Agricultural Economics Report No. 182

January 1984

International Cooperative, Inc.: The Evolution and Dissolution of a Potato Processing Cooperative

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FOREWORD

This study was initiated to study the factors leading to formation and eventual sale of International Cooperative, Inc., a potato processing cooperative located at Grand Forks, North Dakota. The business, which began operation in the fall of 1976, developed from the desire of potato growers in the Red River Valley region of Minnesota, North Dakota, and Manitoba, Canada to maintain a local market for their potatoes. The cooperative was dissolved in June 1981 and the processing facility was sold to a major potato processing firm.

The authors thank the members of the Board of Directors who provided information concerning formation and operation of the cooperative. The cooperation of former management personnel of the firm, the St. Paul Bank for Cooperatives, and consultants who provided assistance during formation of the cooperative is also appreciated.

Financial support was provided by the Agricultural Cooperative Service of the USDA and the North Dakota Agricultural Experiment Station.

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Highlights

International Cooperative, Inc., was formed in 1976 as a potato processing-marketing cooperative. Potato growers in the Red River Valley Region of Minnesota; North Dakota; and Manitoba, Canada formed the business to maintain a local market for their potatoes. They purchased a processing plant located at Grand Forks, North Dakota, that had been owned and operated by Western Potato Service, Inc. Western had closed the plant in the spring of 1975 and filed for bankruptcy under Chapter XI of the Federal Bankruptcy Act.

The cooperative was dissolved in 1981 and the processing facility was sold to Simplot Financial Corporation, a subsidiary of the J. R. Simplot Company. Simplot currently operates the processing plant.

Although the cooperative was not a financial success, grower-members felt they had attained several of their initial objectives. They were successful in (1) forming the business, (2) maintaining and improving the processing facility, and (3) in locating a major private processor who was sufficiently well established to preserve the local potato industry.

In retrospect there were several conditions during formation and operation of the cooperative that affected the firm's performance and led to dissolution of the business. Physical condition of the plant and equipment was a continuing problem and market conditions were not favorable to the formation of the cooperative in 1976. These problems may have been reduced with a more thorough assessment of the plant facility and development of a market feasibility study. Conditions during operation that affected performance included: (1) too large a work force; (2) record high interest rates in combination with a high proportion of short-term, variable rate borrowing; (3) inability to establish pricing flexibility in the finished product market in competing with major competitors; and (4) contracting for a relatively high proportion of processing potatoes during the first two years of operation.

INTERNATIONAL COOPERATIVE, INC.: THE EVOLUTION AND DISSOLUTION OF A POTATO PROCESSING COOPERATIVE

by

Glenn D. Pederson and Donald F. Scott*

I. Introduction

The Red River Valley's largest potato processing plant, located at Grand Forks, North Dakota, was reopened as a farmer processing-marketing cooperative in the fall of 1976 under the name International Cooperative, Inc. Events which preceded the evolution of the firm as a cooperative, marked its inception, and contributed to its eventual dissolution are reviewed and analyzed in this study. Attention is given to the impacts which the cooperative had on growers and on the level of competition and economic activity within the region.

International Cooperative, Inc. was unique as a potato processing cooperative during its years of operation. The business developed from the desire of potato growers in the Red River Valley region of Minnesota, North Dakota, and Manitoba, Canada to maintain a local market for their potatoes. An additional incentive for organizing the cooperative was the locational (freight) advantage which Midwest processors held over Idaho and Washington processing firms in supplying eastern U.S. markets.

Success of the cooperative was hampered by several factors: inability to market all of its processed product, costly unanticipated expenditures on plant and equipment, and the joint effects of a high short-term debt load and record high interest rates. The cooperative was dissolved and the processing facility was sold to a major potato processing firm in June 1981. Development of the organizational plan (financing and marketing strategies) and policy adjustments made by the cooperative's board during its years in existence are a primary focus of this study.

Several objectives form the basis for this report. A major objective is to describe the background, organization, and operation of the International Cooperative, Inc., including why it was formed, how it was organized, how it arranged for financing, how it was managed, and how it related to the rest of the potato processing industry. A second objective is to review the decision making processes involved in formation and operation of the cooperative. Organizational policies and adjustments of the business are analyzed regarding impacts on financial and marketing success. A third objective is to focus on selected impacts the cooperative had on markets and producers. Finally, the study attempts to provide organizational and operating guidelines for other potato producers, and producers of other commodities, that might have a similar opportunity to form a cooperative and acquire a processing plant.

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Data to support the analysis are drawn from several sources. Historical information on potato production and processing, both regionally and nationally, was taken from available secondary sources. A first-hand knowledge of the policy and management decisions that were made was obtained through interviews of members of the Board of Directors, key management personnel, and growers. Additionally, interviews with creditors provided background on the financial progress and problems of the cooperative, and served to supplement information contained in annual financial statements.

II. A Search for Stable Local Markets

Growers' interest in reactivating the potato processing facility at Grand Forks, North Dakota began soon after the plant was closed by Western Potato Service, Inc. in the spring of 1975. Western Potato Service, Inc., a subsidiary of American Kitchen Foods, Inc., had filed for bankruptcy under Chapter XI of the Federal Bankruptcy Act. Potato growers who had been contracting potatoes with that firm were faced with two problems. First, those who had grown potatoes for Western Potato Services in 1974 would not receive full payment for their crop. Second, there were no immediate prospects for another firm to purchase the plant and resume contracting with growers. This lack of a prospective buyer was disturbing to growers of processing potatoes in the Red River Valley. Growers desired to maintain or increase their potato acreage and preserve a stable local market for their crop. They had these two objectives in mind when they began to explore means by which the plant could be successfully reopened. The long-term effects of a diminished or nonexistent local market for Valley processing potatoes was the primary concern.

Behind the growers' long-term objective of a viable local market for processing potatoes were two important economic incentives: 1) competitive economic advantage which the Red River Valley possessed over other potato-producing regions, and 2) the desire on the part of a large number of growers to contract their potato acreage to stabilize their prices and returns. It is necessary to take a closer look at each of these economic incentives.

The competitive position of the Red River Valley region in potato production can be usefully summarized in terms of regional and national comparisons. The regional comparison focuses on the relative costs of production. A national comparison can be made concerning location and cost of transportation differentials between major producing regions. Within the central U.S. region, three producing areas are important to consider: Wisconsin, Michigan, and the Red River Valley of North Dakota and Minnesota. Average cost of production estimates made by state Extension Services indicate that North Dakota and Minnesota produced potatoes for $2.16 per hundredweight in 1978, while comparable costs were $2.23 in Michigan and $2.63 in Wisconsin. Within the central region the Red River Valley maintained a substantial advantage in cost of the raw product and could compete with nearby states for the Minneapolis and Chicago retail markets. The cost-of-production advantage of the Valley reflects, in large measure, the fact that potato production in the Valley is under dry-land conditions while Wisconsin and Michigan produce more under irrigation.

With similar costs of processing, a potato processing firm in the Red River Valley could favorably compete with firms in nearby states assuming that the final product was of comparable quality.

Nationally, the Red River Valley region produced potatoes for processing at a slightly higher cost per hundredweight than its Western U.S. regional competitors, but enjoyed a lower transportation cost to central and eastern U.S. markets. The argument has been made that processing facilities will eventually be located closed to major population centers in the future to gain from locational (freight) advantages in serving those geographically concentrated markets. Processing firms located in the Red River Valley Region would enjoy a distinct competitive advantage over western processors in supplying consuming centers in the East, Southeast, and South. While the transportation cost differential has varied over time, it was the contention of some Valley growers that the differential between the Valley and western U.S. region was between one and two cents per pound of finished product. Growers in the Valley considered the freight cost advantage as a strong incentive to maintain an operational frozen potato processing facility near the potato producing area. Growth in the frozen processed potato market represented a potential for continued profitable operation and growth of the Red River Valley potato industry.

In addition to the interregional competition issue, farmers in the Red River Valley anticipated that changes were on the horizon for the potato processing industry nationally. Projected higher energy and transportation costs suggested that future processing plants would need to be located not only close to producing areas but also close to major markets (population centers). Zink (1982) found this to be the case in a recent study in which he showed that processing facilities in the central fall potato producing area do have an economic advantage over western processors in procuring raw product and shipping final product to eastern markets. By preserving the existing processing plant as a local market for their potatoes, growers could likely remain competitive well into the future as transportation costs escalated.

A second major economic incentive for reactivating the processing plant was the desire by growers to contract their potato production and reduce the risk associated with finding a market for their potatoes. In addition, they wanted to know with greater certainty the price at which they would sell their potatoes. Potato growers in the Red River Valley have historically experienced instability in prices and incomes for a number of reasons. Certain economic factors can be identified which contribute to this general problem due to their direct or indirect influence on the supply of potatoes or the demand for fresh or processed potato products. These factors are not unique to the Red River Valley region.

Variability on the supply side of the market is related to annual fluctuations in levels of production due to producer decisions concerning variety planted and harvested acreages, and weather and general growing conditions which greatly affect realizable yields. The amount of salable potatoes grown directly affects variability of annual grower returns. Demand-side factors (e.g., price elasticity) are of equal or greater importance to producer returns. While the level of demand has not exhibited much variability in aggregate, the demand for potatoes for food is highly price inelastic.[1] Although the elasticity of demand for different processed products varies, most studies have indicated that the demand for those products is inelastic. Highly inelastic demand for potato products in conjunction with relatively small shifts in supply translate into relatively large variations in producer's prices and returns.

An appreciation for the variability in potato prices and production can be obtained by examining the behavior of those two data series for North Dakota for the period 1961 to 1982 (Figure 1, Table 1). In 15 of the 22 years shown, a change in production from the previous year is associated with an opposite change in price from the previous year (Table 1). In other words, an increase in production from one year to the next is frequently associated with a decrease in price. Considering the absolute value of year-to-year changes in production and prices received for those 15 years, the average change in production was 17.4 percent and in prices, 48.9 percent.

