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**STAYING COMPETITIVE INTO THE 21ST CENTURY:
ISSUES AND CHALLENGES FACING THE
NEW YORK STATE DAIRY INDUSTRY**

**Report of Governor's Conference Held in
Albany, New York
June 21-22, 1988**

**Edited by
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July 1989

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PREFACE

The two-day conference on "Staying Competitive Into the 21st Century" was held to provide an open forum for dairy industry leaders to voice their views about the future of the New York dairy industry and to share their ideas about what can be done to enhance New York's largest farm sector.

Dean David L. Call, College of Agriculture and Life Sciences at Cornell University opened the conference of 150 industry leaders. After Dean Call's presentation five focus groups were formed and assigned a topic. Each focus group had a chairman, a discussion leader, and a recorder. The recorders kept notes and prepared the summaries that appear in this report.

Paul Christ, Vice President, Dairy Planning and Analysis, Land O' Lakes, Minneapolis, Minnesota, made two presentations. In the first he gave his personal views on the broad theme of the conference. In the second presentation at breakfast on the second day, he presented a summary of the issues raised by each of the five focus groups. After his presentation the five focus groups tackled the job of making recommendations. In closing the conference Professor Andrew Novakovic of Cornell University summarized the recommendations. This report contains in brief form the texts of Call's and Christ's presentations and summaries of the issues and recommendations that evolved from the focus group discussions.

The names of the speakers, chairpersons, discussion leaders, and recorders are all indicated in the text of this report. All participants attended at the invitation of Governor Mario Cuomo. Commissioner Donald Butcher provided the resources and the staff to host the conference. Ellen Catalano of the New York State Department of Agriculture and Markets took care of local arrangements. Shirley Arcangeli of Cornell University typed several versions of the manuscript and Janelle Tauer of Cornell University provided editorial assistance.

Olan D. Forker
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Ithaca, New York
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Introduction:

In June 1988, Governor Mario Cuomo invited dairy industry leaders representing every segment of the industry to attend a conference in Albany to discuss the future of the New York State dairy industry. Over 150 industry leaders attended. The conference was organized by the New York State Department of Agriculture and Markets and Cornell University's Department of Agricultural Economics. Dairy farmers, proprietary and cooperative operators, university staff, and government officials served as speakers and as chairmen, leaders, and recorders of discussion groups.

One primary purpose of the conference was to provide an opportunity for individuals from every segment of the industry to present their views (and to hear each other's views) on issues that are likely to be crucial to the future welfare of the New York State dairy industry. The main objective, however, was to identify, with the help of industry leaders, actions that need to be taken or could be taken by industry, the state government, and the state colleges and others to help ensure a healthy industry into the twenty-first century.

Several events of the recent past point to the need for everyone in the industry to be concerned. Profits from dairy farming in New York evidently have not kept pace with profits from dairy farming in some other parts of the United States. Some dairy farmers in New York, despite relatively favorable prices in

some years, have not done well. New York State's share of total milk production in the U.S. has declined relative to some other states, especially California, Texas, Washington, and Pennsylvania. In addition, productivity as measured by production per cow has not kept pace with productivity in these states or with the U.S. average. The concern over the availability of an adequate milk supply for the manufacture of cheese has led some firms to discuss moving out of New York and establishing manufacturing facilities elsewhere. One firm has shifted cheese manufacturing volume to another state. Causes need to be identified and discussed to determine if anything can or should be done to further strengthen the state's dairy industry.

Comments by David L. Call, Dean, College of Agriculture and Life Sciences, Cornell University:

The Competitive Position of the New York Dairy Industry

I am very honored that I was asked to be present at this meeting to provide this keynote paper on "The Competitive Position of the New York Dairy Industry." We in the College of Agriculture and Life Sciences view this as a very important meeting. We have seen a number of major studies on the dairy industry in the Northeast that have been completed in the past two years. What is needed now is an action agenda that will lead the New York dairy industry to a stronger, more competitive position in the future. The College of Agriculture and Life Sciences is very interested in this action agenda because we are part of the team that will bring it to fruition. Discussions like those that will take place at this meeting will help guide our research and extension agendas in the future. We are already committed to a new dairy extension program which is referred to as the Pro-Dairy Program. Hopefully, this will lead to a more productive and profitable dairy

industry. Later this fall, we will be dedicating our new food science processing and pilot plant laboratory which will greatly increase our ability to do product-oriented research for the dairy industry. We are very pleased that the National Dairy Board has awarded a \$600,000-a-year grant for dairy product research. This research effort, which will be shared with the University of Vermont, should lead to positive returns in the future.

Quite often, when economists talk about an industry remaining or becoming more competitive, they look primarily at production costs, vis-a-vis other regions. Since that general area has been well covered in the recent studies, I would like to shift the discussion to an area that has not been as thoroughly examined, that is, the problem of staying competitive in the marketplace or, in other words, competition for those limited consumer dollars. New York dairy producers and processors should be aware that the northeastern marketplace is considered a "magic market" by food producers all over the world. It is probably the most concentrated, most wealthy, most diverse, and most sought after food market in the world today. In a relatively concentrated area, a large number of consumers with great pricing power create a very attractive market for all types of food products. In this "magic market," we find intense interproduct competition for those limited consumer dollars.

There are many factors that affect the demand for a food product beyond price, which is usually as far as the discussion goes with economists. In looking at recent trends in the marketplace with respect to interproduct competition, there are a number of factors that seem to be at play. Convenience is still a very important factor and is used by many food manufacturers to either expand market share or to alter existing products. The growth of microwaveable products is a good

example. The growth of the fast-food industry is another example of convenience driving consumer purchasing patterns.

A second factor, which has become quite important in the last decade, has been the development of new and unique products. Yogurt is a dairy product which almost didn't exist a decade ago. It plays a very important role in the market today. High-fat ice creams, an alteration of an existing product, can almost be classed as a new product. Many exotic fruits and vegetables that meet ethnic needs are new to the marketplace.

A third major factor, one that has had an important impact upon animal products, is the increased interest in diet and health. In the last five years this has moved beyond the traditional concern about diet and heart disease to include the concept of wellness, long-term dietary changes, and a more holistic approach. The relationship between diet and heart disease, diet and cancer, and diet and general health are discussed almost daily by the media and in various other information sources. Recently, it was my pleasure to chair a major study of the National Research Council¹ that looked at the role of animal products in the American diet. Our charge was to examine their traditional role and see what could be done to improve the nutritional attributes of animal products so they could continue to play a major role in the American diet.

It is a well known fact that milk and milk products play an important role in the provision of nutrients in the American diet. When you examine their contribution, you will find that approximately 10% of the calories come from milk

¹Designing Foods: Animal Product Options in the Marketplace. National Academy Press (202) 334-3313, Room 384, 20001 Wisconsin Ave., N.W., Washington, D.C. 20007.

and milk products, but in many cases, the proportions of nutrients that come from milk and milk products are greater than the contribution to calories: for example, 21% of the protein, 11.4% of the total fat, 34.6% of the riboflavin, 11% of the vitamin B 6, 20% of the vitamin B 12, 76.2% of the calcium, 20% of the magnesium, and 19.8% of the zinc. Nutritionists would classify milk and milk products as nutrient-dense products because the contribution to these important nutrients is greater than the contribution to calories. That is the good news. The bad news is that dairy products contribute 20.5% of the saturated fatty acids and 14% of the cholesterol. These are the two constituents that nutritionists are most concerned about.

In our study we found that the dairy industry has an excellent record of providing choice in the marketplace. It provides a range of products that allow consumers to choose between products with or without fat, such as skim milk, lowfat cottage cheese, and no-fat yogurt. The dairy industry is hard at work and the research, which I mentioned earlier on dairy food products, should lead to even greater choice in the marketplace as we develop products with even lower fat, lower salt, and lowered cholesterol.

It is important to realize that the American consumer is actively seeking products with lower fat, lower salt, and lower cholesterol. American food retailers are scrambling to place these products before the American consumer. Not too long ago it was said that nutrition would not sell, but that is no longer the case. We have a very dynamic marketplace. Consumers appear to have changed, they are interested in diet, health, and wellness, and they are prepared to change their consumption patterns. Diet and health are here to stay, and new products that take this into account can succeed, and even prosper, in this dynamic marketplace.

Dairy farmers and the dairy industry have to realize that fat, particularly saturated fat, has a strong negative connotation. This is a major change from when fat used to be the principal measure of quality, that is, prime beef was the best because it was the fattest. Golden Guernsey milk was the best because it was high in fat. This is no longer the case.

