influence for declining tart cherry acreage is the urban pressures for more houses to be built.

Nonbearing acres of tart cherries in Utah have remained fairly constant during the 1990s. The nonbearing acreage figures indicate that certain growers in Utah are continuing to replant some of their tart cherry acreage. This has been occurring to some degree despite the relatively poor returns to growers for tart cherries and the pressures that Utah has to switch considerable amounts of land in the state's cherry growing regions into houses and urbanization. Nevertheless, the current nonbearing acres in Utah are now equal to approximately 15 percent of the total acreage. Although there has been a decline in the total acreage, some growers are optimistic with the usages of Utah's cherries and

are continuing to replant. The current nonbearing acreage is probably insufficient to maintain a constant level of bearing acres in the future.

Projections of Utah's future tart cherry acres have been made using a similar approach as Michigan's projections along with information obtained from the author's survey of Utah cherry processors. These future projections of Utah's bearing acres were made taking into account the current number of bearing acres, the current orchard age distribution, the urbanization pressures, and other factors which are likely to impact Utah's future bearing acres of tart cherries.

The future projections indicate that Utah's bearing tart cherry acres are likely to decrease from the current 2,470 acres to approximately 2,030 acres by the year 2003. This indicated future projection would be a decrease of 18 percent. The removal of acreage in Utah will continue to be acreage from poor growing locations. There will not be many acres removed in the prime cherry growing locations.

Wisconsin

Wisconsin's cherry production has averaged nearly 10 million pounds in recent years. In 1998, Wisconsin had a recent high production of 14.7 million pounds. Currently, Wisconsin is the fifth largest cherry producing state in the U.S.

Wisconsin cherry industry leaders estimate that they now have a total tart cherry acreage of 2,310 acres. This can be compared to 2,760 total acres in the early 1990s (Table 4). These figures indicate that Wisconsin has had a decrease in total tart cherry acreage of approximately 450 acres or 16 percent since the early 1990s.

Wisconsin's bearing acres are now estimated to be 2,130 acres. This can be compared to an estimated 2,560 acres in the early 1990s. Thus, a decrease of 430

bearing age acres since the early 1990s or 17 percent is shown. One of the reasons for the decline in acreage during recent years in Wisconsin is the poor net grower returns for tart cherries. Another reason is the removal of older aged orchards which are not being replanted to tart cherries because of the poor returns to growers.

Similar to Utah's non-bearing acreage, Wisconsin's non-bearing acreage indicates a small amount of replanting that is occurring. An estimated projection of 180 non-bearing acres will be planted by the year 2003. However, this is not nearly enough non-bearing acres planted for Wisconsin to maintain a consistent bearing age acreage level in the future.

Projections for Wisconsin's future bearing acres have been estimated by taking into account the expected removals and the overall acreage age distribution. The projections indicate that Wisconsin's bearing acres are expected to decrease from the current 2,130 acres down to 1,720 bearing acres by the year 2003. This is a projected decrease in Wisconsin's bearing acres of 410 acres or a decrease of 19 percent. These projections for future bearing acres take into account the age distribution of Wisconsin tart cherry orchards. Wisconsin now has an estimated substantial percentage of older age orchards. Also, these projections for future bearing acres are based upon a processor's survey in which was indicated that Wisconsin would continue to remove and replant tart cherry orchards at similar rates to what they have done during recent years.

New York

New York's tart cherry production has decreased considerably over the past decade. This declining trend could potentially continue into the future given the acreage trends of

New York. The 1998 crop in New York was the lowest production year for that state in more than a decade.

New York industry leaders estimate that the state currently has approximately 2,100 total acres of tart cherries. Therefore, the estimated decrease in total acres from the early 1990's to the present is 2,130 acres (Table 4). This is over a 50 percent decrease in total acres in less than 10 years. New York's bearing acres have decreased from 3,810 to 1,840, for a decrease of 1,970 acres or a 52 percent decline. The decrease in New York's bearing acreage can be attributed mainly to poor economic returns to cherry growers.

The non-bearing acreage figures for New York also show a significant decline of 38 percent. This decrease in non-bearing acreage suggests that New York's future bearing acres will continue to decline. With this decrease continuing, New York will likely become a small producing state in the overall industry picture.

Projections for New York's tart cherry bearing acreage indicate continued decreases in the next five year. Total acreage is estimated to decrease by another 20 percent to 1,690 acres. The bearing acres are also projected to decrease by 23 percent to 1,420 acres. These projections take into account that a large portion of the bearing acreage in New York are older than 20 years.

The projected 20 percent decrease in future bearing acres in New York suggests that if these projections are accurate, then New York could fall below Washington in tart cherry production and become the fourth largest producing state in the U.S. Michigan, Utah, and Washington would then produce about 90 percent of the tart cherries in the U.S.

Washington

The state of Washington has had a significant increase in its production over the past 20 years. During these past 20 years starting in the late 1970s, Washington's production has gone up from just over one million pounds to a recent average of about 14 million pounds. The largest crop recorded in Washington was in 1993 with a production of 17 million pounds.

Washington tart cherry industry leaders estimate that there are currently about 1,130 total acres of tart cherries in the state (Table 4). The change in total acres from the early 1990's to the late 1990's was a decrease of 370 total acres. Bearing acres in the early 1990's equaled 1,400 and the bearing acres in the late 1990's are 1,060 for a decrease of 340 acres or 24 percent.

Because of the decrease in total acres and bearing acres, it seems that there would be a decrease in production for the state of Washington. However, due to the relatively young age in distribution of the acreage, the production will most likely stay nearly the same or increase somewhat. Washington's age distribution has a significantly large projection of acres between the 10 to 15 years old category. For this reason there is a likelihood of an increase in production during the next few years.

Projected acres for the state of Washington are difficult to estimate, in part, due to the uncertainty of the apple industry. The huge apple industry in Washington is struggling through some economic difficulties. This could pose a large threat of future oversupplies for the tart cherry industry if a number of Washington apple growers decide to shift substantially to growing tart cherries. On the other hand, there are several factors which could deter apple growers from planting many more tart cherries in Washington. Two of

these are the state's hot temperatures and windy conditions which result in many fruit defects. Another which the apple growers would have to overcome is to develop and invest in adequate processing capacity for more tart cherries. Thus, it is difficult to predict the extent to which apple growers might plant more tart cherries in Washington in the future.

The projected bearing acres for Washington state by 2003 are 1,000 acres. This would mean that bearing acres are likely to stay about the same during the next five years. The estimated projections for total acres are 1,100 which is essentially the same as now.

Pennsylvania

Pennsylvania's tart cherry production decreased from about 25 million pounds in the mid 1960s to approximately six to eight million pounds in recent years. This decrease has been largely due to the removal of tart cherries to shift to other agriculture crops.

Pennsylvania's tart cherry bearing and total acres have decreased from the early 1990's to the late 1990's (Table 4). Total acres decreased by 480 acres from 1,350 to 870 acres. The bearing acres decreased by 420 acres from 1,180 to 760 acres or a decrease of 36 percent. Because of such a large percentage decrease in bearing acres, Pennsylvania could potentially also have a large percent decrease in future production. This has not already occurred because of the large number of acres in the prime production age category of 15 to 20 years old.

The projections for Pennsylvania's tart cherry acreage are dependent on a few factors. Some of these factors including grower returns becoming profitable making it more enticing to grow tart cherries. Another is the potential of other fruit commodities , especially apples, becoming less profitable, and hence growers might shift from those

commodities to growing more tart cherries than in past years. Both of these factors would encourage an increase in non-bearing acreage planted, thus making the projections too small.

Pennsylvania's projection for total acreage indicates a continued decrease by 220 acres more to 650 acres. The bearing acreage projection will likely continue to decrease by 220 acres as well to 540 acres by the year 2003. This would be a 29 percent decrease.

The projected decreases in acreage indicates continued lower production estimates in the future. Thus, the state will likely continue to become smaller in the overall production of tart cherries. However, there are large potentials for replanting that potentially could take place due to the economic difficulties of other commodities, especially apples and possibly peaches. The state could turn around and become a major tart cherry producing state.

Oregon

Oregon's average production in the late 1980s was about nine million pounds. In the most recent years, this has deceased to only two to four million pounds. This is a large percent decrease, down to only about 33 percent of the average during the late 1980s, especially for a state whose already providing such minimal amounts. The prospects of Oregon continuing to be considered a major producing state seems to be disappearing.

Oregon's total acres decreased by 500 acres from 1,850 to 1,350 acres or 27 percent from the early 1990s to the late 1990s (Table 4). The bearing acres decreased by 430 acres from 1,730 to 1,300 acres or 25 percent from the early 1990s to the late 1990s.

The decrease in Oregon's acreage can be attributed to the low grower returns for many years in the 1990s and to the unusually large percent of acres which are older than

20 years. Currently, almost 50 percent of Oregon's bearing age acres are over 25 years old. Consequently, the large decrease in production which has occurred over the past decade for the state is a result of so many older bearing acres which have difficulty producing high yields per acre.

