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# Apple Industry Strategic Planning and Integration With University Research

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A major project is underway on strategic planning with the Michigan apple industry. Emphasis has been on crafting strategies designed to enhance the competitiveness and economic viability of that industry, including both the primary domestic markets and for the expanding export markets.

The industry strategic planning framework has provided an excellent basis for linking a number of interesting and useful research components closely with the industry. Industry interest in this strategic planning approach has been high. They perceive the mutual benefits of such forward-oriented planning, and recognize the potential external gains that are broader than can be achieved with only an individual firm focus. They also recognize the need for concerted strategic planning and closer cooperation among the vertical segments of the industry. They have demonstrated their high interest in the industry strategic planning process by providing supplemental financial support and substantial leadership involvement. Industry leadership has also been closely involved in planning certain research components related to the industry strategic planning. The strategic planning approach provides an excellent framework for integrating the research results back to key industry decision makers.

This work with the Michigan apple industry is presented here as a case study of this industry strategic planning approach. Some of the patterns and that we have observed and the approaches that have been used would likely also be relevant for strategic planning with other industries as well.

A key element of successful strategic planning has been the active involvement of industry leaders from various segments working together to accomplish some of their common goals. They have worked toward improved competitiveness for their industry by reduc-

ing some of the major industry problems and by facilitating needed changes for industry improvement.

The strategic planning work with the Michigan apple industry has involved both economic research and multi-disciplinary research approaches by university teams. The research efforts have been closely integrated with the extension efforts both by on-campus faculty and by field extension agents. A very important aspect also has been the university teams working very closely with the industry leaders.

The experience of the Michigan apple industry indicates that strategic planning with an *industry* focus seems to have great potential. This is demonstrated in part by the Michigan apple industry's willingness to devote considerable effort to the strategic planning approach. On the other hand, industry strategic planning is not easy. It is much different, and considerably more difficult, than is strategic planning with an individual firm or organization. An industry has many decision-makers including many different kinds of firms each with their own specific goals. There are also several vertical levels within the marketing system. In the case of the Michigan apple industry, there are also a number of different industry organizations. This industry, as is typical of many commodity industries, has many complex problems with a number of interrelated driving forces and key factors that must be identified and taken into account.

Another reason industry strategic planning is much more difficult than strategic planning by an individual firm is the absence of an inherent overall organizational force to see to it that the industry will work together for common strategic planning benefits. There is no CEO representing an *industry* who is in a position to decide that everyone will cooperate, do the strategic planning, and then implement the plan. Thus, industry strategic planning involves many interesting complex problems and challenges.

If major results are going to occur in industry strategic planning, the industry must make it happen. University staff can, through research and extension, provide useful analysis, information, and assistance. A partnership approach is a necessity, however, for effective university involvement in an industry strategic planning effort. Because of the complexities in an

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industry strategic planning approach and the need for partnership to accomplish the objectives, team efforts are very important. A team of committed, and hopefully visionary, industry leaders is a crucial element for this approach.

In the case of the Michigan apple industry strategic planning effort, the university multi-disciplinary research team has been related to an on-going project which is called the "Status and Potential of Michigan Agriculture". This project was done with a focus on planning for Michigan agriculture to the year 2000. The strategic planning efforts with the Michigan apple industry are partly related to a follow-up project in which the multi-disciplinary research team members from the University have been working with selected problem areas that have been identified in the apple industry during the strategic planning process. This project has also utilized valuable input from an extension team of field agents and on-campus specialists who work closely with the Michigan fruit industry.

Initiating an industry strategic planning process effectively requires a number of important aspects. It is important to have these aspects well-designed because of the complexities involved with industry strategic planning and the need to effectively pull together the many diverse participants in the industry, including industry organizations, growers, packers, shippers, processors, and others. Broad-based industry organizations play an important role in this process. In the case of the Michigan apple industry strategic planning project, the Michigan Apple Committee, which is comparable to the Washington Apple Commission, although on a much smaller scale, was particularly important in getting the process started. The Michigan Apple Research Committee was also initially a key industry organization.

The Michigan Apple Committee's interest in strategic planning for the broader industry arose in-part because they have been doing strategic planning for their own organization for a number of years. As a result, they have had a positive view of the potential benefits of a strategic planning approach. The Michigan Apple Research Committee was also interested in strategic planning--particularly to aid them in developing an integrated long-term plan on research priorities for the industry. With these positive orientations toward strategic planning, both industry organizations were receptive to the idea of expanding the focus to include strategic planning for the entire Michigan apple industry.

Another element that stimulated some interest by the apple industry in strategic planning was the awareness by some Michigan industry leaders that the competing Washington industry had in recent years been making use of a "Washington Tree Fruit Industry Task

Force." There was some awareness that this Washington industry task force had been successful in stimulating certain important changes to improve their industry. Michigan is interested in using a similar approach to try to improve Michigan's competitiveness, especially relative to Washington which is a very important competing region.