Cholesterol has no redeeming value from the standpoint of most nutritionists and practically all consumers. Salt is considered a negative, and since it is often hidden in dairy products, it will come under increasing scrutiny in the future. On the positive side, calcium is important and as you have seen recently, everybody is on the bandwagon to try and help the American consumer consume even more calcium. Milk is a natural, and dairy products are an even more natural way of getting more calcium into the diet.

Milk is a marvelous raw material. We no longer must think of milk as it comes from the cow as a finished product. Innovative product development is essential to stay competitive, and it is essential for the dairy industry to take this marvelous raw material and produce products that better fit today's marketplace. To fit better means lower fat, possibly even the incorporation of the newly announced noncaloric fat substitutes. A good skim milk -- 1% fat or less -- with better mouth feel is still needed. We will need to find another use for butterfat, or reduce the production or the price incentive that encourages its production. I think the market for butterfat is definitely limited. I see nothing on the horizon that would lead to a major increase in its consumption.

Cheese presents a major challenge to the dairy industry. It is an outstanding product, and its increasing consumption has been a boon to the

industry. Cheese has done very well in the fast-food industry. However, it is high in fat and cholesterol. If we can produce some cheese products with lower fat and cholesterol, we will be even more in tune with the marketplace.

In summary, if the dairy industry wants to remain competitive in the marketplace, it must recognize the trends that are influencing consumer choice. The dairy industry must enter the fray of interproduct competition and be prepared to design foods that meet even better the consumer needs of the future. The industry has done an excellent job in bringing choice to the marketplace, and it should do everything possible to broaden the number of choices to maintain its shelf space. Also, to remain competitive, the dairy industry will have to continue and, hopefully, increase its promotion efforts. Promotion of high-quality, nutritious dairy products has paid in the past and should pay in the future.

A warning: if you are going to be a success in the food market these days, don't judge a product by your own likes and dislikes. You have to listen to the marketplace. Dairy farmers may love butter and dislike skim milk, but please, don't attempt to impose those values on other consumers. It will not work.

It is clear that the federal government will not solve the so-called dairy problem. Forging an even stronger partnership between dairy producers, the dairy industry, and the land-grant colleges is even more important for the future than it has been in the past. Our college is particularly well prepared to play a major role in the training of the people that are necessary for this industry, in the development of innovative and productive extension programs, and in conducting the basic and applied research that will backstop both the producers and the manufacturers. New York State needs a strong dairy industry, and everybody

attending this conference is prepared to give them just that. Let's work together to make sure it happens.

Issues and Challenges Identified by Focus Groups. Following is a brief summary of the important issues and challenges identified by the persons involved in the focus-group sessions. These summaries attempt to capture the essence of the discussions and highlight the issues and challenges that seemed to be most important. It is not possible to include every issue or challenge discussed, but every attempt has been made to cover most of them.

Farm Productivity/Profitability

(Chair, Noel Davis; Discussion Leader, Bernard Stanton; Recorder, R. David Smith)

Industry Attitudes Toward Change

The current attitude of the northeast dairy industry is not conducive to its rapidly implementing the changes that are necessary if it is to strengthen its competitive position. Pessimism about the future of the industry must be replaced with a positive attitude reflecting the potential for market expansion, increased productivity, and increased profitability which exist due to the nearness of the industry to markets and the resources (land, research, and human) that are available.

The industry must realistically assess New York's social and natural environment. It must accept that which cannot be changed, and move rapidly and decisively to build the industry which the market and the resources can support. There is room for expansion of the industry. New York can compete even though

the Northeast will continue to lose farms to urbanization. A market exists which cannot be supplied by current production. This provides justification for efforts to increase productivity through expansion of herd size and increased production per cow.

The industry as a whole, but producers in particular, must accept change and begin to prepare for it. The industry must recognize both the challenges and opportunities presented by change and aggressively seek and adopt those changes which will strengthen its competitive position. Producers must strengthen their commitment to management. Too many view themselves as laborers rather than managers of businesses.

Quality of Forages and Farm Crops

Failure to produce adequate amounts of high-quality forage continues to be cited as one of the most important factors limiting productivity and profitability on New York dairy farms. Forage yields and quality must be optimized by more careful selection of forage types based on the soil resources on which they will be grown. The extreme variation in soil resources across the state, within farms and in some cases within fields, makes forage selection a critical management decision for New York farmers.

Once the proper forage type is selected and established, the implementation of recommended production, harvesting, storage, and feeding practices is required to assure that optimal quantities of high-quality forage are available to the cow. The forage/feeding program is key to optimal milk production and maximum

profit on the dairy farm. Failure to implement recommended forage selection and management practices continues to be a major limitation on New York farms.

There is a need for continued emphasis on forage research. Regions viewed as competitors are able to utilize more forage in the form of hay. Forages better suited to New York's soil resources than alfalfa need further development, research, and demonstration. Weather conditions dictate that forages be harvested and stored in silage form. By European standards, silage produced on New York farms is of relatively poor quality.

Research to improve the nutritive value of silage through a better understanding and control of the forage fermentation process is needed as is research on increasing the milk production efficiency of cows fed silage-based diets.

Economies of Farm Size

The trend toward a smaller number of larger herds will continue as successful managers continue to seek greater economies of scale. The optimal herd size was debated, but unresolved. Some felt herd sizes of 500 to 1,000 cows would be required to ensure profitability in the future. Others voiced the opinion that the 80 to 100 cow herd could be organized in a manner to make it profitable (through use of pasture, etc.). The latter seemed to be the consensus of the group, but there was agreement that more research/information for use in determining the optimal herd size under a given set of circumstances would be valuable.

The conclusion seemed to be that New York herds would continue to vary widely in size with larger herds, 500 to 1,000+ cows, increasing substantially in number. This would not likely be balanced by a corresponding increase in cow numbers. Thus there would be fewer farms. Maintenance of a critical mass of farms to sustain supply services will become a problem in some areas of the state. Farmers with larger herds will have significant advantages in marketing services and in bargaining for price.

Specialization in Production

The specializations which are evident across farms (crops vs. cows vs. replacement rearing) and within farm operations (herd manager, milker, crop manager, business manager, equipment operator, mechanic, etc.) in major milk-producing regions are seen as factors which may be limiting milk production efficiency in New York. The premise is that the "specialist" is in general more apt to not only adopt new practices and technology more readily, but also to adopt them more effectively and profitably. More information (research) is needed on the benefits of increased specialization to New York State dairy farmers. Demonstration of benefits will enhance movement toward specialization. Tradition and personal preference for diversity will impede a move toward more specialization.

Other Issues

- Dairy farm income is too low. Efforts to achieve a higher price for milk must continue. High costs (taxes, utility rates, etc.) inhibit change--those with the desire to change and the management skill to successfully

implement new technology and institute other changes in their businesses lack the financial resources to do so. Low milk prices are overemphasized as a cause of reduced farm profitability. Farmers put less emphasis on instituting practices to increase profitability through improved business, herd, and crop-management practices.

- Geographical location (land resources, weather, etc.) constrains production and limits efficiency in New York in comparison to other milk-producing regions of the country.
- Dairy farming faces challenges in an increasingly urban/suburban environment.
- For a variety of sociologic and economic reasons, a large segment of the dairy industry has very slowly adopted changes leading to improved profitability. A smaller segment has not changed and probably will not in the near future. The challenge for the New York dairy industry is to stimulate the desired changes in the group which changes very slowly. Traditional approaches have not worked and they are unlikely to work in the future. New techniques need to be developed.
- Failure to implement recommended herd management practices continues to limit production efficiency and profitability. Milking management and mastitis control are seen as major weaknesses as evidenced by the high somatic cell count in New York herds. Nutritional management, ranging from simply providing an adequate amount of feed to support higher levels of production in low-producing herds to "fine-tuning" the balance of various

nutrients in high-producing herds, is also a limiting factor. Reproductive management and efficiency, and herd health management were cited, but viewed as being critically important in some individual herds, but of relatively less importance on a statewide basis.

- Maintaining an adequate supply of well-trained labor is rapidly becoming an issue. Young people are less interested in pursuing agriculture as a career. Fewer vocational agriculture and two-year college programs are available to encourage agricultural careers and provide training in the basic technical skills. Farmers are beginning to implement their own training programs, but they need assistance with this endeavor which is new to them.

