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THE DAIRY INDUSTRY IN THE 1990'S

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INTRODUCTION

What can one predict for this complex industry for the next decade? What would an outlook commentator have said on this topic ten years ago in November of 1980? The analyst probably did say that the current policy of 50 cent dairy price support increases every six months would cause significant over-capacity and that there would be a painful adjustment period needed to bring the industry back into balance. Perhaps the commentator could have predicted a $3.00 per hundred weight support price drop. But the analyst could hardly have predicted many of the specific programs like the invention of industry-wide assessments, refundable assessments, a Milk Diversion Program (MDP), a Dairy Termination Program (DTP), or political prescriptions for the federal milk marketing order system. Predicting the significant increases in dairy demand experienced in the 1980's or that the U.S. dairy industry would, at least for a short time, be competitive on the world markets would have also been greeted with skepticism.

The changes of the last decade were partially driven by macroeconomic events happening in the overall U.S. and world economies. The 1990's is a decade ushered in by unimagined political events in the centrally planned economies and the increasing realization that the U.S. can no longer unilaterally manage its own economy. Given these new factors, what can be said about the next 10 years for the U.S. dairy industry?

DAIRY MARKETING AND POLICY INSTITUTIONS ARE SHAKING

The basic principles on which the U.S. dairy marketing and policy system is based are being buffeted by some broad macroeconomic forces. The four basic principles shaping the operation of the U.S. dairy marketing and policy system include: insulation of the U.S. industry from world markets; regulation to assure orderly milk marketing and distribution; policies for minimum producer income protection and market stability; and pervasive use of group activity in the industry. These principles are embodied in the basic legal and institutional foundations of the industry. Section 22 of the Agricultural Adjustment Act of 1935 provides for import protection. The Agricultural Marketing Agreement Act of 1937 provides for the Federal Milk

Marketing Order System which, along with similar state milk marketing order regulations, provide for publicly sanctioned oversight of the operation and performance of most dairy markets. The Agricultural Act of 1949, including its most recently passed amendment, the Food, Agriculture, Conservation and Trade Act of 1990, provide for the basic dairy price support price mechanisms. And finally, the Capper-Volsted Act of 1922 grants dairy bargaining and marketing cooperatives special privileges which are used to help overall industry operations and producer income.

In the brief time with you today, I would like to concentrate on highlighting some basic forces which will be paramount in shaping the U.S. dairy industry and what might happen to its marketing and policy institutions in the 1990's.

SOME BASIC FORCES IMPACTING THE DAIRY INDUSTRY IN THE 1990'S

Will There Be National Dairy Industries?

A major article in the New York Times of May 6, 1990, titled, "An Icon of the Good Life Ends Up on a Crowded Plant's Hit Lists" questioned the legitimacy of the U.S. livestock industries. In highly developed countries, many are beginning to question the social value of dairy industries. Those questioning the social desirability of livestock industries concentrate on environmental issues such as animal waste run-off, animal odor problems, and the generation of methane gases as examples of the potentially harmful impacts of livestock agriculture. These concerns are coupled with arguments that animal products, including dairy butterfat, are nutritionally harmful to the societies' consumers. As the cartoon in the New York Times article suggests the U.S. dairy industry may, in the 1990's have to answer the question, "Just what is the dairy cow good for?"

The answer to that question lies in the basic ruminant nature of the dairy cow. Because the cow takes cellulose, which has little direct human food value, and converts it into a highly nutritious and desirable food product that can be consumed in many varied forms, it is one of nature's best value-adding species. In addition to producing a highly versatile primary product, the dairy cow produces a nutritious beef byproduct, replaces herself, and generates business enterprises which can be operated on many scales of operation. These factors combine to make a dairy industry a useful tool for rural community economic development for many locations in the world. Dairy industries can facilitate the development of agricultural economies in locations and on land resources that are generally unsuitable for most other agricultural enterprises. Therefore, at various stages of economic development dairy industries become instruments of economic development and are therefore designed and operated with these domestic socioeconomic goals in mind. So a domestic dairy industry is not only an icon of the good life but a vehicle to the good life. As such most world dairy industries are sponsored industries. They often, at least in their initial stages, use infant industry arguments with regard to international trade and competition. Because most individual dairy industries are domestically organized, world dairy trade is an insignificant part of total world production.