Alternative actions which have the potential for ameliorating the instability problem are 1) to control variations in production by reducing the boom-and-bust cycles which have been characteristic of grower acreage decisions, or 2) to influence the demand for and marketability of the finished potato product. Concerted action by growers to limit and stabilize potato acreage is difficult to achieve. Voluntary acreage restrictions are not generally popular for several reasons: 1) reduction of acreage may mean under-utilization of potato-producing assets (machinery, warehouses, land) and lower returns on fixed investments, 2) growers may consider potatoes a necessary part of their crop rotation and would hesitate to make major acreage adjustments, or 3) growers may not consider a voluntary program to be sufficiently effective in stabilizing prices and returns.

Efforts to expand demand have generally held the greatest potential for success. Advertising potato products may be effective in generally expanding the level of consumption. Product development and improvement also potentially broadens the market for processed potato products and may be a more effective strategy for an individual firm. Expansion and diversification of markets for potato products result in a more elastic demand and potentially greater price and income stability for the producer.

The opportunity open to growers in the Red River Valley in 1975 was to reactivate the processing plant, and in so doing begin to realize certain potential benefits. Opportunities for market growth were perceived to exist as long as a Valley processor could competitively price a high-quality finished product. The ability to continue to contract potatoes in that local market was also an attractive marketing alternative which reduced growers' perceived exposure to price and market instability. Potato growers, much like farmers in general, have traditionally demonstrated a comparative advantage in production aspects of the farming

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[1]Price elasticity is an index of the relative change in quantity demanded in response to a change in the price. At the farm-level, price flexibility increases as price elasticity decreases. As a result, farmgate potato prices adjust more freely and fluctuate more widely than do retail prices.

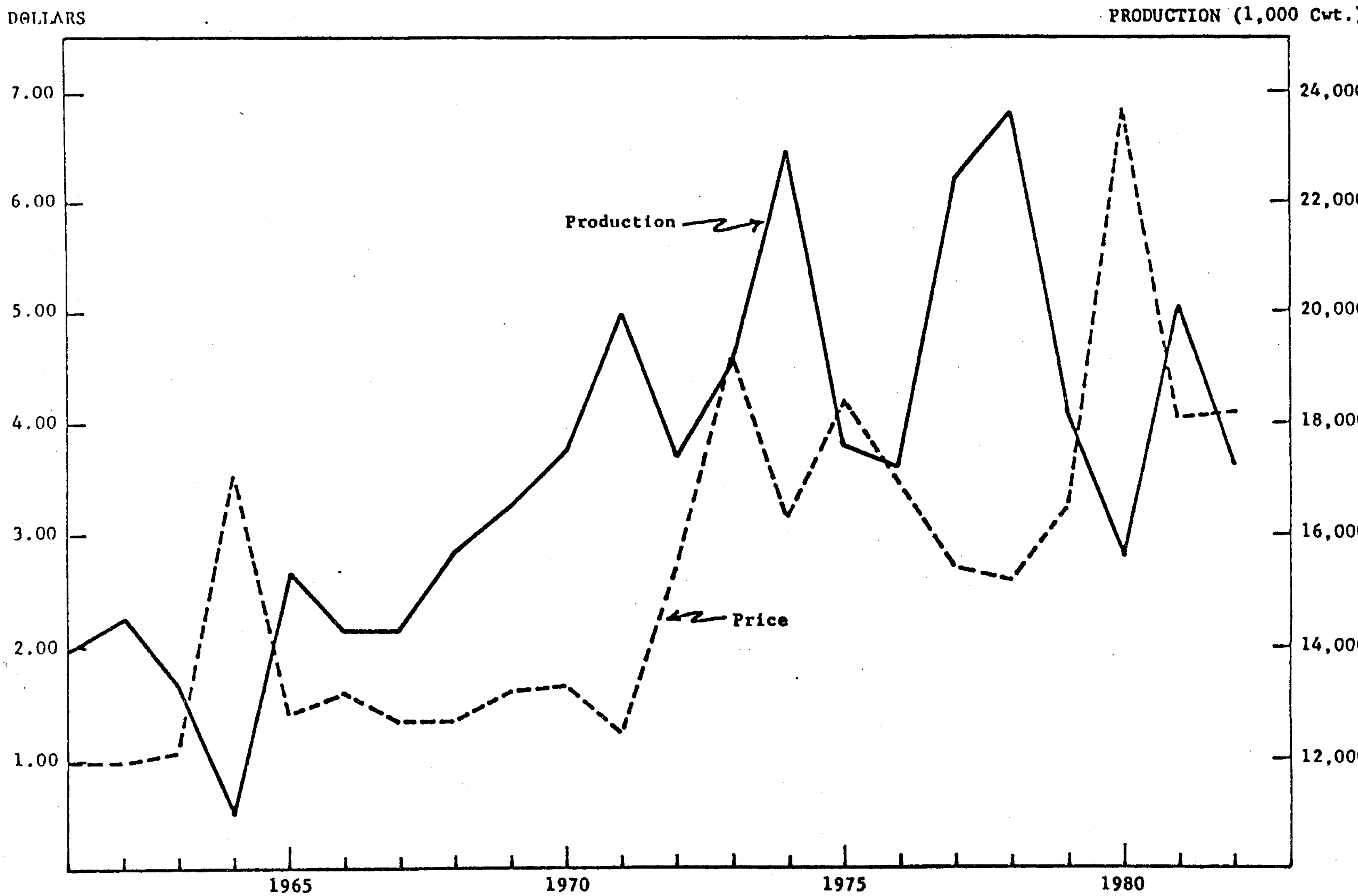

Figure 1. Potato Production and Average Annual Price Received by North Dakota Producers, 1961-1982

TABLE 1. POTATOES: PRODUCTION, PRICE, AND YEAR-TO-YEAR CHANGES, NORTH DAKOTA, 1960-1981

Crop Year	Production (1,000 Cwt.)	Percent Change From Previous Year	Average Annual Price Per Cwt. ($)	Percent Change From Previous Year
1961	13,970	- 2.6	.99	-25.6
1962	14,560	4.2	.98	- 1.0
1963	13,338	- 8.4	1.08	10.2
1964	11,016	-17.4	3.55	228.7
1965	15,370	39.5	1.40	-60.6
1966	14,300	- 7.0	1.60	14.3
1967	14,280	- 0.1	1.34	-16.3
1968	15,660	9.7	1.34	0.0
1969	16,530	5.6	1.61	20.1
1970	17,550	6.2	1.67	3.7
1971	19,995	13.9	1.23	-26.3
1972	17,400	-13.0	2.75	123.6
1973	19,140	10.0	4.60	67.3
1974	22,950	19.9	3.15	-31.5
1975	17,600	-23.3	4.20	33.3
1976	17,220	- 2.2	3.45	-17.9
1977	22,400	30.1	2.70	-21.7
1978	23,625	5.5	2.60	- 3.7
1979	18,240	-22.8	3.25	25.0
1980	15,680	-14.0	6.85	110.8
1981	20,125	28.3	4.05	-40.9
1982	17,250	-14.3	4.10	1.2

SOURCE: Scott, Donald F. and Robert F. Carver, North Dakota Historic Estimates, Selected Crops, 1955-1975, Agricultural Statistics No. 50, Department of Agricultural Economics, North Dakota State University, Fargo, 1980; USDA-SRS, North Dakota Agricultural Statistics, 1982, Agricultural Statistics No. 50, North Dakota Crop and Livestock Reporting Service, Fargo, 1982.

business due to training, background, and interest. The marketing of potatoes is an area of management with which many farmers are less familiar. Questionable in the minds of some cooperative organizers was the ability of a farmer cooperative to effectively compete in an already highly competitive industry. Data to accurately portray the competitive nature of the industry are generally not available for 1978. However, 19 companies owned the 35 freezer plants in operation in the U.S. Sixteen of those plants (46 percent of total) were owned and operated by four companies, and each company operated at least three plants.

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III. Organizing as a Cooperative

Potato growers began to actively pursue the reactivation of the processing plant in 1975, with the formation of an Industrial Development Committee consisting of members of the Red River Valley Potato Growers Association. The committee was formed following a bankruptcy hearing of the Western Potato parent company, American Kitchen Foods, Inc. The closing of Western Potato Service had left two immediate and costly impacts with which the committee was concerned. About one-half of the 500 former employees of the plant were still drawing unemployment insurance. Approximately 20,000 acres of processing potatoes had to be channeled into other markets during the 1975 crop year, thereby affecting price levels in those markets.

Why Organize a Cooperative?

Several factors entered the decision to form a cooperative. Those factors fall into four general areas: 1) lack of an available buyer, 2) availability of financing through the St. Paul Bank for Cooperatives, 3) prior success of a processing cooperative in the Red River Valley, and 4) grower experience with smaller farmer-owned cooperatives.

Initially, organizing growers were not considering the formation of a potato processing cooperative. Rather, the Industrial Development Committee was contacting private processing firms in the Midwest and West in an attempt to encourage one such processor to purchase the facility. Farmers recognized that they had little or no expertise in operating a large processing plant and preferred that an experienced, established private processor be attracted to the Valley. However, the frozen potato processing industry was already experiencing over-capacity problems. Existing plants in the West were running at 80 percent of capacity. Moreover, the facility at Grand Forks was not in good repair and would likely have required immediate cash outlays to make it fully operational. Representatives of western processors did make on-site evaluations of the plant, but no purchase offers were tendered. A major processor, J. R. Simplot, was already operating a processing plant in the Valley at Crookston, Minnesota and was not considering an expansion of its processing capacity at the time.

With the realization that a private concern could not be attracted into the existing plant, organizing growers began to seriously consider the option of forming a processing cooperative. As organization plans began to evolve, the number of growers and other interested parties expanded from five to near 60 individuals. The Industrial Development Committee had fulfilled its role as an exploratory group. The first major step in organization was to form a farmers' cooperative association which could explore financing alternatives for acquiring and operating the plant.