Processing and Distribution Productivity/Profitability
(Chair, Clyde Rutherford; Discussion Leader, Nico van Zwanenberg;
Recorder, Brian Henehan)

Four priority issues facing the processing and distribution segment of the New York State dairy industry were identified:

- The need for processors and distributors to be more attuned to the market for their products
- The importance of developing and adopting new technology in the various levels of processing and distribution
- The need to maintain an adequate supply of milk
- The realization that New York State and federal regulations can hinder the growth of the industry and create an uneven playing field for processors.

Several other issues that were discussed will be mentioned following the summary of the discussion of the four major issues.

Becoming More Market-Driven

Both discussion groups touched upon the importance of the New York State dairy industry understanding more about the market for its products. What are the products that will meet consumers' wants and needs into the future? How does the industry identify those wants and needs? Several participants responded to points made in Dean Call's presentation on consumer interest in low-fat diets.

Numerous participants felt that there were potential untapped markets in New York City, including ethnic and specialty markets. It was felt that New York City is a unique "micro" market that requires different marketing strategies than the mass national market.

The general sense of the discussion was that the dairy industry lagged behind other types of food processors in new-product development and market research. Individual firms must undertake their own efforts, but a coordinated effort is desirable for some types of projects.

New Technology for Processing and Distribution

European approaches to developing and introducing new technology were discussed. Europe has a more technologically advanced processing industry than the U.S. due to what seems to be a better coordinated effort between government,

equipment companies, and universities. The Dairy Center may provide a new opportunity for coordinating the development and introduction of needed technology. There was concern expressed about the ability of the industry to have input on the research agenda for the Dairy Center.

Not all of the opportunities for new-product development involve expensive, high-technology applications. Several examples were mentioned of repackaging existing products (i.e., mozzarella as "string cheese" in small tubes). The point was also made that there were opportunities for applied research and development in improving basic plant efficiencies. There is a need to "put legs on what exists" in addition to looking at cutting-edge technology.

Maintaining an Adequate Supply of Milk

There was much heated discussion on this topic, with processors emphasizing the need for maintaining an adequate supply of milk. Manufacturers were concerned about the future viability of the processing industry in New York State. Farmers were concerned about the future of the farm economy and receiving a fair price.

Several proposals were bantered about: Five-year contracts with farmers, a manufacturer "buy-out" program, and state subsidy of the purchase of Class II milk. Component pricing was discussed as one of the more reasonable ways to better "allocate" the existing supply of milk. There were few concrete issues presented which resulted in specific recommendations.

It was recommended that up-to-date projections be developed of what the supply of milk will be in the future. Will New York State be able to remain competitive both in availability of milk and the cost of Class II milk?

Business Environment

A wide range of regulations that potentially hinder the growth of the industry was discussed. There was concern that UF and RO technologies could not be effectively used given the limitations on product labeling. These processes change the characteristics of milk being used for cheese processing so that traditional cheeses made cannot be labeled as such under current product standards regulations.

Other regulations unique to New York State, such as product shelf life and landfill regulations (i.e., limiting plastic jugs), need to be evaluated by the industry. Are there particular regulatory barriers affecting the New York industry? What should be the role of the state in encouraging the continued growth of a viable processing industry? Does the state have a policy for the dairy industry? What types of economic development efforts could be mounted in New York State to help the processing industry stay competitive?

Other Issues

An issue which received a fair amount of attention in the first discussion group was how to evaluate the competitive position of the New York State dairy processing industry. What are useful measures of comparison? How does the

been reluctant to discontinue unprofitable products. Finally, government regulations were cited as inhibiting marketing efforts.

It was generally recommended that firms in all segments of the dairy industry have the ability and need to become more business- and market-oriented.

Market Growth

Key areas of market growth include: value-added products, becoming more informed of market segments, exploiting the niches, and keeping track of changing consumer lifestyles. It was suggested that the dairy industry does not currently use sophisticated marketing techniques to explore market potential and exploit market opportunities. There is a dire need to conduct or purchase significantly more market research, especially at the consumer level. The purpose would be to learn more about consumer motivations and behavior.

While there was a leery attitude toward increased government regulation, there was a general consensus that more efforts must be made to increase the quality and taste of milk throughout the entire market channel. A minority opinion suggested there should be more brand advertising, even with generic funds.

There was a general fear of the increased role of slotting allowances. With increased concentration in the food industry, participants expressed a concern that many small- and medium-sized firms (like those that exist in the dairy industry) may not have the resources to compete for shelf space. It was pointed out that dairy products are "losing the dairy case" to a wide variety of other types of

products. In addition, it was suggested that, unlike other industries, the dairy industry does not charge a sufficient premium for new products.

Finally, it was pointed out that the current pricing system for milk encourages farmers to produce milk components that do not necessarily meet the wants and needs of today's consumers.

Government Regulations

As one might expect, the discussion on market development issues was punctuated by criticisms of government regulations. One issue concerned the industry being overly protective of its product. Some participants felt government regulations have limited product flexibility and discouraged new product development. As an example, it was pointed out that one book summarizing dairy regulations in the Northeast consists of over 600 pages while the rules governing soft drinks probably cover of less than 10 pages. (We assume they were referring to Review of Dairy Regulation: State Milk Control in New York and Contiguous States, which has 642 pages.) Other participants expressed the view that existing product-identity and labeling rules were necessary and appropriate. In fact, it was suggested that the issue is often one of finding an attractive new product name, rather than trying to infringe on existing names.

There was an impression among some participants that with regulations, firms have a tendency to fulfill minimum standards and compete on price. They felt this reduces profit margins and discourages market initiatives.

Finally, there was a feeling among some fluid milk processors that the classified pricing system gives an unfair advantage to manufactured products and reduces the incentive of fluid milk handlers to be aggressive in the marketplace. While there was not agreement on this issue, all participants did agree that the current pricing system is antiquated and distorts the pricing signals between producers and consumers.

Organization, Regulation, and Economic Incentives
(Chair, Susan Reynolds; Discussion Leader, Norm Garber;
Recorder, Walt Wasserman)

The organization, regulation, and economic incentives session examined five areas: the need for a state dairy policy, regional dairy relationships, the New York business climate, fragmentation of the New York dairy industry, and the need for market order changes.

Need for a State Policy

There is a need for a New York State dairy policy that would define the state's goals relative to the long-term position of the dairy industry in the state and in the Northeast. It was pointed out that the Northeast is a deficit production area relative to available consumer markets for dairy products. Milk production in most New England states and many eastern New York counties is under increasing urban pressure and is declining at an increasingly rapid rate. New York's role as a supplier for the New England market must be recognized. Additional incentives and resources will be required if New York's hard cheese industry is to remain competitive with other regions of the country. The present industry outlook does not warrant additional investment in plants and equipment.

It was suggested that as a matter of policy, New York should be committed to encouraging the production of a supply of milk adequate for the needs of the region's fluid and soft product markets and also to maintain and attract a strong manufacturing community which is vital to the economic well-being of the industry and the state. This point of view, relative to the manufacturing sector, was not unanimously supported. There was some feeling that if other parts of the country can produce hard cheese cheaper, that is where the industry should move.

Uniformity of State Regulations in Northeast Markets

Concern was expressed over the need for greater uniformity in state and federal regulations for the region to improve marketing efficiencies and returns to producers. It was recommended by a show-of-hands vote to explore the use of a Northeast Interstate Dairy Compact to address regional dairy problems. The compact, if adopted, should deal with issues of uniformity of state regulations and provide for an over-order pricing mechanism that would reflect regional supply-demand conditions in such a manner as to assure an adequate supply of milk for all segments of the region's dairy industry.

A Tilted Playing Field

The northeast dairy industry is at a competitive disadvantage due to the "lack of a level playing field" with other areas of the country. Competing regions have the advantage of state or federal legislation that provides subsidized production inputs, tax abatements, or market regulatory enhancements. It was suggested that more could be done to improve the business climate for dairying in

New York State. This could be accomplished by introducing measures that would reduce the cost of doing business in New York relative to some competing areas. Greater uniformity and coordination of state and federal regulations in the Northeast would improve interstate movements of raw supplies of milk and finished products.

A Fragmented Industry

The New York dairy industry is fragmented. There is a lack of organization and coordination in the industry evidenced by too few producers in too many cooperatives. A low level of cooperative membership among the region's producers and the dispersion of cooperative members among a large number of often competing cooperatives have undermined efforts to achieve improved returns to dairymen. A lack of effective organization among producer groups, and to some extent processor groups, has made it more difficult to affect institutional changes that would make the northeast dairy industry more productive.