The estimated projections for the total and bearing acres for Oregon indicate likely continued decreases at even greater percentages than happened during the 1990's. The projected acreage decrease is 56 percent from the late 1990's to 2003 for a decrease of 750 total acres by that time. This is because of the very large percent of quite old orchards that exist now combined with low grower returns in recent years. This bearing acreage decrease of 750 acres is expected to leave only 550 acres of bearing age for Oregon by the year 2003.

Oregon's tart cherry production is likely to decrease in the future to even less than it is at the present time with large expected removals of many of the older acres which are now being harvested. Also, the decrease in non-bearing acres by 50 percent since the early 1990s suggests a continual decrease in future bearing acres and the related reduced production capacity in the future.

4.2.3 U.S. tart cherry acreage age distribution. The U.S. tart cherry industry acreage age distribution for 1998 is shown in Table 5. The non-bearing years category shows 12 percent of the total acres planted. The 6-10 years category shows a similar 13 percent of the total acres planted. These two categories are going to be the primary producing age categories for the tart cherry industry during the next 15 years. The 11-15 age category has a larger amount of acres than in either of the two younger 5-year age categories. Although the 11 to 15 age acres will continue to contribute to production somewhat in the

Table 5. U.S. Tart Cherry Industry Acreage Age Distribution, 1998

Age Category	Acres	% of Total
Non-bearing: 1-5 yrs	5,380	12%
6-10 yrs	5,540	13%
11-15 yrs	8,750	20%
16-20 yrs	14,320	32%
21-25 yrs	6,960	16%
26+ yrs	3,220	7%
Total Bearing Age	38,790	88%
Total All Age	44,170	100%

future, the total production will decrease to some lower level because of the reduction in the older age acres.

The three age distribution categories between 16 to 26+ have been the major contributors to the industry's production for many years. The age distribution categories 16-20 years, 21-25 years, and 26+ years now consist of an unusually high 55 percent of the total U.S. acreage with the greatest bulge of acreage occurring in the 16 to 20 year category. These categories will likely have gradually declining production through the next five years, and likely will experience increasing amounts of these acres that will be removed as they near the end of their productive life after ages of 20+ years. After these age categories have been removed, the U.S. production levels may decrease dramatically for a number of years.

4.2.4 U.S. tart cherry acreage projections. The tart cherry industry has some very dynamic changes occurring in relation to the industry's long-run acreage production cycle, as has been explained in the previous sections. The U.S. industry's total amount of tart cherry acres has been decreasing since the mid 1990s in the U.S. to the present. Currently, the U.S. total acres are at 44,170 acres which is a decrease, from the early

1990s, of 9,750 acres from 53,920 acres. This is an 18 percent decrease in total tart cherry acres in less than 10 years.

The bearing acres had a similar decrease in acres from 48,600 acres to 38,790 acres. This is a decrease of 9,810 acres or a 20 percent decline in the total U.S. bearing acres. Thus, the acreage trends indicate that the industry is in a declining bearing acreage phase of the long-run cycle.

The future acreage trend appears to be declining as well. With very little non-bearing acreage planted, there is not enough acreage planted to replace the older aged acres. The high percent of older age trees that now exist also indicate a continual decline in bearing acreage in future years. However, the future decreases in acreage projections may decrease at a slower rate then has been outlined above due to higher prices in recent years, lower surplus supplies, and other factors.

Recently, the TCISPC has discussed that some growers have increased planting more new acreage again because they understand the industry acreage cycle and are preparing for expected higher prices in the future. However, the nurseries do not appear to be adequately prepared to provide trees fast enough to replace the acreage which has been and will be removed.

Future acreage projections for the entire U.S. tart cherry industry have been made based upon the projections for each of the individual states as previously analyzed and discussed. Table 6 is a summary for the U.S. tart cherry bearing acreage in the late 1990's along with the projected acreage and percent changes to the year 2003.

Through the support and cooperation of industry leaders in the different states, the individual states' acreage analysis was made possible. The summary of all the states

Table 6. Projection of U.S. Tart Cherry Bearing Acreage

	1998	Projected to 2003	Change from 1998 to 2003 Acres	%
Michigan	29,230	25,420	- 3,810	-13%
Utah	2,470	2,030	- 440	-18%
New York	1,840	1,420	- 420	-23%
Wisconsin	2,130	1,720	- 410	-19%
Washington	1,060	1,000	- 60	-6%
Pennsylvania	760	540	- 220	-29%
Oregon	1,300	550	- 750	-58%
Total Acres	38,790	32,680	- 6,110	-16%

combined in Table 6, Projection of U.S. Tart Cherry Bearing Acreage, helps to provide an overall direction for the individual states and the entire industry. The tart cherry acreage projections are estimates from historical data and estimations from knowledgeable processors and growers.

The bearing acres are projected to decline by 6,110 acres for a 16 percent decline similar to the projected decline in total acres at the current removal rate. These projections were estimated by adding the individual states current acreage information and their projected acreage information together to form a summary table.

The projections discussed above are based upon removal rates in Michigan which are similar to those which occurred during recent years. But because of the higher grower returns in 1999 and expectations of higher prices in future years, reduced acreage removal rates potentially could change the acreage projections and estimated future production levels to the year 2003. Thus, Table 7 shows three scenarios with different removal rates comparing current bearing acres and production to possible future levels of bearing acres and production.

Table 7. U.S. Tart Cherry Industry Acreage and Production, 2003

Average Yield Per Acre, lbs.	Projected Acres and Production at Current Removal Rates		Projections with a 10 % Decrease in Current Removal Rates		Projections with a 25 % Decrease in Current Removal Rates	
	Bearing	*Production*	*Bearing*	*Production*	*Bearing*	*Production*
1995-1998	*Acres*	*mill of lbs.*	*Acres*	*mill of lbs.*	*Acres*	*mill of lbs.*
7,490	32,680	245	33,620	252	35,020	265

The average yield per acre figure used is 7,124 pounds. This is a total U.S. industry production yield per acre average from 1995 to1998. The production projections were calculated by multiplying this average yield per acre by the number of projected bearing acres.

The first scenario's projected bearing acres with the current Michigan removal rate is 32,680 by the year 2003. With a continuation of recent average yields, these projected bearing acres can be expected to produce an average of about 245 million pounds within five years. This estimation is based on Michigan growers continuing to remove the acreage at the same rate they have in the past few years.

The second scenario's projections, with a 10 percent slower removal rate than the current removal rate, shows future bearing acres that will not reduce as quickly with a projected bearing acres of 33,620 by 2003. The production with this projected acreage will be higher than with the faster removal rate with an estimated average production of 252 million pounds. Thus, a 10 percent slower removal rate indicates approximately another 1,000 acres and an average production of 7 million pounds higher than with removal rates similar to recent years.

A third scenario's projections based on a 25 percent decrease from the current removal rate leads to 35,020 acres by the year 2003. If this is an accurate projection for

bearing acres and with average yields per acre similar to recent years, the projected industry's production at this acreage level is estimated to be approximately 265 million pounds. Thus, if removals during the next five years are 25 percent less than recently, this would result in approximately 2,300 more bearing acres and an average production that is 20 million pounds higher than if removal rates continue the same.

The possibilities of growers slowing down the removal rates and hence leaving a greater amount of bearing acreage in the ground longer could occur because of higher expected prices in future years. This is due to the more profitable market and price conditions likely for the tart cherry industry during the next few years. A slower removal rate for tart cherries could also be encouraged by the economically difficult times occurring in the apple industry. If removal rates slow down, tart cherry production projections are likely to be higher than if removal rates remained the same as they have in recent year, and more likely to maintain similar levels of production but could decrease some because of the older trees not being able to sustain high yields per acre.

4.2.5 Overview on international competition for U.S. tart cherry markets. The international competition for U.S. tart cherry markets could have considerable implications for the future of the U.S. tart cherry industry's supply and demand balance. However, the analyses required to provide adequate understanding of this complex issue is beyond the scope of this thesis research. The industry leaders have not spent a lot of time concerning themselves with this issue and will need to address it more fully in the near future.

One area of future concern could possibly be the potential of imports as production decreases. The U.S. has had little to no imports of most tart cherry products in recent years. The limited imports have been in the form of juice concentrate, but the amounts

imported have been relatively minor. Any possible future imports would most likely come from new tart cherry producing countries. The European industry has had enough production in the past to approximately satisfy the Western European markets. Thus, if new producing countries, such as, China or Chile, were to start to produce tart cherries, there could be a threat of imports in the future. However, there are no indications that either of these counties are beginning to produce large amounts of tart cherries.

4.3 Analysis of evolving demand for tart cherries. The evolving demand for tart cherries in general has increased slowly over the past 20 years. As indicated in Chapter 3, some of the causes for increased growth have been the dried cherries products, increased information on the healthful benefits that cherries have in them, and the industry continuing to provide effective services to their customers. Similarly, Chapter 3 discusses the slow growth in demand as being caused by changing consumer tastes and preferences, limited new product development, and large food manufacturers purchasing substitute products in place of tart cherries. These and other factors have all contributed to the difficulties the industry have had in expanding demand at a faster rate.