Financing was available to a farmer cooperative business venture through the St. Paul Bank for Cooperatives. A major hurdle was the availability of sufficient venture capital to purchase the plant, make necessary repairs and improvements, and provide working capital for paying growers for their contracted potatoes and meet plant payrolls and other ongoing cash needs of the business. The Bank for Cooperatives was capable of providing a full range of financing to IC and had the capacity to provide a wide range of financial services to processing and marketing cooperatives throughout the region. From the beginning of their planning efforts, organizing growers in IC intended to approach the St. Paul Bank for financial support. Once the Bank for Cooperatives was convinced that the business could become profitable, it provided the financial strength which facilitated the continuation of financing by other commercial banks. These banks were already financing the bankrupt Western Potato Service, Inc. and transferred some of their dollars to the new cooperative. Banks within the Valley acted in concert with the Bank of North Dakota (acting as correspondent) in providing supplementary term financing to IC.

A processing cooperative was not unprecedented in the Red River Valley. Four years earlier sugarbeet growers in the Valley had formed two sugarbeet cooperatives, American Crystal Sugar Company and Red River Valley Cooperative of Hillsboro (which subsequently merged with American Crystal). Some of the members of IC were also members of those cooperatives when they were formed. The Minn-Dak Farmers Cooperative at Wahpeton, North Dakota was formed about the same time as the other two sugarbeet cooperatives and was also quite successful. The success which American Crystal Sugar enjoyed during its first few years in existence created the optimistic outlook that a potato processing venture could also succeed. The design for generating grower-investor capital for IC reflected the thinking that American Crystal was the organizational model. An influential organizer commented that, "We used, pretty much, the same organizational plans as American Crystal did when they set up their co-op." Similarities between the two cooperatives existed from an organizational perspective (contracting, financing), yet the market conditions they faced were quite different in the final analysis.

A final rationale for developing a cooperative form of business organization was that growers had previous experience with how a cooperative functions. A cooperative provided for greater interaction between growers and those in policy making positions, such as the board of directors, who were also growers. Accountability to growers was never to become a problem for the cooperative. Provision of price guarantees to growers was a feature of the cooperative that turned out to be essential to continuation of the business even in years when losses occurred. These guarantees were provided to farmers and their local creditors to insure that producers would be in a position to contract potatoes in each successive year. The use of price guarantees by the cooperative through the St. Paul Bank really evolved through communication channels and financial capabilities somewhat unique to a cooperative.

A cooperative association was formed under North Dakota law on December 8, 1975 using the name, Red River Valley Potato Processing Cooperative, Inc. The objectives of the cooperative organizers can be usefully summarized into four general areas: 1) to maintain and expand existing and potential market outlets for Red River Valley processed potato products; 2) to reactivate the existing potato processing plant and preserve a local market for raw potatoes; 3) to improve the processing facility to achieve greater throughput and operational efficiency; and 4) to expand the capacity of the plant in the future, if growth opportunities occurred. At its inception the cooperative was formed to investigate the issue of acquisition of the Grand Forks facility for processing of raw potatoes into french fries, hash browns, and related final products. In order to fund these activities contributions were collected from growers during the December 1975 to early 1976 period. Legal counsel for the cooperative began to actively negotiate with eastern banks, which held the mortgage on the bankrupt firm, through the bankruptcy court in Maine, concerning the purchase price.

Once it became apparent that the plant could be purchased, the cooperative changed its name to International Cooperative, Inc. (IC) and began to obtain membership subscriptions from growers in Minnesota, North Dakota, and Manitoba. Approximately 31,300 shares of common stock were sold for a total membership equity contribution equalling $3,124,000. Common stock subscriptions were sold on the basis of one and one-quarter shares for each 100 hundredweight of potatoes a grower-member contracted to sell to the cooperative. This price per share amounted to $1.25 per hundredweight contracted. Contract sizes varied from 5,000 to 84,000 hundredweight (cwt.) with most contracts in the 10,000-20,000 range. By September 1976, 173 growers had contracted 2,475,000 hundredweight. Kennebec variety contracts totaled 1,828,000 cwt., Russet variety contracts comprised 398,500 cwt., and the remaining contracts (248,500 cwt.) were undecided or included both varieties. Subsequent to the completion of the membership subscription offering, IC learned that it had not properly registered common stock sold to Minnesota growers with the Minnesota Department of Securities, and a recision offering was made in October 1976.[2]

Feasibility Analyses

Prior to the public offering of common stock, IC contacted the St. Paul Bank for Cooperatives concerning financing for the acquisition of the processing facility. Before committing itself to a financing agreement, however, the bank required that analyses be conducted on the physical condition of the plant, machinery, and equipment, and on the financial feasibility of the cooperative. Consultants were contacted by the bank.

An engineering firm was hired to provide expertise in evaluating the physical condition of the plant and provide an estimate of investment costs required to make the plant fully operational once again. Plant production capacity was estimated to be 150 million pounds per year of finished product. Capital improvements totaling $2.5 million would be required to achieve that level of output on an annual basis. Improved efficiency in product processing, as a result of these improvements, was expected to substantially reduce costs of production below historical plant levels.

A major regional accounting firm was hired for the purpose of generating financial projections for the cooperative over the period 1976-1986. The financial feasibility analysis attempted to integrate assumptions concerning procurement, production, marketing, and financing arrangements into a set of business projections. Financial projections included: a net worth statement, a pro-forma income statement, and a statement of change in financial position (sources and uses of funds).

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[2]A recision offering is a public offering of a stock-issuing corporation to refund the purchase price of the stock which has been purchased. In the case of IC, the recision offer covered both stock and membership in the cooperative.

Several assumptions were necessarily made, including cost of the project, terms of proposed financing, operating costs, growers' contracts and payments, and inflation. The basic assumptions were made by the cooperative and projections were made by the consulting firm.

Historically, the plant had incurred substantial operating losses. It was the contention of IC organizers and management that losses generated by Western Potato Services were the result of 1) ineffective and deficient management, 2) inferior quality of finished product, 3) equipment malfunctions and downtime problems caused by deferral of normal and usual plant and equipment maintenance, 4) unsuccessful farming operations, and 5) both purchasing and marketing policies unsuitable for the market conditions in both raw and processed potato products. Western Potato Services was actively involved in growing some of the potatoes it used in processing. In addition, the firm contracted with Valley potato growers to obtain the volume of raw product needed to utilize the plant. These factors largely explained the excessively high production costs and the low sales price for the finished product.

A comparison of historical operating data for the two years prior to closing the plant in July 1975 with the cooperative's own operating projections for 1978 reveals the anticipated impacts of improved efficiency and product quality (Table 2). The gross sales price was projected to increase and reflect a consistently higher quality processed potato product. Lower freight and brokerage costs and significantly lower cost of the finished product by 1978 were to reflect the joint impacts of improved operational efficiency gained through investment in plant and equipment and more effective management of plant facilities and personnel.

TABLE 2. HISTORICAL AND PROJECTED PLANT OPERATING DATA FOR INTERNATIONAL COOPERATIVE, INC., 1974-1975 AND 1978

Item	Actual (Year Ending July 31) 1974	1975	Projected 1978
	(dollars per pound of finished product)		
Gross Sales Price	$ .194	$ .225	$ .234
Freight, Brokerage, and Cash and Quality Discounts	.027	.035	.024
Net Sales Price	$ .167	$ .190	$ .210
Cost of Goods Sold	.166	.218	.185
Gross Profit (Loss)	$ .001	$(.028)	$ .025
Administration and Interest	(.007)	(.008)	(.010)
Selling and Promotion	(.001)	(.001)	(.002)
Operating Income (Loss)	$(.007)	$(.037)	$ .013

SOURCE: Arthur Anderson and Company, Red River Valley Potato Cooperative, Inc.: Financial Projections for the Period, 1976 86, February 1976, p. 2.

Numerous assumptions necessary to develop financial projections used in gauging the cooperative's chances for success in the long term are contained in Table 3. Initially, the plan was that the majority of the raw product be composed of the Kennebec variety of potatoes which is grown throughout the Valley and which had been processed in the plant by the former owner. The remaining contracted acreage of the cooperative was the Russet variety, which possessed superior processing characteristics but was not grown as extensively in the Valley.

TABLE 3. SUMMARY OF CERTAIN PRODUCTION AND MARKET ASSUMPTIONS USED IN MAKING FINANCIAL PROJECTIONS FOR INTERNATIONAL COOPERATIVE, INC.

Assumptions	1977	1978-1986
Cwts. of Potatoes Harvested -		
Russets	1,000,000	1,100,000
Kennebec	2,000,000	2,200,000
Total Cwts. Harvested	3,000,000	3,300,000
Average Daily Cwts. Processed	14,000	16,000
Plant Processing Days	210	210
Pounds of Finished Product Produced	135,000,000	148,500,000
Average Yield of Finished Product	45%	45%
Average Cost Per Cwt. of Raw Potatoes, Including Grower Production Costs, Freight, Storage, and Duty -		
Russets	\$3.90	\$3.90
Kennebec	\$3.05	\$3.05
Type of Finished Product Produced -		
Pounds -		
Institutional	67,500,000	74,250,000
Retail	67,500,000	74,250,000
Average Net Selling Price Per Pound for Finished Product	21¢	21¢

SOURCE: Arthur Anderson and Company, Red River Valley Potato Cooperative, Inc.: Financial Projections for the Period, 1976-86, February 1976, p. 10.