A fundamental problem that permeates the northeast dairy industry is that it is still beset by historical divisiveness that undermines efforts to achieve a sense of common purpose and recognition of the interdependence among and between the producer and processing sectors.

It was suggested that there is a need for an umbrella organization to foster a better understanding of each group's concerns and more equitably deal with problems relating to the supply, marketing, and distribution of dairy products. The New York State Department of Agriculture and Markets should encourage the development of a New York State Dairy Association to promote a sense of common

purpose and to coordinate efforts to effectively and profitably meet the needs of northeast dairy markets.

Marketing Order Changes Needed

Milk marketing orders have provided stability and orderly marketing to the northeast dairy industry. They are still needed, but their pricing and pooling provisions need to be updated to meet today's market conditions. Market order provisions should reflect the interdependence of northeast markets from Maine to Maryland. Proposals aimed at achieving greater uniformity among northeast order provisions provide initiatives toward eventual order merger. Uniform shipping provisions, transportation differentials, and seasonal pricing plans are examples of proposals currently being considered to make northeast orders more compatible.

In summary, it should be noted that while there was a general consensus in support of the issues and proposals mentioned above, there was also considerable difference of opinion expressed. Some proposals, such as order merger and the northeast compact, are extremely controversial and politically sensitive and should receive further study.

Dinner Remarks by Paul Christ, Vice President, Dairy Planning and Analysis, Land O' Lakes, Minneapolis, Minnesota:

Tonight I plan to discuss two subjects, regionalism and the problems we face in trying to maintain a competitive dairy industry in our respective regions. The subject of regionalism was suggested by Dr. Olan Forker, who may believe that your religious fervor on the subject may be enhanced if you hear the perspective

of a heretic from the Midwest. To accommodate him, I will cover the general topic of regionalism and present the position of the midwest dairy industry with regard to it.

I am also going to talk about the general problems we all face in trying to maintain a viable, competitive dairy industry. The characteristics of the dairy industry in the Midwest are not much different than those of the dairy industry in the Northeast. We face similar challenges in trying to enhance the viability and competitiveness of our own industry. I want to offer a few perspectives about the nature of the problem and describe efforts within the Midwest to deal with the problem. I may say things that you disagree with. If I do, you will have an opportunity to argue your points tomorrow. Or, if you feel compelled to correct my errors right away, I will respond to questions after my presentation.

Regionalism

Regionalism is the first subject, and it really has nothing to do with the second subject of regional competitiveness. I think we are all acquainted with the Leahy Bill (the Dairy Farm Protection Act) which would divide the nation into eight to ten regions for dairy price support purposes. Producers in those regions that experienced sales to CCC above a base amount would be assessed to cover increased government costs. We in the Midwest have been hostile to the Leahy Bill as we think it would be very disruptive to the dairy industry. The main reason we oppose it is that we participate in a national market for milk and dairy products and have done so ever since restrictive health standards were eliminated.

Given the fact of a national market for milk, then what anyone does in one region of the United States affects dairymen in all other regions. For example, if milk production increases in Florida, that affects how much milk will be moving out of the Midwest for fluid use in Florida. The midwestern milk that is displaced ends up in manufactured dairy products. If these extra dairy products cause CCC purchases to exceed the five-billion-pound trigger level, then producers in all regions of the country suffer because of a production increase in Florida. Similarly, if milk is available to expand cheese production in Vermont, and that cheese displaces midwestern cheese in Boston, then the displaced cheese adds to the burden of government purchases. We are all in the dairy game together. With a national market, we rise and fall together, so we need rules of fair play in how we interact with each other to maintain a viable national dairy industry.

Let me make it clear that I believe that the consuming public in the United States deserves the very best performance that we can deliver in terms of reasonably priced dairy products in the store. Best performance means minimizing the combination of production and transportation costs of delivering the product to the consumers.

New York State and the rest of the Northeast have a tremendous natural location advantage. You sit right on top of the biggest consumer market in the world. You get the first shot at these markets. The rest of us in the dairy industry have to pay transportation costs to get our products here, and then we have to compete with your ability to provide localized service. It is much more difficult for us to deal with a market a thousand miles away than it is for you to deal with a market a hundred miles away. Appreciate the advantages you already have.

If regionalism were adopted under the Leahy Bill in an effort to protect the Northeast from natural competitive forces, we would likely find ways to subvert the program. For example, milk producers in the Midwest would support undercutting market prices to gain access to commercial markets to avoid an even more punitive assessment. This would be especially true if surpluses arose in the Midwest as a result of events in other regions.

The United States dairy industry is not completely free of regionalism today. A number of unofficial market distortions exist. In the interest of "best performance," I think we have an obligation to eliminate them. My list of artificial market distortions may differ from yours, but I will mention two of mine. The first is the tremendous subsidies provided under the feed grain program. These subsidies offer major benefits to feed purchasers in the Southeast, the Southwest, and to a lesser extent in the Northeast. The second artificial market distortion worth mentioning is the high Class I differentials under federal milk marketing orders that help subsidize the production of milk for manufacturing. The Class I differential is a major factor that sustains the large milk manufacturing industry right here in New York. These are the sorts of distortions that we should all work to eliminate. We best serve our industry and our consumers by getting rid of all the unnatural regional advantages and disadvantages that exist today.

Regional Competitiveness

My second subject for tonight is regional competitiveness in the dairy industry. All of us share in this problem. Table 1 illustrates the nature of the

problem. The numbers in the table represent the rate of increase in milk production in various regions over the last two years, after the effect of the Dairy Termination Program (DTP) has been taken out.

Table 1. Milk Production of Non-Participants in the Whole Herd Buyout, January-March, 1986 Versus January-March, 1988

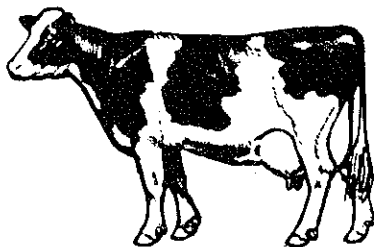
Region	Percent Increase
Southern Plains	30.4
Southeast	21.5
Delta	20.9
Pacific	16.4
Mountain	15.0
Northern Plains	14.1
Appalachia	9.3
Lake States	5.5
Corn Belt	5.5
Northeast	2.4
United States Total	9.2

It is apparent that there have been tremendous increases in production in the Southern Plains, the Southeast, and the Delta region. These areas constitute the Old South. California is the state that is always pointed to as being the major problem with respect to increasing milk production. Table 1 shows, however, that it ranks only fourth among the regions in the rate of increase on farms not participating in the DTP. At the bottom of the list of regions in terms of milk production increases are the Lake States, of which Minnesota is one, and the Northeast, with the lowest rate of growth among all the regions in the United States.

All regions faced a similar economic environment during the past two years. It is obvious that milk producers in some regions are responding much differently than are milk producers in the traditional northern dairy regions. If these trends are extended out very far, it is easy to see that little milk production will remain in the Lake States and the Northeast, and that most milk production will occur in the South and Southwest. I am not comfortable with these trends because I work for Land O' Lakes, whose success depends on a viable dairy industry in the upper Midwest.

What is the cause for these regional shifts in milk production and what can we do about it? Table 2 is a report put out by Land O' Lakes each month for our feed customers. It shows the impact of different levels of production per cow on profitability given current milk prices, feed prices, cull values, and such. Consider the producer who experiences 12,000 to 14,000 pounds of milk per cow. He does little better than break even. Now consider the producer who experiences 18,000 pounds of milk per cow. He is making \$250 per cow. Clearly, a producer earning \$250 per cow will be a more eager and aggressive dairyman than one who is earning only \$70 per cow.

Dairy farmers frequently say that all they need to be more successful is more money. Where is the extra money to come from? It can come from growth in demand. However, demand is likely to grow at no more than one or two percent per year. Demand is not likely to improve milk prices by \$.50 per hundredweight in the next two years.



DAIRYCAST

Table 2.