To facilitate the industry strategic planning process, it was decided to form the Michigan Apple Industry Strategic Planning Task Force. This task force involves all major Michigan apple industry organizations and industry segments. The Michigan Apple Industry Strategic Planning Task Force, as illustrated in Figure 1., includes representatives from the Michigan Apple Committee, the Michigan Apple Research Committee, the Michigan Apple Shippers Association, the MACMA Processing Apple Growers organization, the Michigan State Horticultural Society, apple processors, the Michigan Association of Pomesters, and the Michigan Apple Promoters. The latter two are apple grower groups. The task force also includes a Michigan representative with the International Apple Institute to maintain a close link with this important national apple organization.

The strategic planning task force has proven to be a very useful vehicle to pull together the diverse segments and interests of the apple industry in a forward-looking strategic planning framework. The task force is a means to focus all of these major segments of the industry including growers, shippers, processors, and the major industry organizations on the complicated tasks of joint industry strategic planning.

One of the early research components of this project which helped solidify the Michigan strategic planning effort was a comparative analysis of strategic planning efforts in selected other industries. Information was obtained from the Washington Tree Fruit Task Force on their approaches, major problem areas, experiences, and successes. Information on the Washington experience was useful to the Michigan Apple Industry Strategic Planning Task Force as a similar organizational model. A report from New York, which was done by Cornell agricultural economist Bruce Anderson, was also used to illustrate how industry strategic planning can be useful. This report focused somewhat on strategic planning for a key apple industry organization with important implications for the broader New York apple industry.

A competitive market analysis was also requested by the Michigan Apple Industry Strategic Planning Task Force as a means to clarify Michigan's current competitive position, as well as to show how this position has changed in recent years relative to other major regions. This research component included analysis of important overall market trends as well as

some of the driving forces that affect Michigan's changing competitive position. This was done for each of the four major markets of the Michigan apple industry, including fresh, canning (which is mostly applesauce), juice, and slices. The results illustrate and clarify for the Michigan industry some of the important changes that have been occurring and provide important baseline information for the industry strategic planning efforts.

An especially important component of the research related to the industry strategic planning efforts has been an industry situational analysis or a modified SWOT analysis. The SWOT analysis is a useful approach that has been well worked out by the business school discipline that includes an evaluation of industry-level strengths, weaknesses, opportunities, and threats. Our experience has been that the Michigan apple industry was quite receptive to this overall approach—but with some modifications.

The apple industry leaders readily agreed that an analysis of some of the industry's strengths is important. We also found that it is useful to present the approach as an analysis of *strengths of the industry that can be built upon for future industry benefit*. The industry has also been receptive to analysis of the opportunities of the industry. In this case we have found that expressing it as *opportunities for the industry that can be more fully exploited in the future* is a useful and more acceptable way to approach the analysis.

After considerable discussion among the Michigan Apple Industry Strategic Planning Task Force, the industry leaders decided that a combining and rephrasing of the weaknesses and threats of the SWOT analysis would be desirable. They decided to combine these two and to call the area *issues, challenges, and problems*. In some cases the industry leaders feel that perhaps even the word "problems" is one to be de-emphasized. The industry leaders recognize that to accomplish effective industry strategic planning, there are very important intra-industry political aspects that must be handled carefully in order to build and maintain a commitment of industry leaders to the industry strategic planning process. Thus they believe that the use of the SWOT terminology that includes the words "weaknesses" and "threats" increases the risk of turning off or alienating part of the industry thus causing them to not participate or to drop out of the strategic planning process.

The modified SWOT analysis also included an analysis of major driving forces that are or will be affecting the industry. Throughout this analysis there has been heavy emphasis on the competitiveness of the Michigan industry and how this is related to the major

driving forces especially those that are reflected in the markets.

The industry situational analysis, or modified SWOT analysis, has been a very useful base part of the industry strategic planning efforts. In addition, a major component of the research has been to analyze various action alternatives that the industry has identified as possible ways to achieve the needed changes in order to improve the industry's competitiveness and economic viability. Considerable emphasis has been given to desirable industry strategies that may combine several of the action alternatives as means to help move the industry in the needed directions for the future.

As part of the overall research analysis, the apple industry strategic planning task force requested that M.S.U. agricultural economists do a series of industry surveys. This request was based on the recognition of the leaders on the task force that they serve in this role as representatives of the broader industry and that real success in industry strategic planning requires a broad base of commitment within the industry. Therefore, they requested that as part of the overall process, there should be several surveys conducted of shippers, growers, packers, and processors.