Growers' contracts were assumed to provide an average maximum price not to exceed 35 percent of the net selling price of aggregate products sold. The intention was that prices paid to growers should provide for recovery of costs of production plus a normal return on their investment. These prices were maximum prices per hundredweight to be paid under the condition that all operating expenses of the cooperative had been met. An 80 percent price guarantee was provided to all growers with the balance conditional upon the profitability of the business. Additional payments were scheduled to be made to growers using a pool concept. The price spread between varieties, which primarily indicated the superiority of the Russet variety in processing, was to be reviewed each year for possible adjustments. A set of flat prices was used in making the financial projections.

No explicit assumption was made relative to the expected level of inflation. Financial projections assumed that future increases in costs of production and raw materials would be offset by increased selling prices for the finished product.

Financing Acquisition and Renovation

On August 3, 1976, International Cooperative purchased the potato processing facility located in Grand Forks for the sum of $5.5 million. At approximately the same time as the plant purchase, IC signed a loan agreement to acquire financing up to $11.1 million from the St. Paul Bank for Cooperatives and $700,000 from the Red River National Bank and Trust Company of Grand Forks (as the representative for a consortium of banks located in the Red River Valley). Financing was thereby available to fund the purchase of the plant and land, provide funds for refurbishment and renovation of the plant, and generate initial working capital.

Capital required to renovate and improve the plant over the following two years (1976-78) was to be spent for labor and materials to clean up and repair the buildings and the electrical and freezing systems; acquire materials handling equipment such as forklifts; acquire and install a hash brown processing line, waste disposal equipment, and personnel facilities; and eventually make substantial improvements to the processing lines. Approximately $1.5 million of the projected amount was spent prior to commencement of processing operations in October 1976. A part of that initial expenditure was made to acquire the OKRAY brand and packaging equipment for its production.

Total cost of the project was estimated to be $11.8 million. Plant and equipment improvements totaled $8.0 million, a $430,000 advance capitalization deposit was made to the Bank for Cooperatives, and $3.37 million was required as working capital. Supporting the project was $3.2 million in grower-member equity and $8.6 million in Bank for Cooperatives notes financed initially at 8 percent interest.

The loan agreement with the Bank for Cooperatives provided for a term loan of $7.4 million, a special term loan of $700,000, and a seasonal borrowing line of credit not to exceed $3.0 million. The term and seasonal loans were made using a variable rate arrangement, depending upon the bank's cost of funds. The seasonal loan could not exceed 75 percent of the cooperative's outstanding accounts receivable plus 60 percent of the market value of IC's potato product inventory.

According to the loan agreement with the Bank for Cooperatives, the bank received a first line mortgage on all of IC's real property and a security interest in all other property. Moreover, the cooperative was to maintain at least $2.0 million in working capital at all times. Borrowings from Valley commercial banks were obtained at a 9 percent rate, and the banks received a second mortgage and second security interest in the property.

A condition established by the Bank for Cooperatives in approving funds for acquisition was that the cooperative contract for all of its raw potato requirements in advance. This requirement was imposed for two reasons. First, contracting the raw potatoes in advance insured that the plant would be able to operate near full capacity, if market conditions were favorable, and realize the potential financial projections which were made for IC. Second, the level of growers' contracting was directly related to the level of the growers' equity contribution in the first year. The Bank for Cooperatives felt that a more substantial equity interest in the business would be desirable and necessary to keep IC viable in the first few years of operation when the likelihood of losses was expected to be high. The need to contract for a high proportion of the raw product proved to be a costly requirement in the first two years of plant operation due to the inability to sell the entire inventory at projected prices. Directors were critical of the policy and preferred to contract a lower percentage of the total raw product and acquire additional raw potatoes on the open market when needed.

Financing the cooperative venture was a major issue which concerned growers during the formation and later operation stages. During the months leading up to the purchase of the facility, growers expressed concern about the debt burden and the need to show a profit from the beginning of plant operations. Many growers were hesitant to invest the $1.25/cwt. in the initial membership. Their reason for joining the cooperative was to improve their market for white potatoes, which they felt were better adapted than the Russet variety to the soils they farmed. The cooperative was successful, however, in contracting the hundredweight of raw potatoes required by the Bank for Cooperatives after members of the board of directors held organizational meetings with growers throughout the Valley.

Management Organization

By August 1976, the cooperative's management team had been formed. Figure 2 provides an overview of how IC's management was organized and how areas of responsibility were delineated. The president and general manager was an individual with several years of experience in the potato-processing industry; some of those years were spent in the Red River Valley managing a potato-flake processing plant. The president developed the management plan and located qualified management personnel. From the beginning it was necessary that the management coordinate its efforts. Although grower coordinated with plans for plant operation. Renovation was underway, yet the processing line had not been operated for nearly two years and test runs had to be made to locate trouble areas and avoid costly shutdowns. For that reason operations commenced in October, one month later than

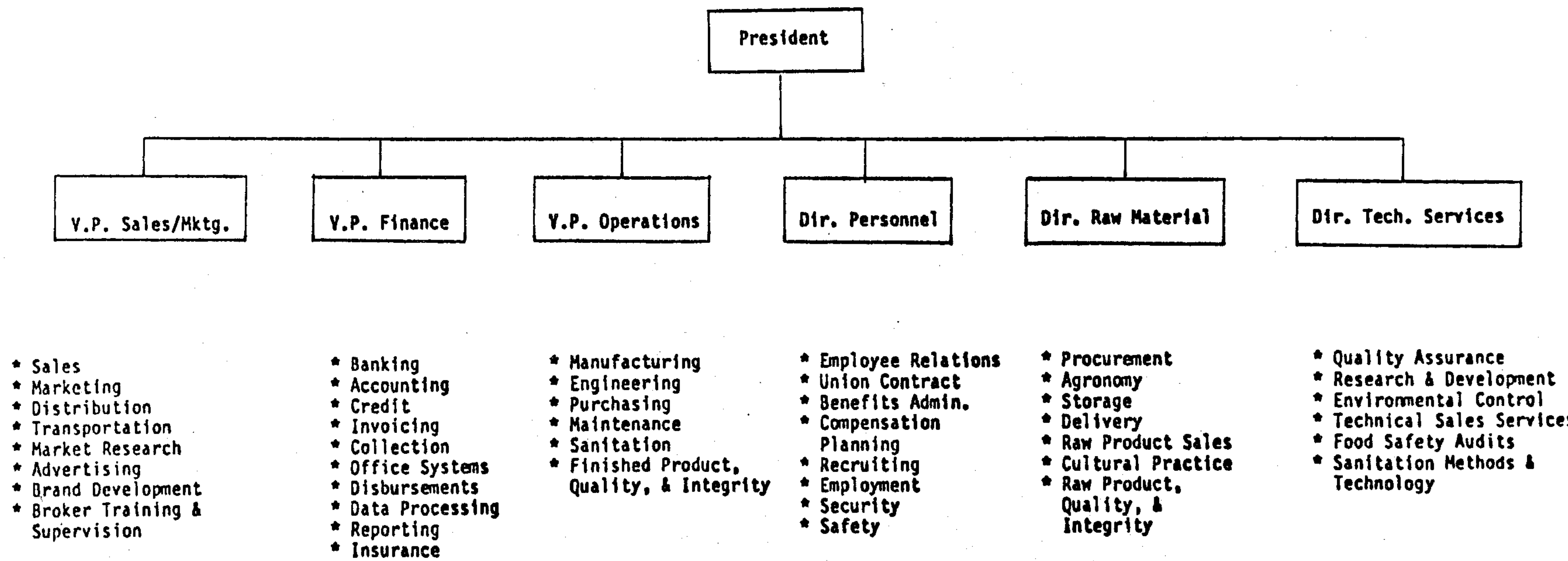

Figure 2. International Co-op Management Organization

normal. Sufficient employees were hired to operate the plant on a three-shift basis between September and June to process the 100 to 120 million pounds of final product which the cooperative anticipated selling. Brokers and marketing agents had begun to make contacts in the retail trade (grocery stores) and institutional segment (restaurants, hotels, schools, government, etc.) of the market. The cooperative's initial marketing plan was to serve customers in both major segments of the market.

Reason for Optimism

Growers and management had reasons to feel optimistic about the cooperative venture's chances for success. Projected plant activity indicated that the cooperative would have several beneficial impacts in the Valley. The plant would employ 425 people with an annual payroll of $3,750,000. Plant facilities were anticipated to be more than adequate with 325,000 square feet of building and a 30 million pound capacity freezer. Although raw product storage space was not sufficient, IC had plans to rent additional storage in the area. The plant was projected to process 2.4 million cwt. of raw potatoes, which was 10 precent of the Red River Valley potato crop. Approximately 550,000 pounds would be processed each day in 9-ounce, 2-pound, and 5-pound packages. In total, nearly 100 million pounds of retail and institutional products with a sales value of $18 million would be marketed during the first year of operation. Projected impacts on the local economy added optimism to the venture. The annual payroll was expected to create sales and purchases of $24.5 million for local businesses and $100,000 in local taxes.

Signals from the marketplace were initially encouraging. The cooperative purchased an idle plant and for that reason could not begin by marketing its products with customers of the former processor. Rather, IC was required to build its own market in an already-competitive marketplace. Prior to plant operation, however, IC brokers and agents had made successful contacts with retailers and institutions within the region and had been contacted by other businesses interested in purchasing from the cooperative. Market development efforts initially attempted to concentrate on high quality accounts with sizeable requirements, yet the cooperative was prepared to accept smaller customers and those with lower quality requirements to insure a market of sufficient overall size. In initiating its marketing efforts IC also found some market resistance. The prior owner, Western Potato Services, had not maintained a reputation for high quality of finished product, and among preferred customers some skepticism remained that the plant could not meet their quality standards.

IV. Evolution of the Cooperative

Projected profitability of the cooperative did not materialize during its first two years in existence. Several factors related to the high level of competition in the frozen potato products industry along with problems unique to IC and the Red River Valley contributed to poor financial performance. This section reviews some of the problems and the adjustments which were made by the cooperative's management to generate profits.