June 3, 1988

	Yearly Production Average, Pounds				
	12,000	14,000	16,000	18,000	20,000
Estimated Receipts:					
Milk	1254.00	1463.00	1672.00	1881.00	2090.00
Cow	181.35	181.35	181.35	181.35	181.35
Calf	85.50	94.50	108.00	121.50	135.00
Total	<u>1520.85</u>	<u>1738.85</u>	<u>1961.35</u>	<u>2183.85</u>	<u>2406.35</u>
Estimated Costs:					
Feed	588.00	631.20	690.89	734.46	765.98
Other Variable	234.00	243.00	252.00	261.00	270.00
Total Variable	<u>822.00</u>	<u>874.20</u>	<u>942.89</u>	<u>995.46</u>	<u>1035.98</u>
Fixed	700.00	785.00	850.00	935.00	1000.00
Total Costs	<u>1522.00</u>	<u>1659.20</u>	<u>1792.89</u>	<u>1930.46</u>	<u>2035.98</u>
Predicted Returns:					
To Labor & Management Over Variable	698.84	864.64	1018.45	1188.38	1370.36
To Labor & Management Over Total	-1.15	79.64	168.45	253.38	370.36
Values Used:					
Income: Milk @ \$ <u>10.45</u> /cwt.; <u>3.50</u> % Fat; Cow Wt. @ <u>1300</u> lbs.; Cull Cow Price @ \$ <u>46.50</u> /cwt.; Calf Price @ \$ <u>95.00</u> .					
Costs: Feed Costs: Forage @ 5.7 Ton 90% DM; 50% Corn Silage @ \$ <u>17.00</u> /ton, 50% Hay @ \$ <u>60.00</u> /ton; Corn @ \$ <u>2.03</u> /Bu.; Protein Supplement @ \$ <u>16.30</u> /cwt.; Mineral @ \$ <u>23.50</u> /cwt.; Salt @ \$ <u>7.00</u> /cwt.					
Other Variable: Livestock costs including bedding, breeding and veterinarian expense, insurance, fuel, repairs, utility, etc.					
Fixed Cost: Costs to include capital investment on dairy equipment, buildings, livestock, etc.					
<i>The above values are based on estimates and assumptions of the Feed Division Tech Service Staff of Land O'Lakes, Inc. Results are realistic but not intended to be guarantees.</i>					



Some believe that extra money for dairymen can be extracted from the margins of marketers or middlemen. I doubt that any level of the dairy marketing system has sufficient price-enhancing ability to generate extra money to pass back to farmers. Even if such "monopoly" profits did exist, farmers are not likely to get them.

The answer I suggest for a dairyman who needs more money is to make efforts to increase production per cow. No matter what happens to the marketing system or to the economic environment, there is an opportunity to generate additional income right on the dairy farm. Increased production per cow is one of the most direct ways to achieve it. Table 3 illustrates the principle. It shows the increase in income per cow resulting from increases in production per cow. Consider the producer who increases from 14,000 to 15,000 pounds per cow. His per cow income grows by \$56. This is equivalent to a price increase of \$.40 per hundredweight of milk. As you look further to the right on Table 3, you can observe that a considerable amount of additional income is available to dairymen from better management.

Table 4 shows that differences in production per cow may be an important factor in explaining why some regions are more successful than others in milk production. Minnesota and New York are averaging in the vicinity of 13,000 pounds per cow. California averages nearly 18,000 pounds per cow. What is the difference of 5,000 pounds per cow worth? At \$.40 per hundredweight per 1,000 pounds, a difference of 5,000 pounds is worth about \$2. An extra \$2 per hundredweight in the pockets of New York dairymen would make them a lot more competitive. I believe productivity per cow should be a focus of our efforts to improve the ability of northern dairy regions to compete.

Changes In \$ Returns Per Cow At Different Production Levels

Table 3.

Milk Price Change Per CWT					Production Level	Milk Production Change Per Cow			
10¢	20¢	30¢	40¢	50¢		1000#	2000#	3000#	4000#
\$12	\$24	\$36	\$48	\$60	12000#	\$50	\$100	\$157	\$213
\$14	\$28	\$42	\$56	\$70	14000#	\$56	\$113	\$166	\$219
\$16	\$32	\$48	\$64	\$80	16000#	\$53	\$106	\$174	\$241
\$18	\$36	\$54	\$72	\$90	18000#	\$68	\$135	\$210	\$284
\$20	\$40	\$60	\$80	\$100	20000#	\$75	\$149		

• Calculated from the 1987 Dairycast

* Milk Production Returns Were Calculated Using

The 12 Month Average Return To Labor And Management

Table 4. 1987 Milk Production Per Cow in Selected States

State	Production Per Cow (lbs.)
Minnesota	12,680
Wisconsin	13,816
New York	13,242
Pennsylvania	14,123
California	17,970
Washington	18,091
United States	13,786

Dairy leaders in the Midwest are not ignorant of these trends and are making efforts to secure improvements in our dairy industry. Next, I will review some of these efforts. I do not want to imply that the Midwest has mastered the problem of improving competitiveness. I think we are moving only by fits and starts in attempts to develop an organized effort to deal with competitiveness.

The first effort I want to mention is the Wisconsin Dairy Task Force. It was organized in August 1985 and included 31 members selected from all aspects of the dairy industry. The task force met frequently, received reports, debated issues and problems, and came up with a list of 75 recommendations. Most of these recommendations apply equally well to New York and Minnesota as they do to Wisconsin. No matter how sound the recommendations of the Wisconsin Dairy Task Force, their value will not be realized unless efforts are made to implement them. I understand that a smaller group, called the Wisconsin Dairy Coordination Group, has been appointed to follow up on the task force recommendations.

The task force recommendations varied widely, relating to milk processing, dairy product marketing, farm milk pricing, education programs, and farm

production. Of particular interest to me are the goals established for milk quality and adoption of modern practices in milk production. Of equal importance to the recommendations was the fact that dairy leaders sat down to specify the directions that dairy institutions ought to take, starting with the farmer and up through the marketing system and the educational system.

Minnesota is about to start a similar effort. A Minnesota Dairy Task Force was authorized by the legislature this spring. It will include 11 people appointed by the governor. Only \$30,000 of matching funds is allocated to support the task force, which implies the low importance the Minnesota legislature gives to maintaining a viable dairy industry. At this point, no one is sure what direction the Minnesota Task Force will take. It certainly does not need to duplicate what this New York conference is doing or what Wisconsin has done. I hope the Minnesota Task Force can reinforce and add to your efforts and those of the Wisconsin Dairy Task Force.

Aside from the study groups I discussed above, there are efforts underway in the Midwest to work with individual producers at the farm level to improve their competitiveness and success. One of these is the dairy initiatives project of the University of Minnesota, which is now called "Dairy Pro." I understand that Cornell University has a similar program called "Pro-Dairy." Obviously, great minds move in the same direction.

The goal of the Minnesota program is to help milk producers who want to help themselves. At the outset, it is important to realize that not every producer is interested in being helped or in helping himself. Thus, the greatest payoff is

available from working with producers who are seeking help and will actively participate in their own improvement.

The focus of the Minnesota program is increased profitability on dairy farms, primarily through increased production per cow. This will be achieved by making available to dairy farmers training and education that is designed to speed the rate of technology adoption. The ultimate measure of success will be the reversal of the declining share of U.S. milk production represented by Minnesota.

The Minnesota Dairy Pro Program is still in the development stage. The concept has been developed, goals have been set, and industry funding is being sought to get the program underway.

The second, and last, program I want to discuss is an effort by Land O' Lakes that has been underway for about five years to increase the quantity and improve the quality of milk originating from member farms. We call it the Q/QM Program, which emphasizes both the quantity and the quality of milk. The quantity aspects of the program are focused on increasing per cow productivity.

The Q/QM Program is not particularly sophisticated. What it does is reinforce some fairly traditional, fairly fundamental technologies -- things that producers could have been doing 20 years ago. We are on the farms trying to encourage their adoption now, if the producer has not done so already. The program is delivered through monthly visits by either a nutrition specialist or a milk quality specialist, both of whom have special training.

One of the first services offered is a milking equipment checkup. The milking equipment is the most frequently used machinery on the farm and is often the most neglected. Our specialists find that virtually all the milking systems can use some fine tuning and that about 40 percent have serious problems, such as inadequate vacuum or pipelines that are too small.

We also do a milking time evaluation to observe the producer on the job. Even though the farmer thinks he is doing everything right (the same as his father and grandfather did), we frequently notice practices that can be improved. The producer is often very surprised to find out there is a better way to do his milking.

A stray-voltage check is one of the first services performed. Our specialists have gotten very good at resolving stray-voltage problems. About 95 percent of the problems are readily solved and the other 5 percent may take as long as six months to solve. In any event, stray voltage is a very common problem that all of us should be aware of. Once stray voltage is reduced, a producer can move on to better herd health and improved response to a better feeding program.