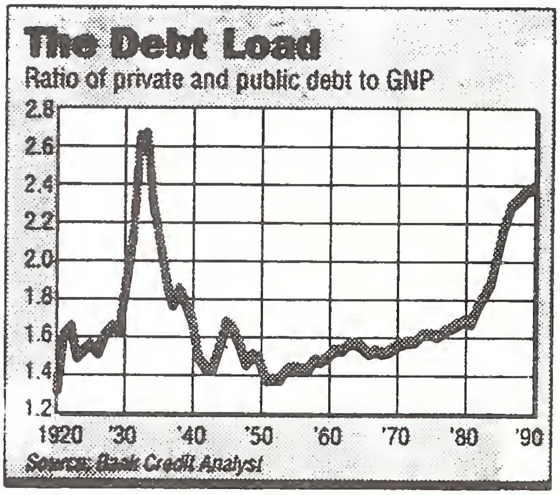
As the proportion of the dairy industry's contribution to the U.S. gross national product becomes less and as certain segments of the society question the societal value of animal agriculture, many policy makers question the need or the utility of having a set of U.S. dairy policies which foster and promote a domestic dairy industry. However, as this debate rages in Washington and Geneva, in many U.S. state capitals the critical importance of local dairy industries to the economic and social health of state rural communities is unquestioned. In recent years, development initiatives in several states including Vermont, New York, Wisconsin, Michigan and Minnesota have been proposed or implemented. Continued U.S. sponsorship of a domestic industry is a necessary condition for these economic development initiatives to succeed. If the United States drops or lessens the sponsorship of its dairy industry, will the resulting world dairy markets be devoid of nationally sponsored industries? This question is examined further later in the paper.

Shrinking Public Funds

The next basic force impacting dairy marketing and policy institutions is best introduced by Figure 1. The 1980's left the U.S. society with a legacy of total economic debt unrivaled since the Great Depression. Total outstanding governmental, corporate and personal debt is about 2.4 times the gross national product (GNP), up from 1.7 times GNP from before the 1981-82 recession. In claims on the national flow of income, debt service occupies a privileged position. The consequences to an individual firm or household of debt repayment default are dramatic. However, default on interest payments on the U.S. national debt would bring down the world financial system.

FIGURE 1.

TOTAL GOVERNMENTAL, CORPORATE AND CONSUMER DEBT AS A PERCENT OF U.S. GROSS NATIONAL PRODUCT



Wall Street Journal, November 5, 1990, p. 1.

The current U.S. gross federal debt is around $3.24 trillion. Net interest payments on that debt are about $182 billion. Net interest on the federal debt, now the third largest expenditure in the U.S. budget, will likely surpass defense and/or social security (the other two largest claimants) some time during 1990's. Net interest expenditures can not be cut economically. As they grow the will take revenues away from other expenditure categories. Even the "politically" uncutable categories of Medicare and other "essential" government services will be constrained severely if interest payments continue to grow. Also, private sector debt service requirements make tax increases that directly affect cash flow extremely difficult to pass.

The provisions of the Omnibus Budget Reconciliation Act of 1990 mandating assessments on all commercially marketed milk in the next five years testifies to the fact that there are fewer public dollars for the dairy industry. In the 1990's the dairy industry will have to develop policies and institutional solutions that can operate without access to unconstrained amounts of public money. This suggests that dairy programs of the 1990's will be the responsibilities of the dairy industry itself. What remains to be seen is to what degree the industry can rely on access to public sanctions and enforcement mechanisms to design and operate industry directed programs.