Several factors converged in 1976 to both reduce sales revenues and increase costs for the cooperative. Frozen potato product stocks were at a record high, with estimates running between 10 and 20 percent above the five-year industry average according to several sources available in early 1976. Stocks of dehydrated products were also up 26 percent nationally in 1975. Price competition in an already-soft market was quite intense. Moreover, timing of IC in entering the private label, retail segment of the market could not have been poorer. Normally, that market is booked in the months of May and June preceding the crop year. Since the cooperative began operations in August 1976, most of the retail business was lost in the first year of operation.

The poor market reputation which the plant and region had received under prior ownership was more damaging to IC's first-year profit performance than poor market timing. Cooperative management summarized the situation well: "Since we purchased a broken-down reputation for quality along with [the plant], customers and potential customers kept us under very close scrutiny." As a result, IC had to become more competitive than the industry on quality, service, and price to develop its customer base.

International Cooperative was attempting to establish itself in four segments of the market in its first year of operation: retail, institutional, export, and government. In the retail market, timing was a major problem, but acceptability of the product was aided by the purchase of the OKRAY's brand from Sentry Insurance Company, Inc., when it closed its Stevens Point, Wisconsin plant. The OKRAY'S brand had been well-established in the midwestern markets served by IC. Customer response was favorable to the hash brown potato product which IC introduced under that brand name. The OKRAY's hash brown patty was viewed as more flexible in methods of preparation, since it could be deep fried, pan fried, grilled, baked, or broiled. Additionally, various forms of french fried potatoes were introduced by IC under the OKRAY's label in an attempt to develop a full line of products.

The institutional market, which includes restaurants, hospitals, fast food establishments, etc., was the most difficult market to sell in due to the high demand placed on quality. Although IC opened a large number of institutional accounts in the first year, not all of those customers repeated as customers in the second year. Discontinuation of some institutional customers was a result of product quality control problems during initial plant operation but also reflected problems unique to the 1976 Red River Valley potato crop. The 1976 Kennebec potato crop had poor overall quality due to sunburn and dryout problems which reflected disease problems and adverse growing and field conditions.

Export and government markets comprised a less significant part of IC's marketing program. Exports to Europe were spurred by the prospects for a drought in 1976, and IC provided some product to that outlet early in the processing season. The export market was viewed as temporary, however, and the cooperative did not devote resources to the development of a long term export potential. Government contracts were successfully bid by IC in its first year. Military and USDA contracts did not contain the high-quality specifications which certain institutional and retail customers required. Government continued to be a permanent part of the market for IC's processed potato products in the years following 1976-77.

A brief summary of the problems and successes of IC's market development program in the 1976-77 pack year is contained in Table 4, which summarizes sales accounts and volume by month. The drop in sales in April 1977 reflects the completion of some export commitments and the underlying slowness of the market. Prior to delivery, export volume was projected to be approximately 47 million pounds of finished product. Recovery of European potato crops, however, dramatically decreased that market to 14 million pounds. The cooperative went from a potential deficit inventory position to a situation of surplus-projected inventories. While new accounts were added throughout the 1976-77 pack year, the growth was predominantly in lower-quality segments of the institutional market. During the first two years of operation, the institutional market comprised approximately 30 percent of gross sales. While retail products enjoyed good market acceptance, the level of market demand was down nationally and growth for IC's products was slower than anticipated.

TABLE 4. FIRST-YEAR COOPERATIVE ACCOUNTS AND SALES VOLUME BY MONTH, 1976-77

Month (1976-77)	Accounts: Institutional New	Institutional Total	Retail (OKRAY'S) New	Retail (OKRAY'S) Total	Total Pounds Shipped
	- - - - - -	number	- - - - - - -		
September	0	0	0	0	0
October	1	1	0	0	294,000
November	12	13	2	2	754,000
December	10	23	44	46	4,623,000
January	30	53	20	66	4,724,000
February	24	77	10	76	7,089,000
March	38	115	4	80	7,396,000
April	20	135	7	87	3,633,000

Growth was achieved through IC's market development efforts during the first years IC was active in the market. The regional sales management staff, who worked with larger accounts and provided supervision and service to the brokers, grew form one to three professionals. Retail sales brokers, who primarily handled sales of the OKRAY'S brand, numbered between 35 to 40 people and reported directly to a national sales agent which the cooperative had hired. The cooperative merchandised its institutional products through an equal number of food service brokers located throughout the Midwest, South, and East. Table 5 summarizes sales volume and gross value by fiscal year.

Improvement in volume and unit price of sales reflected two interrelated factors for IC. First, the cooperative was gradually attracting more customers with larger demands for product due to the ability and willingness of the cooperative to competitively price its product. The cooperative used its locational advantage over western U.S. suppliers to develop new markets and often passed on the freight

TABLE 5. SALES VOLUME, UNIT PRICE, AND GROSS VALUE BY FISCAL YEAR

Fiscal Year	Sales Volume	Price	Gross Sales
	(mill. lbs.)	(¢/lb.)	($1,000)
1977	40.6	17.9	$ 7,267
1978	70.4	19.3	13,587
1979	95.0	22.5	21,375
1980	92.2	23.4	21,575
1981[a]	69.7	23.6	16,449

[a]Includes only nine months of plant operation.

differential to customers in the form of lower prices. Growth of the sales force also meant that an increased number of new clients could be contacted and served. A second factor was the improving ability to retain existing cooperative customers. An increased number of repeat customers reflected greater confidence in IC's product quality and service. The improvement in IC's reputation for a quality product was the result of a deliberate and difficult decision by the board of directors to change its raw product from Kennebec and Russet varieties to Russets only. The varietal change along with other market strategy adjustments, made after two years of poor financial performance, dramatically boosted sales for the cooperative. After achieving some success in the marketing area, how was it possible that IC was having financial difficulties throughout this five-year period? In part, the answer is found in the first two years of the cooperative's operations.

Two Years and Too Many Problems

A review of IC's production, marketing, and financial problems during its first two years reveals that a number of hurdles had to be overcome. General market conditions were not favorable to a new entrant into the highly competitive processed potato market in 1976-77. Selling price for the cooperative's product was about three cents per pound less than the price which had been projected in August 1976. This significant decrease in price was the result of the large 1976 potato crop in the West and the fact that IC, as a new business, had to be highly price competitive to attract customers.

A second problem area in the first year of operation was the poor quality of the potato crop which was to be processed. The raw material was difficult to process due to problems ranging from sunburn at harvest, to severe pressure-bruising of potatoes stored until late spring processing to dry rot. While production yields were projected to be 45 percent of the raw product, the yield was well below 40 percent through the first year of processing. In order to reduce this loss of raw product, trim labor was increased. Related training and downtime costs significantly raised production costs above anticipated levels.

While the plant was projected to be profitable if it could produce over 100 million pounds of finished product, the plant was able to turn out only 70 million pounds that first year. Lower than anticipated production was attributable, in part, to the late plant start-up which occurred in October 1976, a full month later than normal. As a result, fixed costs such as depreciation, insurance, salaries, etc., which could not be allocated over a normal amount of production, drove unit total costs up and the unit net margin down.

Raw material quality problems in the first year of operation were indicative of more general problems the cooperative had to contend with. The plant facility contained only limited storage space adequate for sufficient raw potatoes to continue processing operations for a short time. Contracted potatoes were held in growers' storage facilities and delivered to the plant according to a schedule. Unfortunately, not all growers had storage which could maintain the potatoes in good processing condition. As potatoes were delivered to the plant from multiple sources throughout the Valley, processing quality of the raw potatoes varied. This was evident in the inconsistency of the final product. To address the storage problem, IC leased additional storage from growers in the vicinity of the plant to upgrade and control the quality of the raw product.

The lower quality of finished product which IC sold in that first year reduced the number of customers who repeated in the second year of operation. To maintain customers, IC provided customers guarantees under which the deficient product would be replaced or refunds given. Yet, product quality problems in the first two years damaged their reputation, an inherited reputation which was unfavorable from the beginning.

Unanticipated repair costs compounded the problem of eroded profits in those initial years. Consulting plant engineers had estimated that repairs would run approximately $2.5 million. Major repairs to the plant waste treatment facility to comply with city standards (the plant discharged its waste into the Grand Forks sewage system) resulted in a significant cost overrun. Processing line breakdowns occurred frequently during the first year, even though $1.5 million had already been spent on renovation of plant and equipment prior to the commencement of processing. Breakdowns were costly from two perspectives. Repair costs were high, but lost production time, idle labor, and disruption of delivery schedules imposed high actual and opportunity costs upon the business. Unforeseen structural problems with the plant (e.g., roof damage, ammonia leaks, permafrost in the thermobarrier of the freezer unit) required the cooperative to spend substantially more than was projected. Plant and equipment problems related to the age and condition of the plant and processing equipment were in the final analysis a major contributor to poor financial performance. In retrospect, organizing growers felt that they could have been more successful had they built and equipped a new plant on another site.

The task which was to be accomplished by IC during its first two years as a business was difficult at best. In 1976, with only two months time between the date of purchase of the plant and the beginning of operations, the plant had to be readied (after being idle nearly two years), a management organization built, customers sold, employees hired, packages acquired, etc. It was not surprising, therefore, that two years later the cooperative went through a set of major reorganizations which affected several phases of the business.

Reorganization of the Business

Major changes which were made necessary by substantial business losses in the first two years of operation fall into four general categories: procurement, production, marketing, and finance.