This section will analyze the demand for each of the different major tart cherry product categories and include each product category's projected strategic direction. Strategic directions are specific indicators for the various product categories future area of emphasis. These indicators have been determined from analyzing the past movement of each product categories and making best estimate projections of future market growth possibilities by the TCISPC. By determining the strategic direction for each of the product categories, the council has been able to better emphasize where their resources need to be used in the future.

Overall future prospects for market growth have been analyzed by major market categories. Thus, for each, there has been an analysis of their future prospects in regard to the expected degree of growth if any, or a stable future, or a likely decline. This component of a broad perspective or vision for the industry is based, in part, upon the SWOT analysis which was summarized in Chapter 3.

4.3.1 Change in demand for tart cherries. The tart cherry industry has been successful over the past 15 years in increasing the sales of tart cherries from an estimated 230 million pounds during the early 1980s to approximately 280 million pounds during the most recent years. This has been a 22 percent growth in market sales within the last approximately 15 years. This has been a difficult and a slow growing process for the industry to accomplish.

Since the mid 1980s, this growth in demand for tart cherries has been less than the growth in supply. By the late 1980s, the supply surpluses exceeded the demand quantities considerably. Although the demand for tart cherries continued to increase through the 1990s, the available supplies for the market continued to be much larger, as shown in Table 3 of Chapter 3.

As discussed earlier in this chapter, the long-run acreage cycle decreased as did production during the early 1970s to a low level for both acreage and production during the late 1970s and early 1980s. When this occurred, the domestic and export markets were shorted causing substantial increases in prices. This was a profitable time for the industry, but for long-term demand growth and success, the extremely higher had some detrimental aspects as well. Many food manufacturer customers were disgruntled and abandoned the use of tart cherries because of the fluctuation in the prices and the

unusually high prices over a period of several years. Also, export markets were shorted during the low supply period of the cycle and the U.S. could not compete with Eastern Europe with the high U.S. prices.

4.3.2 Product categories strategic initiatives. The tart cherry industry's product categories strategic initiatives analysis will help to give greater insight to the industry's product categories direction. An in-depth analysis of different cherry product categories was completed with the help of industry leadership through the TCISPC to develop these indicated market growth goals. Also, included in the analysis is a summary of the past and future movement trends for these product categories.

The tart cherry industry's six major product categories include frozen cherries, canned water pack cherries, juice concentrate and juice products, cherry pie filling, dried cherries, and various new products. Within some of these categories are numerous variations of product types and forms which have been developed to meet the needs of the consumers.

Some of the product categories that industry leaders project to have future growth include dried cherries, cherry juice and juice products, cherries in meat, and an array of unspecified new products which fit changing consumer preferences. The product category of pie filling is expected to have limited growth potential, but may be able to at least be maintained at its current substantial sales volume. Canned water pack cherries for exports have been designated as a growth initiative segment for the future. On the other hand, the canned water pack market for domestic sales has been identified as one with essentially no potential for growth and is more likely to be an exit market segment.

The frozen (5+1 and IQF) categories have been the largest volume market categories in the past. The industry goal for these product categories is to try and maintain its overall current level but most likely there will be some decrease. It is expected that IQF will grow while 5+1 will decline.

The tart cherry industry's sales averages by major product category during the most recent years, and projected potential sales averages to 2003 (if sufficient supplies are available) are compared in Table 8. The recent years average sales column has been

Table 8. Tart Cherry Industry Market Sales Volume Projections

	Recent Years	2003 Target	Range
	Average Volumes (mil of lbs.)		
Frozen			
5+1	130	100	60-125
IQF	48	70	65-75
Pie Filling	60	60	48-65
Canned Cherries	25	25	25-35
Cherry Juice	25	50	40-55
Total	288	305	238-355
Dried Cherries	22	60	40-65
Other New Products	1	34	

estimated by the most accurate historical sales data and industry leaders' estimates. The projections to the year 2003 were estimated by industry leaders as a part of the visioning insight process of the TCISPC.

The TCISPC estimated the potential volumes which they felt each of the industry's product categories might be able to be expanded to by the year 2003. These sales volumes will occur only if there are sufficient supplies available to accomplish these potentials for demand quantities at moderate prices. These projections were done by

analyzing the most recent trends in sales volumes and taking into account some of the fluctuation that has occurred in recent years. These projections also took into account to some degree the past price levels. These consensus projections were made to establish target goals for each of the major categories as a potential market growth vision with target goals for the future. Also included in Table 8 is a range column over which these category volumes will most likely fluctuate.

4.3.2.1 Demand for dried cherries. The dried cherries product category is one of the newest major types of product in the industry. Dried cherries were developed starting about 15 years ago and have been increasing in sales and movement since then, especially in recent years.

Part of the growth in sales has been aided by the coordinated efforts of processors, sales agencies, and CMI working together to develop many different promotions and other market expansion strategies. Also, advertizing campaigns with retail grocers have also been used to help increase the sales. Processors have also tried to improve and provide a higher quality product to help capture consumers' confidence in dried cherries which has helped to expand demand in recent years.

The strategic direction for dried cherries has the potential for large growth in the future. This is because of the many strengths in dried cherries. The bright red color, unique taste, and the ability to use dried cherries in many different forms contributes to this substantial growth projection. The growth in the future is not necessarily going to come from variations of the product, but through gaining greater product familiarity and recognition by more consumers. This expected growth will likely continue with a

combination of the retail grocery markets and with food manufacturers using dried cherries as an ingredient to other products.

Dried cherries have been introduced mainly in two different forms - - these are consumer snack food items and food ingredients into breakfast cereals, bakery items, and others. The retail snack items come in several different package sizes from as small as a four ounce bag to as large as a 25 pound box. These retail snack items have become a great substitute for consumer impulse purchases such as instead of hard candy, M&M's, candy bars, and other similar candy items. Many consumers like the idea that they are able to purchase a healthy snack treat for themselves and their children.

Dried cherries used as an ingredient by food manufacturers has recently started to develop into an area with a lot of potential. One example of this is the use of dried cherries in breakfast cereal by Kellogg's. During 1999, Kellogg's developed a product category with a mixture of different dried fruit in their cereals with dried cherries as a part of the mixture. Although this product line has had a slow start, there is optimism in the industry that this is a move in the right direction for the tart cherry industry. Entering the cereal market with dried cherries is another way to get great exposure in a new market with future growth potential.

Some of the difficulties and challenges for future market growth associated with dried cherries are the unavoidable potential for consumers to find some pits. This is not without concern for many of the large food manufacturers who would like to use dried cherries in their products, but who have concerns because of possible pits and the problems they potentially can cause to teeth. Thus, increasing the usage of dried cherries sales to food manufacturers will most like continue to progress slowly.

Dried cherries as an overall category has a substantial potential projected increase by the year 2003, as shown in Table 8. The average movement of raw product in recent years has been approximately 40 million pounds. A projection of 60 million pounds by the year 2003 is thought to be possible by some industry leaders. Well developed and effectively implemented strategies to achieve this growth goal will be needed for dried cherries to grow to 60 million pounds. If this occurs, it will be a significant boost to the industry as a whole in expanding the needed overall demand for cherries by developing new markets for dried cherries.

4.3.2.2 Demand for frozen cherries. The frozen category has the greatest amount of volume packed as well as the greatest amount of sales for the tart cherry industry. The frozen category products are used in a wide array of re-manufactured food products mainly stemming from the purchases of frozen cherries by large food manufacturers. This frozen cherry category is broken into two main segments: they are 5+1 and Individual Quick Freeze (IQF).

The frozen 5+1 cherries are used as industrial and food service ingredient items and generally are not sold directly to retail grocers. Food manufacturers purchase this product and usually use it in sweetened desserts such as pies which are then sold in grocery retail, food service establishments, and other outlets.

The movement of 5+1 cherries in recent years has been around 130 million pounds. The projected movement by the year 2003 is projected to decrease to approximately 100 million pounds. A projected decrease in the movement of 5+1 is an indication of the challenges the industry has been facing in trying find new ways to use the 5+1 pack in

meeting the changing consumer preferences which give less preference to highly sweetened products.

The IQF cherries are also used by food manufacturers as an ingredient item to be re-manufactured. However, unlike the 5+1 pack, IQF cherries are individually quick frozen and not packed in sugar. These differences seem to be characteristics that food manufacturers prefer and hence are increasingly switching more to IQF. Many food manufacturers have made the switch from 5+1 to IQF cherries and the expectations are that this will continue into the future.

The IQF cherries have had an average estimated movement of 48 million pounds in recent years. The estimated projection of potential movement, by 2003, is 70 million pounds. If this were to occur it could be an increase of 22 million pounds over the next few years, as seen in Table 8. If this projected increase in sales volume occurs, this increase will partially compensate for the projected decrease in the 5+1 category. Thus, the strategic direction for the frozen tart cherry category will remain about the same with a possible slight decrease by 2003.