All of the major Michigan apple shippers were surveyed in early 1994. We are in the process of analyzing and summarizing the large amount of interesting information and ideas that were obtained from the shippers in this survey. The shippers were surveyed through a personal interview, which required several hours of time with one or more staff persons from each shipper organization. The high interest in the industry strategic planning process was shown by the fact that all shippers were quite willing to spend considerable time in providing their input for this survey.

A survey of all Michigan apple growers is in progress. This is a mail survey. The results of this grower survey will be analyzed and summarized during this coming year.

In both the shipper survey and the grower survey, considerable effort was spent in working closely with the key industry organizations in developing the specific topics to be covered and the questionnaire itself. In addition to the industry strategic planning task force, we met with key representatives and/or the boards of directors of a number of key apple industry organizations to get their ideas on the survey, and in some cases, to pre-test the questionnaires.

There was a section included in the grower survey for those who operate packing houses. This was included as part of the grower survey since many of the packing houses are owned by growers. Many of

the larger packing houses were included in the shipper survey.

In the future, there is a plan to do a survey of Michigan apple processors. The approach used in the processor survey will be similar to that used for the shipper survey.

In each of the surveys, the industry situational analysis, or modified SWOT analysis, has been used as a way to organize some of the major sections of these surveys. There has been a section in each survey on the strengths of the industry and another major section on the opportunities as perceived by the industry participants. There also has been another major section on industry challenges, issues, and limitations. In both the shipper and grower surveys there was a section on action alternatives to improve the industry. In this section of the surveys, industry participants were asked for their thoughts on what action alternatives are needed and would be supported by the industry. There was also a related section on desirable industry strategies in order to benefit that industry in the future.

Because the Michigan Apple Committee is a key industry organization, and because they are interested in industry reactions on some important questions for their programs, a section in the grower survey was devoted to programs and priority questions related to the Michigan Apple Committee. There was also a smaller section in the shipper survey related to the Michigan Apple Committee. This key apple industry organization is already using the information from the surveys in the strategic planning for its own programs and priorities.

In the grower survey, a small section was included on the program thrusts of Michigan Apple Research Committee and on the MACMA bargaining and pricing organization. This was due to the interest of these organizations in certain strategic planning information related to their organizations.

The shipper and grower surveys further included a section on research and extension needs for the apple industry. This information is intended to be used, in part, by the Michigan Apple Research Committee. In addition, this will be related to the broader programs and linkages of the university with the apple industry.

To illustrate some of the results of these industry surveys, a portion of the results on industry opportunities from the shipper survey are shown in Table 1. It is impressive that a very high percentage of shippers rated certain categories of opportunities as either *outstanding* or *good* for the Michigan apple industry. Those opportunities that almost all shippers rate highly included *improving quality, modernization of packing houses, expanding export markets, and marketing more*

*tray-pack apples*. This latter one is especially impressive, because most Michigan apples have, in the past, been marketed in poly bags rather than in trays.

A very high percentage of the shippers also indicated that they think there are substantial opportunities for the industry to improve its communications and links to the different industry segments. This is one of the major goals of the Michigan Apple Industry Strategic Planning Task Force and shows a high support among shippers for this relatively new industry strategic planning effort.

It is interesting to note that the area of *obtaining higher prices for fresh Michigan apples* was ranked considerably lower by the shippers than were some of the other opportunities. This is especially interesting because Michigan growers view the area of obtaining higher prices for their fruit as an especially important area of concern. Another significant result of the shipper survey was their relatively low rating of the opportunity to *expand the number of varieties offered by Michigan*. Only 29 percent of the shippers ranked this as either a *good* or *outstanding* opportunity. This is especially interesting because Michigan has long tried to emphasize and position itself in the market as "Michigan--the variety state."

Some of the shippers' responses to alternative industry actions are shown in Table 2. These were actions suggested by the task force based upon their discussions. It is interesting that all Michigan shippers support the idea of exploring market niches for the Michigan industry. Essentially all shippers support the specific actions to improve the quality of Michigan apples including reduced bruising, further improvements in storage technology, more uniform sizing (which is related to packing house modernization), and multiple picking by growers in their harvest operations. All of these reactions are related to the high priority that shippers give to the broader action category of improving quality as a means to improve Michigan's competitiveness.

A high percentage of Michigan shippers are also supportive of (1) *removal and rejuvenation of poorer orchard varieties and strains by growers*, (2) *continued expansion of controlled atmosphere storage capacity*, and (3) *continued packing house modernization*. These changes too are all related to important components of improving Michigan's quality as demanded by the market as well as to improve Michigan's competitiveness within the markets.