Since raw product and finished product quality were so closely interrelated, a major policy change was made by IC in 1978 to convert all raw product contracts to the Russet variety. Research by IC's management indicated that the standard of the processing industry was the Russet. A primary qualitative difference between Russet potatoes and the Kennebec variety is the increased level and consistency of solids in the Russet. This increased level of solids in the raw potato makes it more tolerant of processing (peeling, blanching, drying, frying, and freezing). More consistent levels of solids also allowed plant supervisory personnel to make fewer machinery adjustments and turn out a higher, more consistent quality french fry at significantly lower cost. Production data obtained at the cooperative facility showed an increase in overall efficiency. Pounds of finished product per hour increased and indicated that for each additional 10,000 lbs. per hour of production, annual plant revenues could increase by $110,000. It was also determined that the product mix, the proportion of A-grade versus B-grade which the plant could produce, was significantly improved. The impact of a better mix of product quality would add approximately $1 million to plant profitability. A concurrent reduction in vegetable oil usage was projected to result in significant cost savings. Moreover, because the Russet was more storable than the Kennebec variety due to its firmness, a longer processing season could be achieved.

The variety change decision was not well received by Valley growers. Nearly half of the member-growers did not renew contracts with IC in 1978. A significant number of these growers contended that they could not successfully raise the Russet variety on the heavy, clay soils they farmed. Russet potatoes were more ideally suited to sandy, loam soils in the northern Valley. Growers who had attempted to grow Russets on heavier soils experienced a 20 to 30 percent reduction in yields from those they had achieved with the Kennebec variety. Manitoba growers had grown Russets successfully and were supportive of the policy change. Cooperative directors and management held a series of grower-member informational meetings with some success in early 1978 to advise growers of changes in cultural practices (seed spacings, soil conditions, etc.) which would improve Russet yield performance. Growers who had joined the cooperative for the specific purpose of marketing their Kennebec processing potatoes strongly opposed the variety change and argued that it was not an essential change.

Operating inefficiency of the existing plant was reflected in lower product quality and higher-than-anticipated unit costs of production. The original plant and equipment was not well designed, and through the years it had been expanded and modified by prior owner-processors. For instance, grade was reduced because movement of processed product between phases of production required that the product be pumped several times. A process reflow and modification program developed by IC's technical specialists was designed to remove bottlenecks, eliminate breakage, and reduce plant downtime due to mechanical failure. The initial investment of $1.5 million was projected to have a payback period of less than one year. Modifications were completed prior to the 1978 processing year.

Quality of finished product was also improved when the freon freezer unit which was part of the plant at the time of acquisition by IC was replaced by a blast freezer. The freon freezer produced a chalky white appearance on the frozen product which made it less desirable in the market when compared with competitors' products which were a golden color in the frozen state. This difference in quality created difficulty for the sales force even though IC's frozen products fried well and produced the same finished color once fried. From a cost standpoint, IC's management determined that it cost about one cent per pound more to freeze with freon than by conventional blast freezer. The blast freezer was expanded to handle the entire output of the french fry processing system. These problems were both eliminated when the business was reorganized to emphasize food service.

Concurrent with other aspects of business reorganization, the cooperative implemented a guaranteed payment policy to pay growers for raw potatoes and storage in the 1978 crop year. The guaranteed price plan replaced the former pooled price arrangement, under which growers had received as little as 40 percent of the contract price in prior years due to substantial losses incurred by the cooperative. In the 1976-77 pack year, growers received 50 percent of the competitive market price established by the cooperative in its grower contract sales agreements. In the 1977-78 pack year they received 25 percent of the competitive market price in cash, plus 16 percent of the competitive market price in the form of preferred stock in the cooperative. The pool price was determined on the basis of how profitable IC had been during the processing year. Net seller's proceeds, which is the pool of funds available for distribution to growers after selling and processing expenses are deducted from gross sales, were sufficiently low in the first two years of business that the full contract was not paid. Payments which were made to growers in 1976 represented an overpayment according to the pool price approach, and additional financing was required through the St. Paul Bank for Cooperatives. Approximately $2.5 million in additional long term debt was added to the arrangement with the St. Paul Bank and was to be repaid through the use of unit retain reductions from growers' payments over the four-year period 1977-80.

Growers' reactions were not favorable when they received substantially less than the contract price and were being assessed an additional 26 cents per cwt. unit retain in future contracts. Local bankers and other farm lenders were also hesitant to extend additional production financing to farmers without a firm commitment on the contract price. The St. Paul Bank was prepared to provide growers with an 80 percent payment guarantee for the 1978 and 1979 crop, provided the cooperative had secured delivery commitments for at least 800,000 cwt. of raw potatoes. The purpose of the requirement was to assure that an adequate number of growers would be participating. That level of contracting represented about 40 percent of projected plant needs; the cooperative, like other processors, was not allowed to make open market purchases to acquire the remainder of its raw product. This allowance on the part of the St. Paul Bank for a level of contracting lower than 100 percent of the plants' needs represented a change in the bank's approach and was probably tied to the 80 percent payment guarantee. The price guarantee once again made IC's contract competitive in the Valley. In the subsequent year (1980) the price guarantee was adjusted upward to 100 percent.

One year later, a second reorganization occurred within International and focused on the cooperative's marketing strategy and employment levels. A decision was made to discontinue efforts in the private label segment of the retail market. The initial marketing strategy, which focused on the private label segment of the market, had not been profitable. Private label packing proved to be a high-cost processing option with low margins. High processing costs reflected the fact that the private label accounts were not sufficiently large to maintain processing efficiency for an extended period of time. Once a private label order had been filled, the processing line parameters had to be reset to meet the specifications of the next order. Additional costs were incurred because of the change in labels each time. The private label retail trade also proved to be high cost since the lots of finished product were not usually of sufficient size to gain efficiency in transportation to the customer. While the private label accounts in aggregate were a significant part of IC's total market, the loss in sales and revenues was to be regained through growth in the food service (fast-food) industry. In addition, the cooperative's own retail labels, OKRAY'S and Farmer's Choice, continued to demonstrate growth in the market. International's directors and management knew that the food service sector of the frozen processed potato was highly competitive. Yet they knew that the plant could market a high quality product as a result of plant modifications and the varietal change to Russet potatoes. Food service industry contracts were more stable with potentially larger margins; both were features which IC was seeking in its customer accounts.

A second cost reduction measure which was implemented in the fall of 1979 was a 37 percent reduction of plant, staff and management employees. Part of the decrease in plant employees was the result of plant equipment and design modifications. A significant number of plant workers could also be eliminated once the private label business was discontinued. Redirection of the marketing plan and reduction of payroll costs were designed to bring about an immediate change in IC's profitability problems. The turnaround in profitability was not immediate, however, as a review of financial developments in the cooperative indicates.

Adverse Financial Developments and Dissolution of the Business

Financially, IC never demonstrated to its creditors that it could generate a profit during its five years in existence. As Table 6 indicates, operating losses grew from over \$2.5 million in 1977 to over \$3.1 million by 1979. In the final full year of operation IC appeared to have turned the corner on its profitability problem by posting a significantly lower loss amounting to just under \$900,000. During that four-year period sales more than doubled, but processing and other costs also escalated dramatically through 1979. A \$4.5 million reduction of processing costs occurred in 1980 as a result of employment reductions, plant modifications, and changes in the marketing strategy.

A major problem which plagued the cooperative was the rapid growth of interest costs on its short- and long-term borrowings through the Bank for Cooperatives. Initially, the cooperative borrowed capital for plant acquisition and working capital at an 8 percent rate. But as market rates of interest began to rise in 1978 in response to underlying inflationary expectations of investors, the cost of funds which the cooperative could obtain also rose. Funds which were obtained from the St. Paul Bank for plant acquisition were provided under a long-term note. Similarly, funds acquired from commercial banks in the Valley were on a fixed rate basis. Short-term debt and subsequent financing of the cooperative through the St. Paul Bank, however, was provided under a variable rate arrangement. That variable interest rate was to change periodically as the St. Paul Bank's cost of acquiring funds changed. Under this arrangement the cooperative was to experience most of the negative effect of high interest rates on business profits and cash flow. As shown in Table 6, the increase from $724,402 in interest costs to $2,489,260 by 1980 represented an increase of 244 percent in just four years. Interest costs as a percentage of net sales grew at a substantially faster rate than other expenses. The interest bill grew from 7.2 percent in 1977 to 14.1 percent of total costs and expenses in 1980. Interest rates which IC was paying on its short-term borrowings in 1981 exceeded 14 percent.

Growth of the interest bill was not all attributable to escalating interest rates. Repeated annual losses forced the cooperative to increase its borrowings from the St. Paul Bank. By August 1980, IC's total indebtedness to the St. Paul Bank was nearly $20 million, and the cooperative was in default on the term loan provided by Valley banks. The cooperative's seasonal line of credit grew from $2.5 million in 1977 to $7.1 million in 1981 and reflected the expansion of its short-term capital needs and the plan of the St. Paul Bank to keep seasonal borrowings on a short-term basis. In that regard it was remarkable that in 1981 the cooperative actually showed a gain from its operations. Projections made for the final year of operations placed business profits at over $500,000 for the nine months ending in June 1981. For the seven months ending March 31, 1981, the cooperative had booked a net profit (unaudited) of approximately $102,000.

Operating losses and the need to finance those losses and other plant and equipment capital investments led to a steady deterioration of the cooperative's financial strength and the growers' equity position as shown in Table 7. Growers went to a negative equity position by August 1978 and IC was technically insolvent from that point on. The cooperative's cash-on-hand, receivables, and inventories indicated the desire to keep short-term assets at efficient levels. Strict credit policies of the cooperative were reflected in the relatively low level of receivables.