4.3.2.3 Demand for canned water pack cherries. The canned water packed product category can be separated into two different major market segments: 1) the export market and 2) the domestic market. This segmentation is useful for analysis purposes because of the very different needs and demands of these markets.

The canned water pack product in the domestic market has been a declining market for a number of years. Water pack products are not preferred products by U.S. customers because they are cooked cherries in water which lack some of the bright color of pie filling and have less overall quality than frozen cherries. Many of the traditional water pack

customers including, consumers and food service customers, have switched to other product forms such as frozen and pie filling which are more preferred to meet their needs. Thus, the domestic segment for canned water pack will likely continue to decline nearly to a level of discontinuance in the domestic market.

The export market, however, is significantly different with substantial potential for growth in this market. Especially in European markets, such as in Germany, water pack cherries are used to make their kinds of traditional pastries and baked goods. Some European customers prefer the water pack cherries over the other packs because they are able to create the pastries and desserts which adequately meet the needs of their consumers. Canned water pack cherries, when compared to frozen cherries, are also relatively easy to distribute to small bakeries and for them to store until needed.

The water pack export market has the potential to grow if the tastes and preferences in the exporting countries continue to demand the products made from this pack. The strategic direction for the export market is to grow, but the growth could be influenced by the availability of the fluctuating annual supplies.

The canned or water pack category has a recent average industry sales of approximately 25 million pounds in recent years. A majority of that has been into the export markets. As shown in Table 10, the future estimated potential movement is projected to be 25 million pounds with a range between 20 to 30 million pounds by 2003. As has been explained, the export markets for this category will be a major focus area for the movement.

4.3.2.4 Demand for juice concentrate. The juice concentrate product category has increased over the past few years due to an increasing demand by consumers for healthy

fruit drinks and less imported supplies of cherry juice concentrate. This has been a benefit to processors and growers because they have been able to use more of the poorer quality cherries which are not suited for pitting but may be made into high quality juice. This is another example of where the industry has been able to add value for more product volume which had often been left unharvested because of marginal quality for pitting especially when surplus supplies occurred.

The sales movement of cherry juice concentrate category in recent years is estimated to have increased some over the previous years. As seen in Table 8, there has been an average movement in recent years of 30 million pounds of raw product equivalent (RPE). By 2003, the movement is projected to potentially be 50 million pounds with a range of annual sales fluctuating between 40 to 55 million pounds. The overall industry strategy for this product category is to strive for continued substantial growth.

Cherry juice and juice products may especially benefit from the more recently documented healthful benefits that come from tart cherries. This is one reason why a growth strategy is appropriate for cherry juice. The anticipated growth from cherry juice and juice products is positive and could potentially be a considerably large market segment for the industry in the future.

4.3.2.5 Demand for pie fill. The pie fill product category continues to be a major market segment for the tart cherry industry to market a considerable amount of fruit for processing. The recent sales volume in this category have averaged approximately 60 million pounds. The category's average sales have continued to maintain about the same level for some time. On the other hand, the threat of changing consumer tastes and preferences away from pie filling could potentially hurt this product category in the future.

The pie filling category has been able to market a fairly stable average of 60 million pounds of fruit during the past few years. The projected target for 2003's movement is to continue to move about the same 60 million pounds with a range of 48 to 65 million pounds. This means the industry's guiding strategy for this product category is to maintain or try to grow the category if possible with the expectation that large market growth is unlikely.

4.4 Balancing supply and demand in the future. The possibility of supply shortages in the tart cherry industry and hence what that might mean for demand quantities in the future is an issue that has been discussed somewhat, but deserves more specific consideration by most industry leaders. Although the surplus imbalance has been a major driving force for such a long time, industry leaders need to give more consideration to the issues of what might happen in the future as the long-run acreage cycle approaches its low point and considerably shorter supplies are more likely.

Because the industry has been so focused on eliminating the excessive surpluses in order to help increase the grower returns, the future supply and demand shortage imbalance possibilities have not been discussed thoroughly. The following analysis addresses the potential possibility of supplies decreasing below quantity demanded.

The possibilities of supply decreasing considerably below the current demand levels is most likely going to happen. As discussed previously in this chapter, during the late 1970s the quantities supplied fell below the potential quantities demanded. The market reaction in the tart cherry industry resulted in increases in prices high enough to reach a general equilibrium in the markets with the smaller supply quantities. The reduction of quantity was good for the short-term prices and profits, but caused some significant

problems by contributing to decreased long-run demand and later difficulties in regaining customers in the long-run after supplies increased again.

As the tart cherry industry now is approaching another more recent low point of the long-run acreage and production cycle, a number of considerations need to be addressed by the industry leadership. Some of considerations by the industry may include: 1) how best to use the FMO's reserve to provide more stability of product availability in short supply years, 2) analysis of implications for previously outlined demand expansion strategies with the possibilities of lower quantities of product available for sale, and 3) consider the implication of higher prices including key threshold levels which might cause major losses of markets similar to that which occurred in the previous short supply phase of the earlier cycle.

Earlier in this chapter industry supply projections and quantity demand projections were estimated to the year 2003. The average estimated supply projection, as shown in Table 7, is 265 million pounds of cherries. The average projection for demand quantities, as shown in Table 8, indicates a potential of 305 million pounds. These two projections indicate a discrepancy of a 40 million pound shortage of supply compared to the potential quantity demanded. This could potentially be a significant issue for the industry to address in the near future.

If the potential shortages of supply occur, the industry would not be able to expand markets to as much as the potential projected demand quantities. Some market customers or segments could potentially be lost due to the reaction of the buyers if adequate supplies are not available or prices are too high for their needs. This might especially affect processors who supply the markets that are particularly price sensitive, and hence have the

potential of declining significantly in volume with the expected higher prices in future years.

One of the most likely results from the problem of supply shortages in future years is that prices for tart cherries will likely increase significantly causing some reduction in the quantities demanded. The expected increases in prices will also likely cause some shifts in the different market categories. Higher demands for those products which better fill the needs of the customers, for example, IQF, dried cherries, and cherry juice will likely cause a higher percent of the pack to be sold into these market use categories. Other products, such as, 5+1 and pie fill, may also be impacted with reduced quantities demanded from the expected higher prices in future years because of the likely decrease in demand for those products.

In the future the use of the FMO reserve to supplement supply shortages in short-crop years many help to lessen the potentially negative reduction in markets because of shortages. Due to the annual fluctuations in production, the FMO reserve could potentially provide a partial buffer, from year to year, for the industry to maintain more stable supplies for some of the markets. This would not totally resolve the major concerns and issues related to the potential shortages in the future, but provide some greater stability in the markets.

Another potential result in the future may be the possibilities of imports filling the expected gap between the quantities supplied and quantities demanded in the U.S. markets. As discussed earlier in this chapter, there have been few if any imports in recent year. The likelihood of imports in the future has considerable potential if prices of U.S.

cherries are too high, and if there are new producing counties who begin to grow tart cherries, perhaps like China or Chile.

4.5 Overview of the supply and demand balance for tart cherries. Although the tart cherry industry has experienced some extremely difficult times the past two decades with respects to large surplus supplies, the future has the potential for a much different outlook. The long-run acreage cycle has been a key influence in the quantity of total supply. The future outlook for the long-run acreage cycle indicates that there is likely to be a continued decrease in acres for the next few years. If this occurs as expected, the industry's total supply will likely be reduced to lower levels as well.

The overall demand for tart cherries has slowly increased over the past two decades to approximately 285 million pounds. Estimates of potential demand quantities during the next few years indicate a potential similar quantities demanded to continue to increase. However, as the potential supplies become less than these demand quantities, the quantity demanded will reduce somewhat to a price sensitive equilibrium.

The future balance between demand and supply will continue to be a major driving force the industry will need to plan and prepare for. The industry leadership, through the TCISPC, needs to address this issue more fully and prepare the necessary strategies to best help the industry when this situation develops.

Chapter 5

TART CHERRY INDUSTRY IMPROVEMENT STRATEGIES

5.1 Introduction. Strategy planning is an important aspect the tart cherry industry has been able to accomplish to some degree. Strategy planning by the TCISPC in several major areas of emphasis has helped the industry to prepare somewhat for needed future industry directions. Major areas of strategic planning emphasis have included demand expansion, supply management, processor pricing, and grower returns.

Through the coordinated efforts of all the different organizations involved with the TCISPC, directed and focused strategies have helped the industry to position itself during the past three years for a positive future outlook. A few of the significant accomplishments emphasized in Chapter 2 from the more comprehensive strategic plan which began in late 1996 include the following: 1) successful management of some surplus supplies through the use of the FMO, 2) development of 5-year strategic plans for demand expansion including promotions, advertising, and a number of other strategies for existing and new products, 3) increasingly higher processor prices for the past three years, and 4) higher grower returns during extremely difficult surplus supply circumstances.

The council has discussed future planning and addressed many of the major issues during many planning sessions. Industry leaders have concluded that there is an ongoing need for strategy planning as the dynamic industry situation evolves overtime. Thus, the council works continuously on the current as well as long-run issues that are important for the industry.