"Unbounded" Markets

Answering the question, "Where does the dairy industry stop and where does another industry start?" highlights the third basic force impacting dairy markets and policy. Increasingly dairy industries are not bound by physically distinguishable products or markets. The use of nonfood casein imports for dairy type products is a well known example of this basic force at work. The fat substitute or "fake fat" issue is the next major dairy product boundary question. As more food products are built rather than grown or raised, knowing what is a milk and dairy product becomes difficult. By the end of the 1990's advances in genetic engineering, transspecies technologies, and embryo manipulation will bring the dairy industry boundary question directly to milk producing units.

Likewise, we are getting boundless international markets because the world consumer packaged foods markets are becoming dominated by a relatively few international food conglomerates. Executive suites are no longer dominated by dairy industry executives and dairy products are just another part of the firms' product mixes. Nationally sponsored dairy industries complicate milk supply sourcing and distribution patterns. Redesigning dairy markets and institutions will be more and more difficult when what is "the dairy industry" becomes harder to define. This basic factor is one often cited by policy makers who argue that the age of national sponsored dairy industries is over.

New Roles for Dairy Cooperatives

Recent changes in the economics of dairying and ascendancy of individualism are affecting whether dairy cooperatives can continue their historic roles. World-wide, dairy cooperatives and other forms of group action are fundamental institutions of dairy industries. Cooperatives arose out of the need to readdress bargaining power differences within the market place. In the dairy industry, this usually meant guaranteed fairness on milk tests and weights and assured payment for milk delivered. Over time many producers asked their cooperatives to guarantee processing outlets for their total production. Also over their history, many dairy cooperatives stepped into the role of providing activities and actions which help the overall efficient and effective operation of the entire dairy marketing system. Activities such as market-wide balancing, rationalization of transportation patterns, etc. have benefitted all market producers and consumers.

As with any voluntary market-wide or industry-wide program, the "free rider" problem becomes preeminent. Free riders are members of an industry who benefit from the activities of the organized group without incurring any expense. The interactions of cooperatives with the federal milk marketing order regulations have been very useful in helping cooperative producers deal with some free rider issues. Recent financial stress, coupled with the structural changes occurring at the dairy production level, have heightened the free rider problem. As such dairy cooperatives enter the 1990's increasingly being asked to justify their importance to not only the dairy system but to many of their members-owners.

Cooperatives achieved many of their current roles by vertically integrating their bargaining activities with assembly and processing. Increasingly, many dairy producers, including many cooperative members, do not view the integration of production and processing as either necessary and legitimate dairy cooperatives activities. Many policy makers do not make a distinction between cooperative processors and investor-owned processors. If cooperative members continue to distinguish between their cooperative's production base and its processing base, a whole new set of cooperative roles and operating practices will evolve. If the open-ended public commitment to purchase surplus manufactured dairy products erodes significantly, cooperatives will have to seriously reevaluate their market-wide servicing roles and their willingness to guarantee members a market for all of their milk. The need for cooperatives to redefine their mix of services is the final major force driving change to the overall dairy marketing and institutional structure.

POSSIBLE CONSEQUENCES FOR DAIRY INSTITUTIONS IN THE 1990'S

The four forces discussed above are not exclusive of those at work. Nor were their full dimensions explored. However, some possible consequences for the traditional dairy marketing and policy institutions become evident. The following are a few possible consequences that one can predict at this point in history. But as the 1980's showed, there will be many more unforeseen consequences yet to arise.

Impacts on Dairy Import Protection?

In my opinion, a widely held belief in the U.S. dairy industry is that our current GATT negotiators fully subscribe to the idea that our industry should no longer be under societal sponsorship. In a less widely held belief, many in the U.S. industry believe that on a "level planning field," the industry could be competitive. The operative question is, "Will nations abandon sponsorship of domestic dairy industries and allow international dairy trade to flourish?"