Financial problems which IC experienced are best reflected in the liability section of the balance sheet. Current liabilities, which included seasonal borrowings under its line of credit, grew nearly 10 times. By June 1981, current liabilities of the cooperative comprised 45 percent of its total short- and long-term indebtedness. A review of the liquidity ratios (current assets/current liabilities) indicates that IC experienced a

TABLE 6. STATEMENTS OF OPERATIONS FOR INTERNATIONAL CO-OP FOR YEARS ENDING AUGUST 31, 1977-80

	1980	1979	1978	1977
NET SALES	$21,584,696	$21,361,053	$13,555,628	$ 9,753,579
COSTS AND EXPENSES (INCOME):				
Processing Costs, Excluding Cost of Potatoes Under Contract With Grower-Members	$12,055,222	$16,557,611	$10,867,864	$ 7,079,889
Marketing	2,707,713	2,546,188	2,463,634	1,733,834
General and Administrative	598,999	695,794	592,823	638,612
Interest	2,489,260	1,782,450	1,145,118	724,402
Patronage Dividends from the St. Paul Bank for Cooperatives	(149,283)	(212,033)	(160,932)	(110,435)
Other, Net	13,418	11,877	(72,037)	(46,782)
Total Costs and Expenses	$17,715,329	$21,381,887	$14,836,470	$10,019,520
NET SELLERS' GAIN (LOSS)	$ 3,869,367	$ (20,834)	$(1,280,842)	$ (265,941)
PAYMENTS TO GROWER-MEMBER FOR POTATOES DELIVERED UNDER CONTRACT:				
Cash	(4,769,039)	(3,112,125)	(841,093)	(2,255,616)
Preferred Stock	--	--	(771,287)	--
Net Loss	$ (899,672)	$(3,132,959)	$(2,893,222)	$(2,521,557)

TABLE 7. CONSOLIDATED BALANCE SHEETS FOR INTERNATIONAL CO-OP FROM AUGUST 1976 TO JUNE 1981

	1981	1980	1979	1978	1977	1976
	dollars					
Assets:						
Cash and Short Term Investment	180,387	262,125	227,957	32,968	98,810	5,002
Receivables	1,438,728	1,485,280	1,257,416	646,600	854,911	79,161
Inventories	6,626,539	4,576,514	4,667,973	4,639,619	2,649,437	6,568,516
Property and Equipment (cost less depreciation)	8,719,790	8,933,575	9,081,373	8,791,056	8,242,633	6,568,516
Other	1,389,316	1,211,275	1,112,180	935,154	817,422	261,687
Total Assets	18,354,760	16,470,337	16,375,499	15,089,822	12,734,491	6,932,039
Liabilities and Grower Investments:						
Current Liabilities	10,891,131	8,805,089	6,616,079	5,193,443	2,941,954	1,151,845
Long Term Debt	13,389,541	13,509,777	14,707,777	11,714,777	9,490,000	2,955,100
Total Liabilities	24,280,672	22,314,866	21,323,856	16,908,220	12,431,954	4,106,945
Grower Investment:						
Membership Certificates	95,500	95,500	92,000	89,000	88,000	89,000
Preferred Stock	771,287	771,287	771,287	771,287	--	--
Common Stock	3,093,750	3,093,750	3,093,750	3,093,750	3,093,750	3,093,750
Allocated and Unallocated Deficits (including unit retains)	(9,886,449)	(9,805,066)	(8,905,394)	(5,772,435)	(2,879,213)	(357,656)
Total Grower Investment (Deficit)	(5,925,912)	(5,844,529)	(4,948,351)	(1,818,398)	302,537	2,825,094
Liquidity and Solvency Indicators:						
Current Assets/Current Liabilities (Ratio)	.768	.718	.934	1.033	1.249	.088
Fixed Assets/Fixed Liabilities (Ratio)	.645	.661	.617	.750	.868	2.22
Total Assets/Total Debts (Net Capital Ratio)	.76	.74	.78	.89	1.02	1.68
Grower Equity (Deficit)/Total Assets (Ratio)	(.322)	(.355)	(.302)	(.121)	.023	.407
Equity Per Member (Dollars)	(31,025)	(30,599)	(26,893)	(10,216)	(1,718)	(15,871)

favorable liquidity position in only two years (1977 and 1978). To maintain sufficient liquid assets to meet its working capital needs, IC borrowed close to its maximum line of credit with the St. Paul Bank. Long-term liabilities as a proportion of total liabilities fell steadily during the five-year period, since the bulk of new long-term debt for plant and equipment was added prior to 1977.

International went from a position of solvency in 1976 to insolvency in 1978, as shown in Table 7. Several financial indicators indicate a loss in financial strength. Total assets/total debts decreased to less than one in August 1978 and indicated that a sale of all business assets at that time would not have covered total liabilities. An insolvent position continued into 1981. Another indicator of insolvency is the equity position of grower-members. Growers had a negative equity interest in the business from 1978 to 1981. If average equity per member is used as a measure of the typical growers' ownership position, the average grower went from $15,871 in equity in 1976 (approximately 12,697 cwt. using the $1.26/cwt. capital subscription rate) to a negative $31,025 equity (creditor) position at the close of business in 1981. A potential total loss of $46,896 was facing the average cooperative member.

The foregoing review of the financial decline of the cooperative verifies the comments made by directors and management, that the St. Paul Bank for Cooperatives and Valley banks had been "merciful" in providing financing to the venture. Yet, by mid-1980 the St. Paul Bank had decided to find a buyer for the business. The cooperative was in default on its bank loans and was unable to find an alternative lending source to provide assistance in meeting its financial obligations. Without a continuation of the St. Paul Bank's guarantees of payment for contracted potatoes and warehousing, the cooperative was not in a position to assure growers that they would be paid the full contract amounts. The St. Paul Bank was reluctant, however, to begin foreclosure proceedings in early 1981, since it recognized that the value of the cooperative as an ongoing business was considerably greater than its value as a nonoperating facility.

With the assistance of a consulting firm, acting as an investment banker for the cooperative and the St. Paul Bank, several major processing firms were contacted concerning the sale of the business. A sales agreement was reached with Simplot Financial Corporation, a subsidiary of the J. R. Simplot Company of Boise, Idaho in April 1981. Simplot's Red River Valley potato processing plant at Crookston had been destroyed by fire two years after the cooperative was formed, and the company was interested in acquiring the facility at Grand Forks.

Under the sale agreement, the total equity payment to the grower-members of the cooperative was set at $1.3 million. In exchange, Simplot was to assume $23.3 million of debt which included the cooperative debt to the St. Paul Bank ($20.7 million) and a $2.0 million bank loan to be advanced the company by the St. Paul Bank for Cooperatives in order to make certain improvements to the plant facility. An additional $2.0 million in capital improvements was to be invested by Simplot during the following three years under the sale agreement. Another condition of the sale was that the acreage of potatoes contracted in the Valley be increased. As a result of the sale of the business, cooperative members were to receive approximately 30 cents for each dollar which had been invested in the cooperative during the preceding five years. Grower-member reaction was generally favorable to the decision to sell the cooperative.

V. Assessing Some of the Impacts

The impacts which the International Cooperative had during its existence are difficult to assess due to both the lack of adequate descriptive data and the broad range of impact dimensions which one might want to consider. One set of general categories into which the economic and noneconomic impacts could be divided is national, regional, and local impacts. The essential question to be answered from a regional perspective is, "Where and how did the cooperative make a difference?"

At the national level the cooperative was not of sufficient size to have a dramatic impact on the level of competition. When IC entered the processed potato market in 1976-77, consumption was approximately 4 billion pounds per year and industry production capacity was in the neighborhood of 5 billion pounds. The cooperative had made the tenuous assumption that it could sell all of the product it could process. Yet, IC had to be as competitive as other processors in the market just to survive.

International's total plant capacity represented only 1 to 2 percent of the total industry capacity. The cooperative was price competitive in marketing its product, yet other major competitors in the market, such as OREIDA (H. J. Heinz), Simplot, and others had established reputations in the market for quality potato products. Customers were either unwilling to risk acceptance of a potentially lower quality product to obtain a lower price, or dealt with substantially larger contracts than IC could supply at the time. As a result, the cooperative was a negligible factor in the market from a price competition perspective. In later years when IC moved more aggressively to capture a share of the food service industry, it had an impact on the market shares enjoyed by western processors in the South and Southeast. The transportation differential was a decided advantage to the cooperative and served as a competitive selling point with customers throughout the eastern half of the U.S.

If a regional and local frame of reference is used, the impacts IC had are more easily identified. Even within the region, however, the cooperative did not greatly influence the contract prices which growers received or the prices which the cooperative's customers paid. Initially, grower prices were determined administratively by the board of directors at a competitive market level. The board first acquired information on what prices were being paid by other processors in the Valley. A contract price was then established by the board at the average of the competitors' prices. As a result, the contract price offered by the cooperative was potentially no more beneficial to growers than similar contracts available from other processors in the region. As it turned out, the cooperative's price was not competitive in its first two years of operation. Business losses forced IC to pay between 40 and 50 percent of the contract price. Only in the period 1978-81 was the cooperative able to offer payment guarantees exceeding 80 percent of the contract price and generate a competitive price effect. At that point the cooperative was acting as any other corporate enterprise in contracting with growers. It was setting prices for raw potatoes which could be used by growers in the Valley to bargain with other local processors for higher contract prices. Canadian growers felt they had been successful in using the cooperative contract price as a competitive lever when contracting Russet potatoes with Carnation, a Manitoba processor.

Prices paid by customers within the region for the finished product were not significantly affected by the cooperative. The bulk of IC's institutional market was located in the New York-Boston-Washington metropolitan areas. Chicago and Minneapolis were important regional markets, but not for the institutional products which IC had found to be more cost efficient, where the cooperative eventually directed its sales emphasis. The midwestern regional market (Chicago and Minneapolis) was more heavily retail-oriented with high production and service costs for the cooperative. Moreover, retail market demand was not strong between 1976 and 1979, and IC's success with its retail brands was steady but limited. The midwestern market also proved to be a difficult market to effectively penetrate. Processor-customer relationships had been established over several years and the cooperative's sales efforts took time to produce a noticeable effect. Product prices were not the sole means of competition, and IC found that the plant's poor product quality reputation was more difficult to shake within the Midwest than outside the region. Competing processors within the region were generally successful in maintaining their customer accounts, although the cooperative did generally build a retail and institutional (food service) customer base.