This chapter is also related as past chapters to the second phase of the industry strategic planning and coordinating framework discussed in Chapter 1 (Lyford 1998).

Within this second phase, this chapter is focused on the specific industry strategies component.

5.2 Tart cherry industry demand expansion strategies. Demand expansion for the tart cherry industry is a key necessity for the future growth of the industry. The primary goals or objectives of the industry include expanding market volumes for existing and new markets to continue adequate demand for tart cherries. Additional goals for expanding the industry's demand are to help increase processor prices and increase the returns to growers through market expansion.

This section of the future strategic planning process summarizes a number of different strategies including many from a recently developed 5-year strategic plan developed by CMI (1999), and a number of other industry strategies to aid in demand expansion through coordinated efforts by various industry segments. CMI through its leadership position has recently developed a comprehensive strategic plan for its programs which has been supported by the industry as a whole. Along with CMI's strategic planning process, other industry organizations have contributed to both CMI's plan and to broader industry plans by accepting the responsibilities and roles which apply to their organizations. Much of the coordination between CMI and other industry organizations in carrying out some of the strategies for the industry's demand expansion occurs as part of the discussion with the TCISPC.

The leadership role of CMI in the industry has provided a major focus on industry demand expansion for the growers and processors for a number of years. The various demand expansion programs of CMI have been accomplished through devoted and willing staff with the goal of expanding the demand for tart cherries. The major programs or

areas of emphasis for CMI are domestic market expansion, export expansion, facilitating the development of new products, and other research.

5.2.1 Demand expansion strategies in domestic markets. The tart cherry industry has relied on the domestic markets for a majority of the sales each year. The largest volume product categories included in the domestic markets are frozen cherries (5+1 and IQF), pie fill, cherry juice, and dried cherries. The potential market directions for these product categories were discussed in Chapter 4.

CMI has been and continues to be committed to building long-term domestic demand through an effective and efficient marketing program. With the greatest emphasis of CMI's focus directed to the domestic markets, positive changes have and will continue to occur. Over 80 percent of the sales from tart cherry production each year are sold in the domestic markets, thus, emphasizing the importance for a key program like CMI to continue to direct a majority of its time and resources to those markets.

The following sub-categories emphasize the domestic market areas of most importance. They include the following: 1) consumer retail grocery markets, 2) restaurant / food service promotional programs, 3) food manufacturer markets, 4) school food service communications program, and 5) new product development.

5.2.1.1 Consumer retail markets. CMI's overall goal for consumer retail promotions is to encourage consumers to continue to purchase cherry products. CMI has outlined four major focus areas in accomplishing this goal. They are: 1) to develop consumer promotional programs that pull retail cherry products through the distribution system to help build consumer demand for cherry products at the retail grocer level, 2) to develop trade promotion programs that will push distribution of cherry products, 3) to develop

retail programs that encourage supermarkets to advertise cherry products (i.e. cherry ad contest, cherry theme ads with bakeries, and delis), and 4) to work closer with processors to establish stronger retail promotion partnerships to meet the needs of the cherry industry.

The industry has supported CMI's strategies for the retail markets. Some of the cherry processors and marketing agencies have taken advantage of these retail market strategies by partnering with CMI to do coupon drops, newspaper advertisements, and magazine advertisements in the past and hope to continue to continue to work with CMI in the future. Food manufacturers could also effectively work with CMI by partnering with CMI to do similar advertising and promoting of cherry products in the future.

5.2.1.2 Restaurant/Food Service Promotion Program. The goal for CMI is to develop this program based on what cherries can do for the restaurant or food service business. Three areas of strategy have been outlined by CMI in this section. They are: 1) to develop restaurant/food service programs that showcase cherries as a preferred dessert, using point of purchase material and other incentives, 2) to focus on the take-out trend to increase the number of cherry items available, and 3) to develop a stronger relationships with food service distributors and brokers.

This strategy is targeted to help encourage new buyers as well as return buyers to use POS material developed by CMI to help promote existing products. The POS material prepared by CMI is available to all the different processors, marketers, and sales agencies within the industry to use with their products. Also, this material is made available by CMI to restaurant and food service businesses.

5.2.1.3 Food manufacturer markets. CMI's main goal is to emphasize working closely with food manufacturers to be a source of information to encourage the manufacturers to use more cherries in their current product lines, and to develop new products using cherries. The strategies to maintain and develop contacts with food manufacturers have been outlined in three areas of emphasis. CMI's strategies are as follows: 1) to contact food companies to develop working relationships with key personnel, 2) to develop co-op marketing programs with food manufacturers, and 3) maintain a consistent communication program with food manufacturers and share information obtained with cherry processors.

As discussed in Chapter 2, food manufacturers are one of the most important customer segments in demand expansion for tart cherries. They usually have substantial abilities to do advertizing and promotion of products that are developed by them. Processors and marketers can undertake joint efforts with CMI and to partner with a food manufacturer in offering specialized advertisements or promotional campaigns.

5.2.1.4 School food service communications program. The major goal for CMI in this area is to offer a total package of educational and promotional materials to school food service directors and staff. Thus, CMI provides the promotional materials to the school food service buyers for their use at no costs. CMI's strategies are as follows: 1) to continue with the established program of relaying innovative, practical information about cherries to school food service directors and others affiliated with school food service that pull cherries through the school lunch system, 2) to communicate with food companies who make products with cherries for schools; encourage other companies to provide cherry products for the school market, 3) to work with USDA and other federal or state agencies involved in school food service to showcase cherries in a positive light, 4) to

develop a communications format that brings together school food service directors, cherry processors, other cherry vendors, and government officials to educate all of these people about the school food service market and cherries, and 5) to exhibit at national school lunch food shows and attend other meetings to maximize interaction with all participants in the school food service market.

Some of the other industry organizations involved in School Lunch purchases are CIAB, CherrCo, processors, and sales agencies. These organizations all play an important role in supporting and developing with CMI the best methods to approach USDA in obtaining purchases. Some of the support may be through providing historical information, current surplus supply holdings, and the product categories which are not likely to be sold that year. Other support may be given by contacting government officials to help influence USDA to push for a purchase.

5.2.1.5 New product development. Another area of emphasis for demand expansion by CMI and various other industry organizations and segments is in the development of new products. New products category is an area where continual investment needs to occur to effectively meet the changing preferences of the consumers at retail. However, many of the individual processor and marketing firms in the industry find it difficult to invest enough money into new products because of the large costs involved. CMI has made it part of their emphasis to help stimulate and facilitate such programs.

The following CMI strategies are to help encourage processors and food manufacturers to continue to research and try to develop new uses for tart cherries. CMI has worked very hard in this area in the past and is committed to continue in the future. Their strategies are as follows: 1) to establish a closer working relationship with the

technical staff of food manufacturers and cherry processors to develop more "we" partnerships, 2) working with industry and other outside sources to establish funding for new product ideas that use cherries, and 3) to develop partnerships with food scientists at several major universities to do initial research aimed at developing viable value-added products.

These strategies are centered around the ability for CMI to coordinate with industry firms in developing partnerships with food manufacturers, or other cherry customers who might be interested in developing and marketing new cherry products. This strategy is another way for processors who are willing to work on new products to obtain assistance from the broader industry to support their new product development efforts. Although, profits may not be made for several years down the road, this strategy provides some means for the processors and food manufacturers to reduce some of the investment costs.

5.2.1.6 Other domestic demand expansion strategies. The FMO has also provided significant incentives and opportunities for processors to expand demand through diversion credits for new products. The diversion credits for new products, as discussed in Chapter 2, helps those processors who work on new products to gain diversion credits towards their regulation percentage during the over supply years. This has been a very positive strategy supported by the majority of the industry for encouraging long-run new product development and growth.

5.2.1.7 Summary of domestic demand expansion strategies. These five areas of emphasis (consumer retail promotions, restaurant/food service promotion programs, food manufacturing contacts, school food service communications program, and new product development) are all areas of considerable importance to CMI as well as many other

industry segments. Through the development of the above outlined strategies, CMI can significantly help the industry expand the demand of tart cherries. Whether the expansion is through the use of existing products or new products, the goal is to increase demand for cherries.

5.2.2 Industry coordination for demand expansion in export markets. CMI has devoted considerable amounts of resources to expanding the export markets. The tart cherry industry is generally quite supportive of CMI's export expansion strategies for the industry as a whole.

The two main export markets are to European countries and Japan. For more than a decade CMI has participated and funded the development of the Japanese market. Recently, CMI has refocused their efforts in export expansion more toward the European markets.

CMI has anticipated that the expansion of export markets is important to the long-term success of the cherry industry. Through the following strategies, CMI is planning to redirect the focus of the export expansion programs and to use its resources in markets which will benefit a majority of the industry. The CMI export strategies are as follows: 1) maintain sources of funding to continue promotion in the Japan and Korean markets, 2) to develop a strategic plan, short-term and long-term, to market and promote cherries in Europe, and 3) to research potential market opportunities of cherries in South America and other parts of the world.