A review of the data in Table 1, suggest to me that the answer to this question is no. Table 1 shows the proportion of world cow milk production in various regional locations. Fully one-third of the world's production is in the USSR and East European countries. This milk supply is not formally covered by GATT. Even if the developed world phases out sponsorship of their dairy industries through GATT, a whole new set of nations could take up state sponsorship. This is because as these countries politically and economically reorganize many will likely find the dairy industry a convenient vehicle for establishing privately-owned, high-value economic activity in their rural communities. Further pushing this tendency is the political dimension where centrally planned economies are dividing into ethnic or cultural subunits each seeking industries which will produce tradeable output and sources of hard currency. If the inquiries at our international units at Michigan State University are any indication, there is extensive interest in quickly developing improved production, processing, and distribution technology for dairy and dairy products in the USSR and Eastern Europe.

In addition to the state sponsorship for economic development, there will be considerable short-term disruption in international dairy markets. As internal consumption subsidies and production subsidies on various products and industries are relaxed, manufactured dairy products formally directed to domestic outlets are now available for export. In 1989, for example, the per capita butter consumption in West Germany was 7.5 kilograms on half the 15.0 kilograms consumed in East Germany.[1] The highly subsidized consumption in East Germany will likely decline. As the East European and Soviet milk supply works through its adjustments over the next decade, one can reasonably expect to have sporadic, unpredictable and perhaps long-term systematic supplies manufactured dairy products showing up on world markets.

The world can also expect some other new players in world markets as developing countries' sponsored industries succeed. India is an example. Today India is estimated to be the fourth largest producer in the world and is now beginning to export dairy products.

It is very unlikely that there will ever be truly open markets for manufactured dairy products in world trade. Eliminating national sponsorship of the U.S. dairy industry will have little effect on freeing international dairy markets. However, a change in the operation or the existence of Section 22 import quotas would force the redesign of all existing dairy marketing and policy institutions. Whether the U.S. dairy industry has to live without current Section 22 restraints in the 1990's is being decided now. However, the general debate on whether we should have a societal sponsored industry will continue unabated through the 1990's.

Impacts on Milk Marketing Orders

Open regionalism of the late 1980's has brought about the current debate over the U.S. federal milk marketing order system. However, fundamental macroeconomic forces are really driving change. The rapid ascendancy of cheese as a major claimant of milk supply, the changing structure of the processing and distribution sector, and the changing nature of the definition of milk products are all putting significant stress on the federal milk marketing orders. The concluding national hearings on the federal milk marketing order system will provide the USDA's Agricultural Marketing Service Dairy Division with ample suggestions for redesigning

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[1] "World Dairy Situation," USDA, Foreign Agricultural Service, Circular Series FD 1-90, May, 1990, p. 31.

the federal order system. Irrespective of what the USDA finally proposes, there will be controversy. Also, market evolution will not stop. Orderly marketing will continue to be a vague and elusive concept in the 1990's. Also, California milk supply will likely continue to influence pricing in the federal order system. As a result, the use of national order hearings will likely become a regular feature of the 1990's dairy industry.

Impacts on the Dairy Price Support Program

The 1990 Dairy Bill saw the elimination of the open-ended commitment to purchase surplus manufactured dairy products offered on the market. This will produce a fundamental change in the dairy price support policy and all other dairy marketing institutions. The events of the last two years have demonstrated that the dairy markets are inherently unstable without some coordinated and industry-wide manufactured products inventory management system. Some marketing economists will argue that needed market predictability can be achieved by establishing futures and options markets for dairy manufactured products. There will be many strong counter arguments to this alternative policy thrust.

Without open ended public sector support, and with the need for an industry-wide program, dairy policy may well become the responsibility of the dairy industry. The 1990 Dairy Bill solutions of producer assessments to pay for surplus purchases and to reduce the budget deficits, in my opinion, are temporary solutions. The operative provision of the 1990 Dairy Bill is the solicitation of proposals to establish a milk inventory management program. The 1991 Dairy Bill debate has already started. As a veteran of the 1980's debates over the merits and evils of supply management, many of the arguments of the 1990's will be the same. However, given limited access to the U.S. Treasury, the 1990's "inventory" management debate will take on a much different and more serious character.