We help the producer monitor somatic cells in order to improve herd health. We also help him set goals for milk quality. Quality premiums are widespread in the Midwest. For example, Land O' Lakes pays an extra \$.35 per hundredweight for top-quality milk. These premiums are an extra incentive for the producer to improve his operation.

Nutrition recommendations are a regular aspect of the Q/QM Program. We test the farmer's home-produced feeds and forages, and we calculate a personalized balanced ration for his herd. All these rations include supplements and other feeds

marketed by Land O' Lakes. Increased feed sales are part of the way we pay for the program. Another part is the increased milk volume that passes through our processing and marketing system.

Does the Q/QM Program work? Before I answer, I should explain that we are reasonably careful about who is offered the program. If a producer is not amenable to change and is not willing to accept advice, we simply don't invite him to be on the program. We are interested in success and are not interested in spinning our wheels. Right now, about 25 percent of our membership is on the program.

The next three figures illustrate the kind of results we get from the Q/QM Program. Figure 1 shows that in the first year, most program participants do not get spectacular results. Eighty percent get an increase in production per cow of less than 1,000 pounds. The other 20 percent get production increases well in excess of 1,000 pounds per cow. Producers get greater responses as they get deeper into the program. Figure 2 shows that in the second year, slightly more than half get less than a second 1,000-pound increase in production per cow. The remainder get a much greater increase. Figure 3 shows that the rate of improvement accelerates in the third year. Apparently, it takes a period of adjustment for the farmer to get used to making change, experience success, and gain a high level of confidence. Thereafter, he is willing and able to move more rapidly in achieving higher levels of productivity.

Figure 1. Production Distribution Graphs for QQM Producers

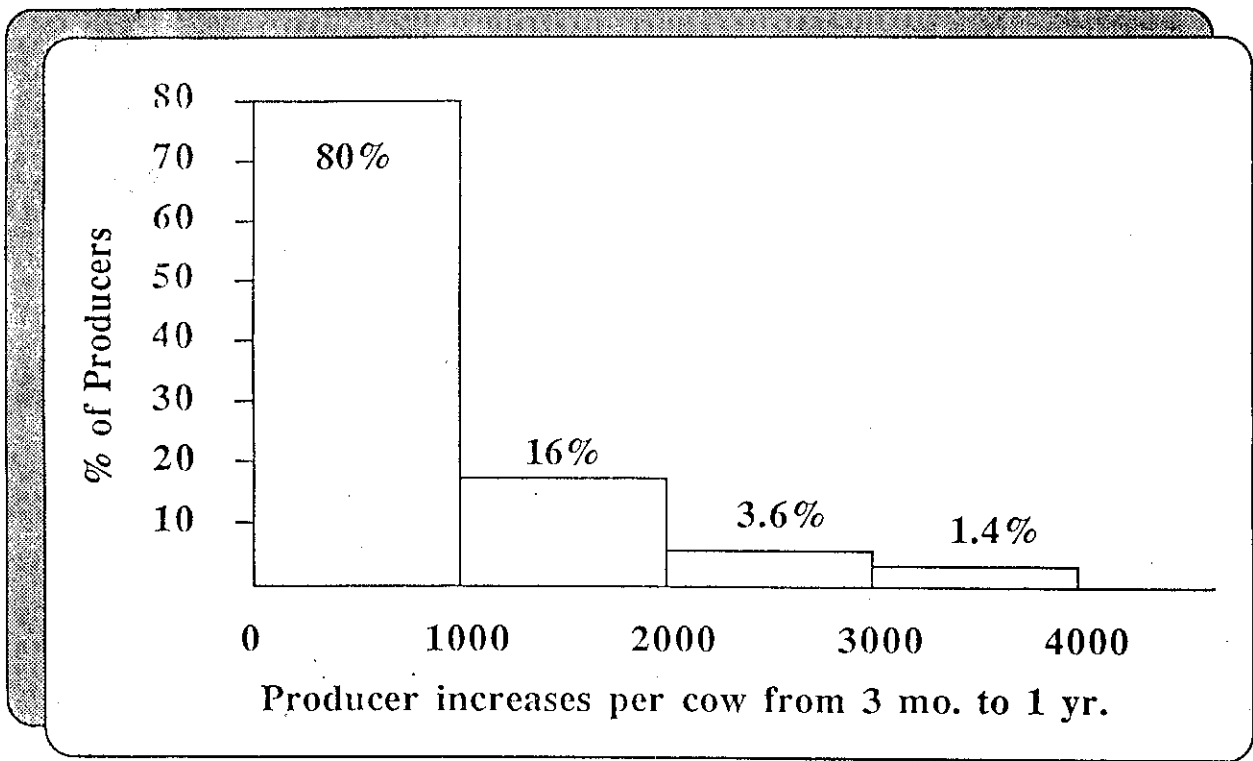


Figure 2. Production Distribution Graphs for QQM Producers

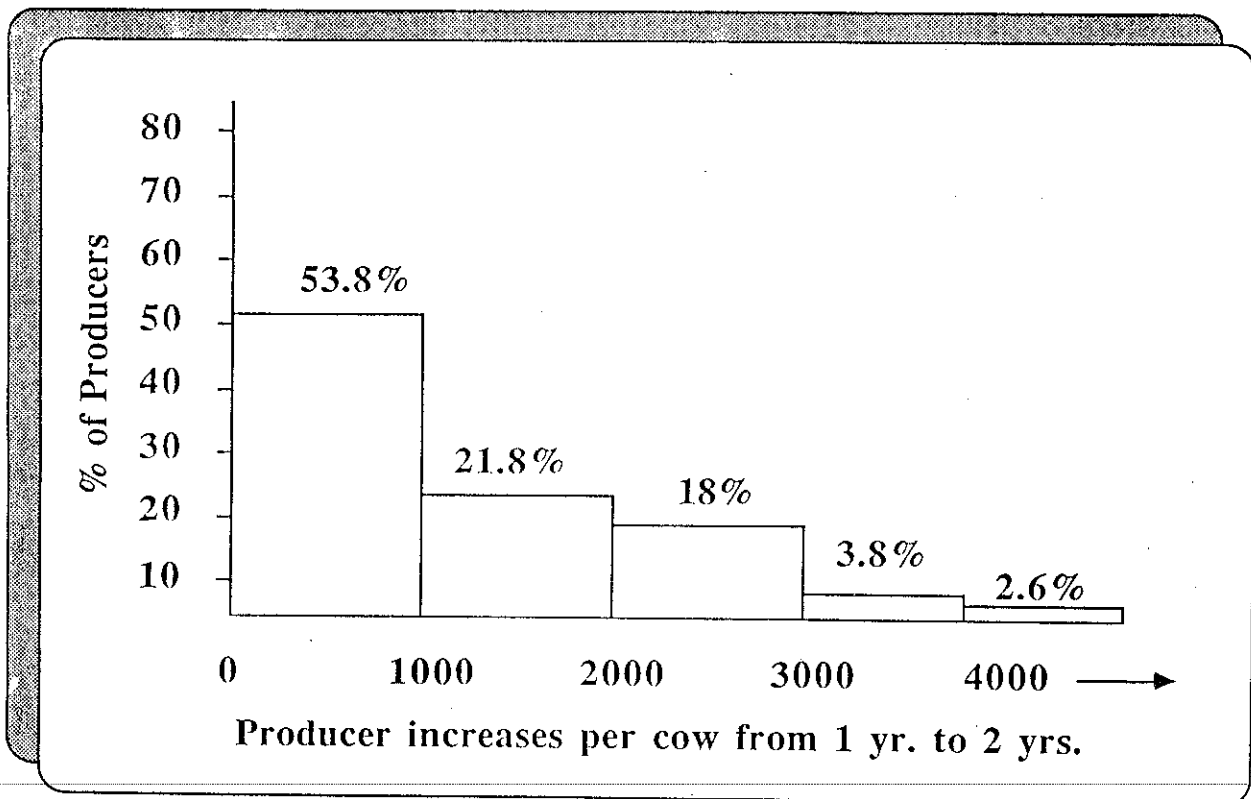
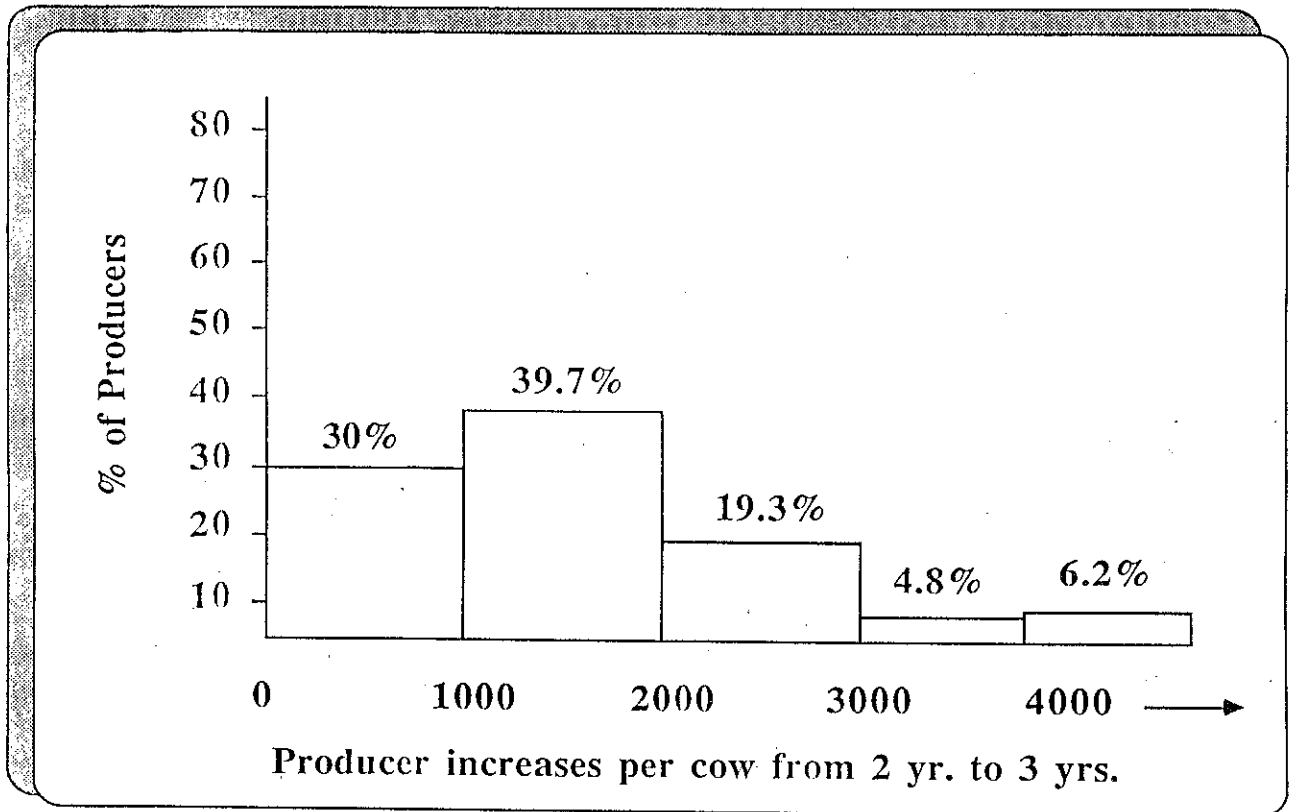