The goal of the industry's redirected and reorganized export expansion program is to develop a strong, integrated program for the cherry industry with leadership by CMI and with close involvement of the processor exporters, marketers, and CherrCo. In order to

do this there needs to be involvement in the planning by all major industry segments who are involved. Market research needs to be done to better understand the changing export markets, the customers' needs and preferences, and where the markets are that the U.S. should be targeting, etc.

5.2.2.1 Refocusing the export expansion program. A refocusing of the overall export expansion program involves CMI processors, marketers, and CherrCo. These export participants of the industry have been jointly developing the revamped export expansion plan through the use of the newly formed U.S. Cherry Export Council. In order to address the needs of the export customers, the industry needs to become more knowledgable about the different uses of cherry products, market niches, and potentials for market growth in current and possible new export countries.

5.2.2.2 Export expansion program funding. There are several sources of funding for export expansion programs by the tart cherry industry. These include the state and federal governments, cherry processors, cherry marketers, and CMI funds. MAP funds may be obtained from USDA-FAS to help promote generic brand products by the industry. MIATCO funds also can come from USDA-FAS, but are handled through Michigan Department of Agriculture (MDA) only to be used on branded Michigan products.

To obtain MAP funds an industry promotional organization such as CMI needs to apply to USDA-FAS each year with a specific program plan as to how the funds will be used. Also included in the application, CMI needs to commit to matching the funds with a specified amount of the industry's funds. These combined funds are then used by CMI to carry out the export expansion program for the industry emphasizing generic brand funding.

To obtain MIATCO funds, CMI needs to apply to MDA each year with a similar plan of how the funds are going to be used. These funds are targeted to be used for products which are branded with a Michigan label on the product. These funds are matched as well by the processors who use them to help develop and expand export markets by promoting Michigan products.

5.2.2.3 Export expansion program implementation. CMI will be the facilitator who helps the exporters to develop, serve and strengthen trade contacts, and establish business relationships in export market countries. In order to do this, there needs to be coordination and cooperation from those involved in the U.S. and those from the importing countries.

Specifically, CMI is going to try and implement an export expansion program that helps to accomplish the goals they have set out in their strategic plan. In order to do that these are the activities which need to take place. CMI will focus on identification of new international markets with appropriate cherry products that are demanded and increase the export opportunities. Michigan State University will work closely with CMI, processors, and sales agencies to provide some analytical assistance in obtaining and summarizing certain kinds of needed information.

CMI, in partnership with the processors and marketers in the industry, through the U.S. Cherry Export Council, will develop and implement action plans to expand exports of cherry products to established and new export markets. Some of the action plans will use MAP funds combined with industry funds to be used for generic promotions for Michigan tart cherry products. Also, MIATCO funds will be made available to all processors who want to be part of using branded funds to promote Michigan tart cherry products.

This refocusing of the export demand expansion program of the tart cherry industry which is currently underway is an excellent example of the coordinated efforts of the many different organizations and industry segments. Thus, this is an example of one fundamental concepts of CMI and other to involve many organizations in working together to attempt to increase the sales of tart cherries. The export expansion strategies have the potential to successfully help the industry to increase more exports over time. Also, it could be a good model for effectively coordinated efforts involving markets in the domestic markets.

5.2.3 Overview of industry demand expansion strategies. Future growth and economic returns for the tart cherry industry will be influenced substantially by the ability of the industry to develop effective strategies which maintain demand in many product categories as well as expand demand in new value added product categories.

CMI has played a major role in the past for developing programs to help the industry to go forward in demand expansion. CMI has continued to be a leader for the tart cherry industry and has established many demand expansion programs to continue to lead the industry in the future. Many of the strategies developed by CMI include a number of aspects which relate to and are integrated with the contributions of other organizations to successfully implement the strategies.

Although CMI has outlined goals or objectives to accomplish the strategies in each of the major areas of emphasis, other industry organizations such as CIAB and CherrCo can also contribute considerably to the success of these expansion programs. The demand expansion goals established by CMI help to provide the initial and necessary steps for achieving the strategies. By working together in a coordinated fashion, the goals for the

industry to continue to be competitive in the domestic markets and export markets in the future may be accomplished.

5.3 Supply Management Strategies. Supply management for the U.S. tart cherry industry, as discussed in the previous chapters, has been the major need for a number of years. Through the use of the FMO, supply management for the past three years has been somewhat successful in reducing the surplus supplies and bringing demand and supply closer to an approximate balance.

A number of amendment changes and board policy changes are being discussed and analyzed by the board and the TCISPC to help facilitate effective policies related to the FMO. The following strategy areas for the FMO have been developed by the CIAB board with analysis help from MSU extension.

5.3.1 Key issues related to the FMO. During the first three years of operation, the CIAB has faced, analyzed, and re-examined a number of important policies and related strategies for the FMO. Some of these complex issues included equity within the industry and to clarify the permitted parameters of the FMO through amending the language used in the order. Many of these issues involve different views by industry participants regarding the best approaches to use the FMO to most effectively benefit the industry. Some also arose because of legalistic interpretations by the USDA in their overall "watchdog" role.

The CIAB has continued to discuss alternative ways to improve the marketing order to meet the needs of the entire industry and industry participants with varying circumstances. This discussion and program improvement process has helped resolve some issues and help to increase the effectiveness and efficiency in how the order operates

on a number of aspects. Nevertheless, a number of important issues continue to be discussed and debated, sometimes with considerable furor.

There are two main categories of action the board can use to make particular changes with the order after their discussion process. These are: 1) through board policy changes and 2) through amendments to the marketing order. The board policy changes must be accomplished through a super majority vote by 2/3 of the board. More substantial changes to the way the order can be operated may need to be accomplished through amendment changes and a referendum process.

5.3.1.1 Board policy changes intended for long-term success. The CIAB board representatives have the responsibility to represent their specific districts in making policy changes when necessary. However, the board also has the important responsibility to address various policy changes with the interest of the entire industry. This is difficult at times because what is the best for the industry as a whole may or may not be perceived to be the best for a particular district.

The various policy changes are generally discussed at great length by the board members before coming to a decision. Some of the major long-run board policy issues recently discussed by the CIAB include the following: 1) should diversion credits for exports be continued? 2) should the allowance of diversion credits for new products be continued? 3) methods of in-orchard diversion, and 4) different methods for using the optimum formula during years of regulation. The issue concerning whether diversion credits for exports should be continued will be further discussed in this section followed with a strategy plan developed by the CIAB.

Should diversion credits for exports be continued?

As discussed in Chapter 2, diversion credits for exports were used as an option of surplus cherries and a method to try and help expand sales in to the export markets. Many in the industry and on the CIAB believe that it is important to expand various markets including the export markets and the use of diversion credits is an appropriate method for serving that purpose with the FMO. This can be accomplished by allowing a secondary market use for exports for surplus cherries and thus reducing the amount of surplus which might otherwise be left unharvested. These diversion credits are applied to the surplus regulation requirements during the regulation years helping to meet those participants regulation percentage.

There are a number of controversial aspects discussed by the CIAB related to diversion credit for exports. One of these is that some growers and processors perceive that there is an equity problem with export diversion credits and they perceive that their neighbor growers with exports have been getting the upper hand. The perceived inequity by some is that some growers and processors are leaving more cherries unharvested so they are doing more to help reduce the amount of cherries available to the market. The following example helps to illustrate the controversy between growers and processors.

Processor A sells their entire crop into the export market, perhaps for a much lower price than can be obtained from the domestic market. In doing so, the growers of this Processor A do not have to leave any of their fruit unharvested during the surplus regulation years. However, Processor B, who does not export any of their fruit, sells all of their sales into the domestic market, perhaps for a much higher price. Their growers, during surplus regulation years, have to leave some of their surplus fruit unharvested

because this processor may have no other alternative diversion activities to offer the growers. Thus, the controversy of which processor and growers has the greatest burden placed upon them because of the different markets the processors have entered into during the surplus regulation years. Processor A and that processor's affiliated growers, on the other hand, often take the position that Processor B could also participate in the export market.

The CIAB purposed a change in the board policy from diversion credit for exports as were allowed in 1997 and 1998 to the use of exemptions for exports during the 1999 year. The proposed change by the CIAB was in response to the allegations by some processors and growers about equity issues discussed earlier. This change to exemptions was argued by some that it would provide some but less encouragement for processors to export. The CIAB discussed various options and decided in June of 1999 that exemptions for exports was an acceptable alternative in considering various aspects of the issue.

After considerable discussion and analysis, the industry was informed by USDA that the exemption approach would not be permitted because of insufficient justification for this approach in the original marketing order hearing testimony. The CIAB and other industry leaders have recently decided to reinstate diversion credits for exports. This long-run strategy for developing export markets through diversion credits is important to the industry and potentially could open markets that have not been filled with U.S. cherries.

5.3.1.2 Needed amendment changes to the FMO. The tart cherry industry has been able to effectively use the FMO to make progress toward some of the goals for supply management. In addition, there are a number of key amendment changes needed to help

make the FMO even more effective and efficient. Some of the reasons for the needed amendment changes are to develop more equality and equity between all the producing states, to better meet changing industry conditions, and to help clarify what actions or strategies are permitted with the order.