Furthermore, for the industry to take over national dairy policy, requires access to the enforcement and police powers of the society. Historically, granting societal enforcement power to a particular industry has never been done without considerable debate. This debate will be very contentious because many policy makers believe the time for societal sponsorship of the U.S. dairy industry is over.

Impacts on Dairy Cooperatives

The dairy cooperatives are truly caught in a difficult position. They must be proactive in designing and redesigning marketing and policy institutions for the 1990's. But, they are going to have to react to what gets changed. If the U.S. dairy industry is forced open to international competition and to self-help price support policies, dairy cooperatives may well be the only nearly industry-wide institutions left to achieve national level policy coordination. However, freed economic forces will further penalize cooperatives and organizations of cooperatives which take on industry-wide responsibilities. In the 1990's U.S. dairy producers will have to decide whether they will reassert their historic beliefs in cooperative and group action. There will likely be some painful reformulation of individual cooperatives and industry-wide cooperative organizations.

A DECADE OF INSTITUTIONAL DESIGN

In 1983, Alden Manchester published his classic text titled The Public Role in the Dairy Economy: Why and How Governments Intervene in the Milk Business to explain to the policy makers why there is extensive government involvement in dairy markets. Revisiting his arguments has convinced me that there will always be many forms of public intervention in U.S. dairy markets. Even though the foundations of dairy marketing and policy are under severe stress and critical evaluation, complete industry deregulation, in my opinion, is not very likely.

I do believe, however, that the 1990's will be the time when the industry's basic marketing and policy institutional structure will be recast. When redesigning market institutions, several basic questions must be addressed. First, what market and nonmarket performance outcomes do you want from the dairy industry? Second, to achieve the desired mix of industry performance, what is best provided by private markets versus private markets guided and/or directed by the public sector.

The 1990 Dairy Bill signals the start of the decade of dairy marketing and policy institution design and redesign. Currently on the industry's agenda are: 1) implementing USDA national federal order hearing recommendations; 2) designing an alternative to the Minnesota-Wisconsin price series; 3) designing a new pricing system to recognize multiple milk components; 4) dealing with the consequences of trying to mandate changes in the California state milk marketing order; 5) designing an industry-wide "inventory management" price support program; and 6) digesting the outcomes (if any) of the Uruguay Round of the GATT negotiations.

Dairy marketing and policy institutions touch every dairy production, processing or distribution enterprise. As the industry embarks on redesigning its institutions, I would hope we keep two critical perspectives in mind. First, the U.S. dairy industry is a totally integrated and interrelated market system. Second, any change in one marketing institution will require changing most of the other basic institutions. Recommendations of any one particular study, proposal or action must be evaluated from a total systems perspective. No one can predict the final outcome for where the dairy industries will be at the end of the 1990's. But it is clear to all of us who are observers, students and analysts of the industry, we will be very busy in the years ahead.

TABLE 1

WORLD MILK PRODUCTION BY SELECTED REGION, 1985 AND 1990

REGION	1985	1990[1/]
	Percent of Total	
EC 12 and other Western Europe	31.3	28.2
North America[2/]	17.4	17.0
USSR and East Europe	34.1	34.8
Pacific[3/]	5.1	5.1
India	4.5	5.6
Other Reported Countries[4/]	7.6	9.3
TOTAL VOLUME (1,000 Metric Tons)	419,129	440,006

SOURCE: Foreign Agricultural Service, USDA. World Dairy Situation FD 1-90, May 1990, p. 11.

Notes: 1/ Estimated
2/ U.S. and Canada
3/ New Zealand, Australia, Japan
4/ Central and South America, Mainland China, South Africa