Localized beneficial impacts of the cooperative included employment generation and accompanying secondary growth of business activity and a tax base for the Grand Forks-East Grand Forks area. Employment at the plant exceeded initial projections and at one point reached 460 plant, support, and management employees. The 37 percent employment reduction that occurred in late 1979 created a less favorable impact on the local economy, yet left the cooperative as a major employer in the area. While the plant would have continued to incur property tax liability to the city, even if it had stood idle from 1975 through 1981, investment in the facility raised the assessed value of the real property and increased the level of taxes paid to the City of Grand Forks. Sales and income taxes (of employer and employees) which flow to the state and indirectly back to the cities was another area of beneficial impacts of the cooperative.

Other direct economic linkages between the cooperative and other sectors of the local and regional economy could be included in an assessment of the economic impacts. The transportation subsector (primarily trucking) was positively affected by the cooperative. An average of 175 truckloads of finished product were transported from the plant each month during the marketing year. Deposits at local and regional banks had impacts on the financial subsector as a result of plant operation. Similarly, loans to individuals employed at the plant, and firms doing business with IC, expanded. A broader circle of positive impacts resulted through payments to growers for potatoes which were produced for IC. It would be highly speculative to suggest that growers generally expanded their acreages, farm machinery investment, and employment as a result of contracting, yet some of that activity most likely occurred. Impacts which were transmitted throughout the Valley region via grower involvement were a mixture of positive and negative effects; the net impact is unknown. Preservation of the local market for processing potatoes can be identified as a long-term beneficial impact. Existence of a viable market for processed potatoes in the 1976-81 period had short- and intermediate-term, beneficial impacts. That market preserved an outlet for 15,000 and 20,000 acres of potatoes which may have depressed potato prices in other markets due to an excess supply situation. Although IC was not a financial success, grower-members expressed the view that they had attained 75 percent of their initial objectives by forming the cooperative, maintaining and improving the processing facility, and eventually locating a major private processor who was willing and sufficiently well established to maintain the local market.

Losses, both equity and operating, which were sustained by the cooperative and the growers had a negative effect. Funds which were provided by area banks to offset growers' short-term losses siphoned funds away from other farm and nonfarm uses. Moreover, funds were in short supply during the post-1978 period and undoubtedly created a greater impact on the flow of funds at local banks than would have occurred under less restrictive monetary conditions.

VI. Transferability of International's Experience

A cooperative form of business organization is generally recognized as beneficial to farmers when 1) it maintains or improves the market share of an existing business, 2) an outlet for the product is threatened, 3) it preserves or improves transportation for the farmer, or 4) it leads to higher farmer returns. International Cooperative potentially provided a cooperative solution to several of the above problem areas. The market for Red River Valley processing potatoes was clearly being threatened with the discontinuation of operations at the facility in Grand Forks. Grower efforts to revitalize the plant and maintain a stable share of the market was anticipated to improve the level of farmers' returns and the stability of those returns through contracting.

Problems which IC encountered during formation and operation are aspects which can be usefully analyzed for the benefit of other processing cooperative ventures. Some of the conditions which led to the dissolution of IC were unique, others were general in nature. An attempt is made here to separate those two sets of conditions and prescribe areas in which other similar cooperative ventures could usefully focus their efforts. To some extent useful parallels can be drawn between IC and certain aspects of the highly successful American Crystal Sugar Cooperative, which was formed two years earlier.

Factors Affecting Formation

Physical condition of the plant and equipment proved to be a continuing problem for the cooperative. The plant was initially constructed in 1959, as a much smaller processing cooperative. Through the 1959 to 1975 period the plant changed ownership several times, and each time certain modifications and additions were made to expand its processing capacity. Yet, additions were made without attention to overall design of the plant and its operational efficiency. Second, since the building and equipment were not well maintained by former owners the plant's ability to process at or near capacity for an extended period of time was impaired.

Market conditions were not favorable to the formation of the cooperative in 1976. The potato processing industry was operating at 80 percent of capacity in response to a weak market demand. Nationally, frozen potato product inventories were approximately 19 percent higher than normal. *International's entry into the market was not well-timed in two ways. First, an over-supplied market meant low, highly competitive prices with low margins. Second, IC began processing potatoes four months after customer contracts should have been made.* International was not afforded the benefits of an existing customer base when it bought the idle plant. As a result, prices received by the cooperative were 20 percent lower than projected. Sales receipts were sharply down from their projected levels in 1976 and 1977. This decline of receipts was due both to lower sales prices and lower-than-anticipated plant production.

The psychology for formation of a potato processing cooperative in the Red River Valley was favorable and was influential on organizers of International. This momentum for a cooperative processing enterprise is partially attributable to the recent success of a sugar-processing cooperative in the region. In sharp contrast, however, market conditions surrounding the formation of American Crystal (ACS) represented a once-in-a-lifetime opportunity for Valley sugarbeet growers to organize. Sugar prices increased dramatically in reaction to a favorable worldwide supply-demand situation which had been growing for several years. Through the organizational change at ACS, the business showed a net saving the first year of $19 million which funded modernization and expansion of the existing plant facilities. American Crystal also began operations in 1974 with an established customer base and strong industry reputation. Moreover, the ACS sales and marketing group was already in existence. American Crystal experienced a high level of business continuity during the organizational change.

The above problems associated with IC's formation may have been reduced with a more thorough assessment of the plant facility, and with the development and conduct of a market feasibility study. Numerous problems arose with the building and processing equipment which were not cited in the engineering study. Processing capacities had been optimistically determined by reviewing historical peak plant production data. Under sustained operating conditions the plant was not capable of the projected level of performance, and numerous, costly shutdowns occurred during the first processing year. Repair costs cut into profits and increased the debt load. Board members and management became convinced later that construction of a new plant on an alternate site outside of the city would have been a better investment.

Lack of a careful assessment of competitive marketing conditions and the cooperative's market opportunities was undoubtedly a major missing ingredient in the organizational plan. A financial feasibility analysis was done on the business which incorporated the optimistic assumption that all of the product produced could be sold. Board members and management later found that "the market was not waiting for another french fry processing plant."

Development of a market feasibility study could have productively focused on product-mix and product-quality areas. Quality factors, which are important in gaining market acceptance and maintaining customers, were not fully considered by the cooperative. The initial market strategy developed by IC was to sell approximately 50 percent of its product in each of two market segments--institutional and retail. Product specifications in these two markets varied substantially, and customers within the same market required different product grades and qualitative characteristics. Moreover, product specifications were constantly changing in the industry in response to demand factors. The cooperative attempted to meet its market projections with a combination of Kennebec and Russet potatoes, but product quality was not sufficiently high to attract and maintain customers to meet these projections. Product quality was the combined result of deficiencies in the processing plant and difficulties encountered in processing the Kennebec variety. Changes were made in both areas. Growers farming heavier Valley soils were hesitant to switch to the Russet variety. Had a market feasibility study shown that the cooperative could have only been successful in its marketing efforts by processing Russets, the cooperative would not likely have been formed. Organizing growers were not just trying to preserve a local market for their potatoes. They wanted it to be a market for Kennebec potatoes, which were well-established throughout the Valley.

Another dimension that a market feasibility study could have focused on was locational and nonprice competitive advantages of the cooperative within certain market segments. The success of IC's institutional (food service) market strategy in the South and Southeast was largely attributable to its locational advantage. However, the cooperative did not fully comprehend the high level of competition which existed in the market at the time. A careful study of the market could have initially provided at the outset information on which to base earlier decisions concerning the market strategy to pursue.

Operational Factors

As the cooperative evolved, several problems areas emerged. First, the business maintained too large a work force, including plant, support staff, and management employees. Plant modifications and discontinuation of the private label retail trade facilitated the employment reduction. *Second, record high interest rates in combination with a high proportion of short-term, variable-rate borrowing impaired the financial performance of the cooperative.* Organizing growers contended that while the St. Paul Bank for Cooperatives had provided sufficient debt capital to finance the business, it was mostly short-term debt. This necessitated that the cooperative show positive profits in its formative years to avoid a growing debt load. Escalating interest rates were not the reason IC failed, but it hastened the process. Concurrent record levels of inflation increased material and operating costs for the cooperative and were an influential factor in generating operating losses. *A fundamental problem faced by IC was that it had no pricing flexibility in the finished product market in competing with major processors to accommodate higher interest on debt and processing costs.* As a result, its profit margin was necessarily squeezed and became negative. *Third, IC contracted for more potatoes than it should have during its first two years.* The St. Paul Bank required that all potatoes be contracted, partly to insure adequate raw product and partly to provide adequate initial grower equity in the business. Growers were overpaid for contracted potatoes in the first year (in terms of business proceeds) in order to provide growers with needed cash flow. This overpayment necessitated use of additional intermediate-term debt and the deduction of unit retains from subsequent grower payments to retire the additional debt. A more flexible strategy would have been to contract 50 to 60 percent of the plant's capacity and purchase additional raw product in the open market or through a grower-member pool.

Sale of the business in June 1981 represented a means by which cooperative owners could insure the continuation of operations at the plant and yet receive back at least a part of their initial investment. Several farmers had ceased growing potatoes for the cooperative or had discontinued potato production completely. Other farmers were skeptical about the cooperative's chances at generating a sustained reasonable level of profits. The decision to sell met with wide acceptance.

In retrospect, the cooperative had been partially successful in achieving its goals of preserving a local market for Red River Valley potatoes, although it was for Russet potatoes. Total success of the venture was not achieved. Capital losses were incurred by the organizing growers. Workers at the plant gained employment, and the City of Grand Forks and the local economy benefited from the continuation of business activity. Credit institutions, although heavily involved with the unsuccessful cooperative, will likely recover their investment given time.

The experience of this cooperative venture suggests that the initial steps in organizing a processing/marketing cooperative need to be planned and executed with care. Adequate feasibility analyses would likely have changed the perceptions of organizers with regard to plant facility and market conditions.

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