Amendment changes to modify the marketing order:

The marketing order provides that states or districts which have a three year average production of more than 15 million pounds are the only districts which must participate in the all important surplus management actions. These districts include North West Michigan, West Central Michigan, South West Michigan, and Utah. New York has also been a regulated state, although their three year average production dropped slightly below 15 million pounds which allows them to be unregulated. All of the other states, including Washington, Wisconsin, Pennsylvania, and Oregon are not regulated for surplus management because the average production in each of these states is less than the 15 million pound threshold as stipulated in the marketing order. Hence, they are able to harvest and process their entire crop even when the industry has surplus supplies and Michigan and Utah must reduce their production to mange the surplus. It is not surprising that Michigan and Utah view this important free rider situation as unfair and inequitable.

Because of this situation, the CIAB has proposed an amendment to provide that all tart cherry producing states must participate in the surplus supply regulation when this is needed by the industry. This amendment is somewhat controversial because of the difficulties in satisfying all the industry participants. The currently regulated states, Michigan and Utah, advocate that all states should be required to participate in the surplus management actions. By contrast, many in the states which are currently not regulated

would prefer to remain in that status and let Michigan and Utah reduce the industry's surplus supplies.

This amendment idea has been the subject of considerable debate, and has the potential, if not passed when voted upon, to influence some growers and processors in the currently regulated states to favor terminating the order. This proposed amendment change, to move the regulation production threshold for a state to zero has the potential of helping to unify the industry so that all growers and processors feel the impacts of regulation equally.

Some of the reasons why the CIAB is proposing the amendment to include all producing states for supply management regulations include the following: 1) the perceived inequity by the processors and growers in the current supply management regulated districts, 2) representatives of districts which are not regulated may nevertheless vote on the CIAB issues that impact primarily the regulated states, and 3) the currently unregulated districts have a substantial economic advantage over the regulated districts from the FMO program. This is because the unregulated districts are able in a year of surpluses and hence supply regulation to harvest their entire crop without any surplus restrictions while the regulated districts must modify or reduce their volumes marketed to reduce the industry's surplus supplies. The current situation is a good example of a free-rider problem by the currently non-regulated states.

Amendment policy changes to clarify the authority of the CIAB:

A number of additional proposed amendments have been developed by the CIAB and presented to the USDA during the past two years. A majority of these proposed amendment changes pertain to clarifying what is permitted to be done with the marketing

order and by the CIAB. Many of these are related to what the CIAB contends are mis-interpretations with USDA about the original intended authority of the marketing order. These "administrative" amendments are relatively uncontroversial within the industry and are needed to clarify the CIAB's authority and to help the order operate more effectively. The following is one example of an amendment change to help clarify some of the mis-interpretations.

> USDA Estimate - to give the CIAB the flexibility of either using the USDA-NASS pre-harvest production estimate in June, or to use another crop size estimate for the pre-season industry production for the FMO's calculations regarding the optimum supply formula.

5.3.2 Overview of supply management strategies. The supply management program under the FMO needs to develop more comprehensive long-run strategic plans. By establishing future directions for supply management, the industry can prepare for changing circumstances that are likely in future years.

There has been some long-run planning concerning the FMO and how it can operate most effectively. The CIAB has continued to discuss methods on how to improve the effectiveness of the FMO for the future. These discussions have included board policy changes on a number of key issues and also a number of very complex issues which are still being discussed at length. The CIAB has also made proposals to change amendments such as which will create more equality of FMO treatment within the industry. These proposed amendment changes are still being discussed and considered by the industry and USDA.

5.4 Processor pricing strategies. Future processor pricing strategies is another area to which the industry has given considerable attention. As discussed in Chapter 2, CherrCo was an important accomplishment of the initial phases of the comprehensive strategic planning process. This new organizational strategy was developed to strengthen and rationalize processor pricing and to stabilize within season prices for processed cherries. Also summarized in Chapter 2, the success of the first three years of CherrCo has encouraged the industry to continue to coordinate and develop strategies to strengthen processor pricing for the future.

A majority of the industry are supportive of CherrCo's position and strategies for processor pricing. Because CherrCo is a cooperative, the strategic plans developed within the coop are not public information and some are not shared outside the organization. CherrCo does coordinate and work together with CMI, CIAB, and other organizations in attempting to develop and implement needed broad industry strategies.

This section will consist of suggested strategies for the future that CherrCo might consider. The suggestions are based upon considerable analysis by the author of the thesis and discussion with industry leaders in gathering their insights.

5.4.1 Potential future focus for CherrCo. After the moderate but important successes of their first three years by CherrCo, a number of potential future strategies which CherrCo could explore include: 1) expanding their membership to overcome the free-rider problem, 2) long-term contracts with food manufacturers and processors, 3) establishing a two tier pricing mechanism for the different product category pricing needs, and 4) working with CMI on the revamping and refocusing of the industry's export demand

expansion program. The following example is one strategy which CherrCo might use to help to further its success in the future.

Long-term contracts between food manufacturers and tart cherry processors have been considered for a number of years. However, due to a number of problems including 1) the inability of small processors to guarantee delivery of large volumes over a number of years and 2) the unwillingness of food manufacturers to commit to long-run prices and volumes, the tart cherry industry has not been able to successfully implement such a strategy to any substantial degree. Now, with the help of CherrCo, the industry is more likely to be able to use such contracts with large food manufacturers.

CherrCo's role in the use of long-term contracts might be to help facilitate the combining of members cherries into large saleable quantities or pools. This may be accomplished by combining different members tonnage together to fill the needs of certain food manufacturer customers. Depending on the contract, CherrCo could be the key facilitator for fulfilling the requirements laid out in the contracts.

Some of the potential problems which CherrCo might have to overcome in developing multi-year contracts could be related to processor involvement, possible short supplies, and the impact of rising prices with supply shortages. Of these three problems, rising prices could be a key reason for not wanting to develop a long-run contract in the near future. The problem might occur if a contract were developed at this time while grower returns are still low and later there is a significant increase in prices over the next few years. The processors and growers tied into a contract at lower prices would likely not want to deliver on the contract to when higher prices outside the contract may be possible within a few years. Thus, CherrCo will need to develop ways to account for

rising prices (and possibly lowering of prices) so that the contracts can be beneficial to all the participants.

5.4.2 Summary of processor pricing strategies. CherrCo has been successful in strengthening and stabilizing within the season processor prices for the past three years. Although there is little public information concerning CherrCo's long-run strategies, there continues to be strategic planning in this areas. CherrCo's future possibilities include growing in processor membership to include more of the entire industry and multi- year contracts.

5.5 Grower returns strategies. The need for profitable grower returns to cover their costs is increasing in importance due to the struggles that growers have been faced with for so many years. Some of the reasons for the needed stronger, profitable returns to growers include: 1) grower returns have been substantially below their typical cost per pound for most of the last 15 years, 2) growers have felt the economic difficulties from other commodities such as apples recently, combined with the economic difficulties of the tart cherry industry, and 3) re-investment into the farm operations have been very low for a number of years. For example many growers are operating entirely with older machinery and with aging orchards.

The interrelationship between expanding demand, supply management, and strengthening of processed cherry prices are related to the potential of increased returns to the growers. Without these aspects combining to help the industry become more economically viable, many growers would not be in a position to continue. The strategies outlined earlier in this chapter to expand demand, combined with the essential supply

management program to reduce surplus supplies when necessary, help to make it possible for processors to strengthen the prices and return more to growers.

The TCISPC has discussed the low grower returns issue considerably. Grower returns have increased substantially from a recent low of 5 cent in 1995 to an estimated 20 cents in 1999. Nevertheless most growers and industry leaders rate the area of low grower returns as a problem area of continuing priority. Developing strategies which will alleviate the problems of low grower returns is difficult and clear-cut answers are not evident. The TCISPC has suggested that one step which is needed is for processors to work more closely with their growers to increase their communications and inform the growers of the many different aspects involved in the processor pricing and grower returns. By providing more information to growers and working together, the growers and processors can make some additional progress on this issue instead of continually pointing the finger.

The TCISPC has suggested a strategy to help improve communications to growers about some of the major variables that influence their returns. These variables include the following: 1) raw to finished product yields, 2) raw grades, 3) sale prices of processed cherries (as influenced by finished product grades), 4) type of pack, 5) processing costs, and 6) FMO options that are used for surplus cherries and their costs and returns. The TCISPC encourages processors to communicate to growers complete information on these variables and how the variables impact each grower individually.

5.5.1 Summary of grower returns. Grower returns have been a major concern of the tart cherry industry for a number of years. The low grower returns and difficult economic conditions of the industry have made it so many growers have exited from the production

of tart cherries. Also, many of the growers who have continued to grow tart cherries have received lower than cost of production returns.