Figure 3. Production Distribution Graphs for QQM Producers



In my view, the Q/QM Program has been moderately successful. It has moved our member patrons on this program to a higher level of productivity and profitability more rapidly than would have occurred without the program. We at Land O' Lakes recognize that Q/QM is not a complete program. For example, we do not address farm management recordkeeping, financial management, genetics, or forage management. There are a lot of things missing that we plan to incorporate into the program over the next few years.

The point of this discussion is that something similar to the Q/QM Program may be worth considering for New York. Such a program can make a difference for the many people who want to change, want to do better, and want to succeed. Often, they lack information or the motivation of someone looking over their shoulder. But given the opportunity, these people will change and will succeed. That gives us plenty of optimism that the New York and Minnesota dairy industries will succeed for a long time into the future.

Breakfast Remarks by Paul Christ:

Paul Christ was responsible for summarizing the work of the various focus groups that met the day before. The purpose was to provide a discussion base for the recommendation sessions that were to follow breakfast. Most of his presentation was a summary of the issues and challenges that have been presented in this proceedings issue. They are not repeated here. However, he did introduce some issues of his own that he felt were important. They are presented here to make the record as complete as possible.

Farm and labor specialization. He suggested that specialization in milk production, forage production and marketing, and heifer raising, for example, could result in increased efficiency and profits for dairymen. If this were true, then such specialization would also strengthen the competitive position of a region.

Breeding. The whole breeding area was not discussed. This is an area for additional improvement in production efficiency per cow.

Herd health. Routine herd health checks are very important but costly. He suggested a Herd Health Maintenance Organization (HMO) for dairy cows. The dairy farm would pay a certain monthly fee and then get needed medical care of its cows from the veterinarian without additional charges.

New-product development. There is a belief that regulations limit product flexibility and thus limit demand expansion that might be possible from new-product development. Christ developed the idea that the only real impediment here is lack of imagination. He used the example of Velveeta. Velveeta does not meet the standard of identity for cheese or processed cheese, but is perceived as cheese by many consumers. Consequently, over the years it has become a large-volume product with a known identity to consumers. He also used the example of Land O' Lakes' Country Blend as an example of a product that is not "butter" according to the standards of identity, yet moves a large amount of butter into the marketplace. Christ argued that if you have the imagination to come up with the name that sells, you can effectively get around the standards-of-identity restraint.

Formulated foods. The rapid growth in the volume of formulated foods is expected to continue. The dairy industry would be well served if it invested in

research and development work on functionality and performance of the various milk ingredients. This might enable the dairy industry to capture more of the benefits of this growth market.

A long-run vision. Christ challenged the New York dairy industry to develop a long-run vision of what the industry should be like 10 or 20 years from now. Over the next 20 years a new industry will be created. New plants will be built, new technology developed, and new markets available. Now is the time to plan for what it should be like. What kind of investments, what kind of policies, and what kind of organizational structure will provide us with the kind of industry that we want to have? Everyone needs to be brought into the act -- input suppliers, dairy farmers, dairy organizations, dairy cooperatives, the universities, colleges, and the appropriate state and federal agencies.

Recommendations:

The conference highlighted that the New York dairy industry has a variety of concerns ranging from immediate fears about survival by specific individuals and firms to less precise concerns about the long-run vitality of the New York dairy industry. Conference participants offered numerous recommendations on what can be done to ameliorate the problems and achieve the opportunities facing the New York dairy industry. In some cases, recommendations require changes in federal policy or policy in other states, over which New Yorkers have little influence. In other cases, New Yorkers are able to act as agents of change in a variety of forms: (1) individually as farmers and dairy farms; (2) collectively as dairy cooperatives, farm organizations, and trade associations; (3) politically or legally via state government; and (4) through education and research.

Recommendations offered by conference participants are summarized below. A discussion of how these recommendations might be implemented is also offered.

Farm Profitability

Although farm profitability seems a simple enough concept, there can be numerous reasons why one farm is more or less profitable than another. The recommendations offered by conference participants cover factors that are believed to be key for a large share, though not necessarily all, of New York farmers. Correcting the flaws implicit in these recommendations will not ensure that every New York farm will enjoy improved profitability. Nonetheless, the recommendations that were made are believed to cover areas that are of widespread interest and for which positive actions could be taken. The recommendations to improve farm profitability cover the following areas: (1) forages, (2) labor, (3) continuing education for farmers, (4) land use, including water quality, and (5) the attitude and image of the dairy industry, especially farmers.

Forages. The considerable discussion about forages ranged from production to marketing and reflected the traditional viewpoint that dairy farming has a natural advantage in geographic areas that are best suited to the production of high-quality forages. Dairy cattle have traditionally been fed homegrown forages. Hence, being able to produce the best possible forage crops is generally considered to be a major ingredient in the success of a dairy farm. The conference challenged the industry to reconsider what the best possible forage for New York farmers is

and to consider whether more specialization and trade between forage-producing and milk-producing farms should occur.

Participants suggested that too much emphasis may be placed on growing and feeding alfalfa in New York. Although alfalfa is an excellent feed, New York agronomic conditions may be better suited to grasses and other legumes, which could in turn be good food for dairy cattle. It was suggested that further study of these possibilities be encouraged.

Participants also suggested that better systems are needed for commercially marketing forage crops and pricing such crops according to quality. Implicit in this recommendation is a suggestion that farm organizations and agribusinesses explore ways to achieve this objective, perhaps with the help of the New York State Department of Agriculture and Markets and Cornell University.