Most shippers (82%) are supportive of *analyzing the progress of Michigan in relation to competing regions*. Most shippers added that they believe this is a standard business practice for the shippers. The shippers were also asked if they would be supportive of a new mandatory program for quality standards for

**Table 1. OPPORTUNITIES FOR THE MICHIGAN  
APPLE INDUSTRY ACCORDING TO SHIPPERS**

	Combined "Good" Or "Outstanding"	"Outstanding"	"Good"
Improving Quality	97 %	47 %	50 %
Technically Advanced Packing Houses	90 %	62 %	28 %
Expanding Export Markets	89 %	53 %	36 %
Marketing More Trays	87 %	55 %	32 %
Improved Industry Education On Quality	87 %	24 %	63 %
Improved Communication and Linkages Between Different Industry Segments	86 %	36 %	50 %
Expanding The Sales Volume	82 %	39 %	43 %
Expanding Type of Pack Offerings	50 %	5 %	45 %
Obtaining Higher Prices	40 %	15 %	25 %
Expanding The Varieties	29 %	8 %	21 %

**Table 2. SHIPPER RESPONSES TO ALTERNATIVE INDUSTRY ACTIONS ON QUALITY IMPROVEMENT  
AND COMPETITIVENESS**

	<u>Support</u>	<u>Not Support</u>
● Continued Improvements to Reduce bruising	97 %	3 %
● Further Improvements in Storage Technology	97 %	3 %
● Encourage More Uniform Sizing	97 %	3 %
● Encourage Multiple Picking	95 %	5 %
● Further Improvements in Maturity Information	95 %	6 %
● Remove and Rejuvenate Poor Varieties and Strains	89 %	11 %
● Continue Expansion of C.A. Storage Capacity	85 %	15 %
● Continue Packing House Modernization	82 %	18 %
● Monitor and Analyze the Progress of Competing Regions	82 %	18 %
● A System for Non-Destructive Firmness Testing in Packing Houses	68 %	32 %
● A New Mandatory Program for Quality and Grade Standards	50 %	50 %

fresh apples marketed from Michigan. This was an action program that had been discussed considerably by the strategic planning task force as a means to improve Michigan's competitive position for the fresh market. Those who advocate this program argue that since Washington has implemented a program like this several years ago, Michigan also needs a similar program. The shipper survey results showed that this is an action alternative which is quite controversial among the Michigan shippers. Fifty percent of the shippers expressed support for this program, while 50 percent are opposed. In addition, those who are opposed are *strongly opposed*, while those who support the idea tend to be *strongly supportive*. This is a type of program alternative that will likely receive more attention and discussion by the industry including the strategic planning task force.

In addition to the industry survey, research related to the Michigan apple industry strategic planning process has also included several other project components. These include a major sub-project on pest management, pesticides, and pesticide-related issues. The previously mentioned interdisciplinary team of M.S.U. researchers has, by working closely with the industry strategic planning task force, pulled together a major report on a modern "stewardship" approach for integrated pest management and pest control methods for the industry in the future. This report included a summary of the current situation and needs for pest control under Michigan conditions, particularly in light of the very high quality standards demanded by the market. It also included an exploration of pest management strategies for the future that are workable for the industry while over time will likely result in less pesticide usage. Some emphasis was on research for continued improvement in pest-control technologies, IPM systems and nonchemical controls. Attention was also given to extension needs in the area of modern pest management as well as related government policies. Results of this project are being used as input for a broader national project through the International Apple Institute.

The apple industry strategic planning task force has identified market research on consumer behavior and preferences for Michigan apples as another high priority area. As a result, university economists have an ongoing market research project to survey consumers on aspects relative to Michigan apples. This has been done through consumer telephone surveys, focus groups, and some survey information from consumers through in-store demonstrations of Michigan apple varieties. The results will be used by the Michigan Apple Committee for planning their programs and strategies as well as by the Michigan Apple Industry Strategic Planning Task Force.

Another area of research for the interdisciplinary university research team will be the analyses of the status and potential of key technological and related problem areas for the apple industry. These specific problem areas will be based upon discussions and priorities of the task force and information from the industry surveys.

The strategic planning effort has a number of activities going on that will be very useful in the future for the industry. Currently there is an emphasis on discussing, digesting, and analyzing much of the research information that has been obtained. In the future more attention will be given by the task force to industry priorities, including which problems to work on first. The task force will also likely discuss, analyze, and evaluate which industry actions will be acceptable to the industry and hence should be pursued. They will also give more attention to deciding which combinations of key industry strategies that the different segments of the industry should work on together in order to improve the industry.

Overall the experience with the new thrust on Michigan apple industry strategic planning has proven so far to be an exciting area with great potential for benefiting the industry. It is an excellent way to link various components of research with the industry with primary emphasis on improving their competitiveness along with needed strategies for the future.

## Endnotes

1. See, for example, *Status and Potential of Michigan Agriculture--Tree Fruit*, by D. Ricks and J. Hull, Agricultural Experiment Station Special Report #57, Michigan State University, E. Lansing, MI. September, 1992.
2. Andersen, Bruce. *Strategic Alternatives for the New York Apple Industry*. AE Res. Sept. 1989:89-15.