The major strategies to help alleviate the problems dealing with low processor prices are centered what happens with tart cherry supplies. The strategies developed throughout the other sections of this chapter will all have some impact on grower returns. The suggested strategy for better communication between growers and processors about the major variables that influence returns is one method for growers to understand better some of the reasons their returns may be lower or higher in certain years.

5.6 Overview of tart cherry industry strategies. The tart cherry industry has, through the coordinated work of industry leadership, developed a comprehensive strategic planning effort to give more future direction to the industry. This strategic planning has been a significant accomplishment over the past three years and continues today. Demand expansion, supply management, processor prices, and grower returns have all been some of the focus of attention throughout this planning process. The process has an ultimate goal of helping to increase grower returns compared to the unprofitable levels which have prevailed since the mid-1980s.

The FMO has played a very important role in providing a closer supply and demand balance and hence providing a solid basis for CMI and CherrCo with strengthened opportunities to develop effective overall strategies for the industry's future. The industry, including CMI, has devoted considerable resources for promoting existing products, markets, and developing new products and markets. CherrCo has successfully increased processed cherry prices over the past three years and has the goal of maintaining their positive influence in strengthening processed cherry prices in the future. CherrCo's

success will not be possible without the help of the supply management FMO which can manage supplies to reduce surplus supplies of cherries on the market when these occur so that prices can be strengthened.

Through the coordinated efforts of industry leaders a number of new program strategies and other developments have occurred. The future strategic directions for the industry appears to be overall quite positive due to the evolving acreage production cycle. Many of the strategies and plans by different industry organizations are centered on working together in partnerships and building stronger relationships to jointly help the industry progress and take advantage of the many strengthened opportunities available. Throughout the past three years, the coordinated efforts of the industry have helped to stimulate a progressive movement from a very negative and difficult economic position in which the industry was situated during the late 1980s and early to mid 1990s to a more positive environment at the present time. The strategies discussed in this chapter are intended to continue to help guide the industry in a positive direction in the future.

Chapter 6

OVERALL THESIS SUMMARY

6.1 Introduction. In a number of respects, the direction of the tart cherry industry's future will likely be substantially different than what has occurred during the last 15 years. The economic difficulties of the past caused by excessive surplus supplies have led to persistently low grower returns and processor prices. The recent implementations of the FMO and CherrCo the continued leadership of CMI for demand expansion, and the prospects for significant improvement in the demand supply balance have dramatically improved the possibility of a much more positive economic future of the tart cherry industry than during the late 1980s and the 1990s.

The main purposes of this thesis have been to summarize the evolving economic situation of the tart cherry industry, analyze the current industry status, and analyze future industry strategies that are being developed and implemented through coordinated industry efforts. The Tart Cherry Industry Strategic Planning Council (TCISPC) has been a primary organization for industry visioning analysis and insights in helping to develop this thesis. Through the efforts of industry leaders and the TCISPC, over the past three years a comprehensive strategic planning effort has helped to stimulate plans and implementation of various strategic directions. This has helped to position the industry to be more competitive and to obtain more positive economic returns. These strategic planning efforts have provided the industry with a coordinated and positive future planning direction to help accomplish these areas of need.

6.2 Overview and broad perspective of evolving strategic directions of the tart cherry industry. The comprehensive strategic planning efforts by the tart cherry industry

during recent years have evolved from and built upon earlier strategic planning efforts. These earlier efforts were directed toward certain more focused problem areas, such as management of the surplus supplies. The recent strategy planning efforts of the TCISPC to develop more comprehensive strategic plans is a more coordinated approach. This has helped industry organizations to strengthen their partnering and working together to solve a number of major industry problems.

As discussed in Chapter 2, prior to an industry summit conference in 1996, many efforts to develop strategies to overcome some of the industry's major negative driving forces, such as, excess supplies, were pursued. In doing so, the industry attempted to address certain specific and targeted issues. These early attempts to coordinate strategies to overcome the excess supply problem helped in the long-run to pull the industry closer together for the recent more comprehensive strategy planning efforts.

The industry summit conference which focused on needed future strategic direction was held during the fall of 1996. At that time, the new supply management FMO, which the industry had worked on for years, had just been passed in an industry referendum. This provided an important new base on which to build additional strategies for industry improvement in the future. At this summit conference, the industry decided to give priority in their strategy development efforts on 1) the future development and implementation of strategies and policies of the new FMO, 2) formation of a new "super co-op", 3) well-coordinated demand expansion program efforts, and 4) formation of a broad based industry strategic planning group or council.

During the next few months following the conference, the industry succeeded in developing CherrCo as a new federated cooperative to help rationalize and strengthen

processor pricing. The new marketing order program was also further and more specifically organized and implemented with many key policy decisions and development of strategies on specific issues. The TCISPC was also formed and has become quite active for broad-based industry leadership and coordination of ongoing strategic planning within the industry.

The TCISPC was formed to help the industry by providing an organization for facilitating and stimulating more comprehensive strategic planning. Through insightful and visioning leaders who represent the major cherry industry organizations participating on the council, overall plans for future strategic direction have been developed. The council meets together regularly to discuss major issues that pertain to such key issues as supply management, demand expansion, processor pricing, and grower returns. By analyzing these key and important areas, strategies for future direction for the industry have been and will continue to be developed.

The industry has experience some significant progress during the past three years in reducing surplus supplies, higher processed prices, and somewhat improved grower returns. These significant indicators of the industry's progress are related to the industry's new programs such as the FMO and CherrCo and to the overall efforts of the TCISPC.

The industry's future strategy planning efforts will need to be oriented toward the evolving industry situation and new challenges. One area which will deserve considerable attention will be the possibility of supply shortages. The council will need to further develop strategies on how the industry might handle this and other evolving circumstances in the future. Although some planning has been done related to supply shortages, the council will need to further consider all the related issues. Otherwise, the possibilities of

having a reoccurrence of substantial long-run surplus supply problems may continue to occur in the future.

6.3 Evaluation of the tart cherry industry's strategic planning process. The tart cherry industry's strategic planning process with its evolving evidence of some effectiveness, may provide a model for other commodity industry strategic planning to improve industry performance. The strategic planning process for the tart cherry industry has evolved into a coordinated and effective working partnership between many different industry organizations and the university. These cherry industry organizations with the help of MSU extension, provide visioning, direction, and a broad perspective of what potentially could happen in the future and hence what strategic directions are needed by the industry. This partnering and coordinated planning effort brings many different aspects of the industry into one broad based organization to work together in developing needed future direction.

Other commodity industries have become interested in exploring and initiating similar councils within their respective industries to do similar industry strategic planning as is being done within the tart cherry industry. By using a broad based council to help industry strategic planning, the whole process of doing research, analyzing, discussing different alternatives, and strategy implementation has a much greater impact and success on the industry because of the number of different organizations involved. These organizations add greatly to the needed analysis. A "model" for industry planning methods needs to include organizational representatives from all aspects of the industry. Without a organization with a broad total industry perspectivel, some aspects or interests of the industry may not be given adequate consideration.

Strategic planning in different ways by the tart cherry industry has been occurring for a long time. The TCISPC is a continuation of the efforts of many others who have worked for years to bring together a industry planning and progress. The TCISPC and its especially broad based, comprehensive perspective on the industry's issues is also somewhat unique.

The council has been successful in developing strategies over the past three years to deal with improved industry coordination and a number of key problem areas. Although the specific strategies for the industry's future circumstances may be different, the council, working with the industry and its various segments, will continue to develop appropriate strategies. Continuing to coordinate efforts between demand expansion, supply management, and processor prices, the council will continue to address many different issues which may arise.

In doing this thesis, the positive experience of working with the industry leaders to obtain information has provided an opportunity for much greater understanding regarding the industry strategic planning approach. Pulling togther all the many different aspects from the various organizations is extremely complicated at times and only through a coordinated effort can this be accomplished effectively. The TCISPC works together as a group of unified leaders to find the best possible solution to the most prominent issues the industry faces.

The council was organized to represent all the different interests and segments of the industry. These include major industry organizations, processors, growers, marketers, cooperative, and buyers. By including all of the different segments of the industry, the council has been able to successfully help the industry as a whole. Although the TCISPC

has been successful and supported by the industry, there are some who feel that this council needs additional representatives from certain industry segments.

The council has successfully developed strategies which have been both short-run and long-run in nature. Some of these strategies have been successful and positive in helping to attain their specific objectives. Others have not yet been successful and are being re-analyzed, modified, and new strategies are being developed.

In the future, the council will need to continue to address various immediate issues as well as to continue to work to develop appropriate long-run strategies. Substantial long-run planning has occurred and this provides an excellent overall direction for the future. However, if there is an area which needs further attention by this council, it may be in the area of more long-run planning on certain issues.

The tart cherry industry strategic planning approach has helped to broaden the understanding of many key problem areas and has strengthened working together as an organized industry to achieve many different goals. The broad perspective of working together as one organization to develop needed future direction for the tart cherry industry is being accomplished to a substantial degree. By uniting the university expertise with industry leaders, continuous structured strategic planning will continue in the future. Continued effort and progress is needed to help the industry cope with its dynamic and constantly evolving circumstances.

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