Labor. A very widespread concern about the availability of qualified people for unskilled and skilled farm labor was expressed at the conference. The challenge is clearly placed before the broad range of educational institutions in New York to respond to the labor issue. Possibly the New York Departments of Agriculture and Markets and Labor could play a role. Just as important, dairy farmers need to consider creative ways to effectively utilize available labor, attract new labor, or lessen the need for hired labor.

Continuing education. It was recommended that participation in the Cornell Dairy Farm Profitability and Productivity Program, or Pro-Dairy, be encouraged. This undoubtedly reflects a feeling that farmers recognize that they must be

involved in continuing efforts to improve their management skills and to utilize information that will help them make the best management decisions.

Land use and water quality. Recommendations relative to land use come from two concerns. First, it is becoming clear that groundwater quality is becoming an important environmental concern across the country. Drainage efforts, or the lack thereof, can have significant impacts on water quality. Second, proper handling of poorly drained soils can improve yields of feed crops and may improve quality relative to the timing of planting and harvesting.

Attitude and image. The attitude and image of dairy farmers, in particular, and the whole industry was discussed in detail. One important message seemed to be that, despite current difficulties, New York should maintain a positive attitude about its dairy industry.

Milk Quality

Milk quality refers to the quality of both farm milk and finished dairy products, especially beverage milk products. Not much was said about the technical ways to improve farm milk quality. Rather the focus was on providing greater incentives for farmers to produce better quality milk. It was recommended that dairy farm and processing groups work with technical experts to develop a specific plan based on milk quality and composition.

In the area of finished dairy products, two suggestions were offered. One suggestion was to increase the enforcement of quality- and composition-related regulations. The second was to encourage processors to consider more aggressively

ways to improve the use of packaging as a marketing tool without detracting from its attributes for protecting dairy foods.

The emerging or impending use of biotechnology in milk or dairy product production raised concerns relative to food quality and safety. The discussion of how to respond to biotechnology in the dairy industry made clear that some people accept scientific evidence that biotechnology is safe, others are doubtful, and many are concerned that, whether they are safe or not, products of biotechnology are likely to be viewed negatively by dairy consumers. Although conference participants generally agreed that more attention needs to be given to communicating the results of scientific studies on biotechnology, it is less clear how this should be done. Cooperative Extension obviously has a role in helping farmers adopt profitable technologies, but it is not clear how the question of consumer acceptance should be approached.

Processing and Distribution

Three basic concerns are reflected in the recommendations concerning the New York dairy processing sector. First, and foremost, New York processors are concerned about the current and future availability of milk in New York and the Northeast. Second, there is a general feeling that the business climate in New York is poorer than in major competing states. Third, there is no unified or organized purpose or strategy within the dairy processing sector.

To ensure adequate milk supplies, conference participants encourage processors to work with the dairy farmers and to support programs intended to improve the profitability of dairy farms. No specific recommendations on how to

improve general business conditions in New York were made. Obviously this is a business concern that far transcends the dairy industry, although there may be some aspects specific to dairy. It appears that further study and documentation is necessary before prescriptions can be offered.

To alleviate the third concern, participants suggested that the dairy processing sector work together to develop an action plan, or at least discuss basic industry objectives. Attention was drawn to the need to better utilize resources available through universities and government. In particular, the dairy processing industry should participate in the development of the agenda of the Northeast Dairy Foods Research Center, whose headquarters are located at Cornell University.

Market Development

Recommendations resulting from the discussion of market-development issues fall into two basic areas and overlap to some extent with the recommendations related to processing and distribution and to market regulation (presented in the following section). The first area concerns research and the adaptation of existing knowledge. The second area concerns the effects of current and alternative dairy policies and regulations.

A few specific research topics were discussed. Evaluating the use of nutritive sweeteners, substitutes for butterfat, and other products representing new ingredients for dairy foods or dairy substitutes was one specific area mentioned. Another was the need to improve the palatability of skim milk, and one could probably extend this to other reduced-fat or lowfat dairy products.

The research and information needs identified might be separated into two types: (1) product and process knowledge and (2) customer and market knowledge. In the first case, the focus is on learning how to do new things or do something better. In the second case, identifying customer wants and market trends is the emphasis. The general recommendation is that there is a need for more public research in both basic areas. At the same time, it is very important that public research be targeted toward areas the industry identifies as a high priority.

A broad range of regulatory topics was discussed, again with a general recommendation for further study. Specific topics included classified pricing under milk marketing orders, federal price supports, product regulations such as labeling and identity standards, and the broad interest of New York State. The market development group suggests that product regulations may be stifling or impeding product development, and state regulations may be placing New York processors at a disadvantage. Pricing systems should be studied, particularly with an eye toward rewarding those who serve commercial markets versus those who rely on price-support programs. Finally, there was much discussion about what New York State should be doing to facilitate dairy production and marketing. It was strongly and widely suggested that a clear statement of New York's dairy policy objectives or intent would be helpful. Participants believe that such a statement would help the dairy industry plan and make future commitments, and would provide a benchmark by which to make specific regulatory decisions.

Organization, Regulation, and Economic Incentives

Several recommendations have already been presented relative to regulation and economic incentives. The group which specifically discussed these topics highlighted five areas: (1) New York State dairy policy; (2) the economic environment; (3) New York attitudes relative to those of other northeastern states; (4) cooperative marketing; and (5) organization and representation of industry interests.

The notion of a state dairy policy was discussed in the previous section. One aspect stressed here concerns the role of the manufacturing sector versus the fluid sector. There has been much growth of the manufacturing sector in New York and considerable potential exists for further growth nationally. Given the current availability of milk in the region, manufacturers want to know if they can expect the state to encourage future growth. Related to this is the attitude of New York and its neighbors toward each other. Processors clearly view their milkshed and market as having a scope larger than the political boundaries of New York. They would like to see state governments in the region working more as partners than as opponents or competitors.

Although it is probably fair to say that conference participants generally would like to see a stronger dairy cooperative marketing system in the Northeast, no clear consensus recommendation emerged to suggest how this objective should be achieved.

A final recommendation was that producers and processors, either separately or jointly, should develop an organization(s) or representative body that helps them speak with a united voice on issues such as were discussed at this conference.

Summary

Dairy farmers. Farmers are challenged to take steps on their farms that will enhance their survival and generally improve the competitiveness of New York's dairy industry. Conference participants suggested that they pay particular attention to the following areas related to farm profitability:

- Forage production or procurement

- Labor

- Analyzing their current mix of activities with an eye toward considering whether some restructuring or specialization would be beneficial

- Becoming more involved in continuing education and expanding their role as a manager of the farm as opposed to a laborer on the farm.

Dairy cooperatives. Cooperatives, as extensions of their member farms, face similar challenges in representing their members' interests and added challenges as marketing agencies. They and other farm organizations are looked to for:

- Leadership in the development of quality and component pricing systems

- Leadership in the formulation of regulatory and policy issues
- Support for a variety of research initiatives, including both long-term product and market research and short-term studies of current topics.

Dairy processors. Processors, individually and through representative organizations, are likewise called upon to provide support for long- and short-term studies relevant to the issues discussed at this conference. They are challenged to:

- Give additional thought to regulatory issues
- Try to speak on regulatory topics in a more coordinated and cohesive way
- Exert greater influence on the research and education agendas of public educational institutions.

They need to work with representatives of dairy farmers and become more actively involved with public educational institutions.

State of New York. The state, primarily, but not exclusively, through the Department of Agriculture and Markets, is looked to as the agency to provide some financial support and coordinating authority for industry-oriented research and education. The state is challenged to:

- Define a policy or position with respect to dairy industry support and development

- Judge its laws and programs relative to the interests of the dairy industry.

Educational institutions. Universities are challenged to pay greater attention to the pressing needs of the dairy industry, New York's largest agricultural sector and a major component of its overall economy. This includes:

- Formulating educational programs targeted toward such current needs as forage production, land use, labor training, and processing technology
- Conducting basic research aimed at improving New York's competitive position as well as conducting topical studies on, for example, pricing systems, new products and processes, markets, and the implications of current or alternative federal or state regulations.

The challenge is large and the needs are many. It may be too easy for all involved to become overwhelmed. Further discussions are needed among and between the various industry groups to assess priorities and determine whether action can and should be initiated first.

Other Agricultural Economics Extension Papers

No. 89-6	Regional Factors Affecting the Impact of Biotechnology in U.S. Crop Production	J. Love L. Tauer
No. 89-7	National Dairy Markets and Policy and Some Implications for New York	A. Novakovic
No. 89-8	Dairy Farm Business Summary, Northern New York, 1988	S. Smith L. Putnam
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