

# **Agricultural Processing Plants in North Dakota: Socioeconomic Impacts**

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## Abstract

The socioeconomic impact of four agricultural processing plants on their respective North Dakota communities was investigated. The objectives were (1) to evaluate the impact of plant construction and operation on economic, demographic, public service, and fiscal structures of rural areas and (2) to develop a set of general principles and recommended actions for community leaders to follow when a new agricultural processing facility is being considered.

The selected communities were Carrington (Foster County), Jamestown (Stutsman County), New Rockford (Eddy County), and Wapheton (Richland County). In-depth personal interviews of community leaders were conducted in each community. In addition, a representative from the agricultural processing plant was also interviewed. Subsequently, a random drop-off/pick-up survey was conducted in the communities. A total of 469 questionnaires (85 percent response rate) were completed by community residents.

Improved job opportunities and enhanced incomes were seen as major benefits to the local communities with the addition of the agricultural processing plants. Except for a few management and engineering positions, most of the available jobs were filled by area residents. The addition of the plants did not result in a large in-migration of people to fill positions. The residents' incomes were enhanced by the payroll of the plants. The areas where the plants are located had experienced a declining population base for some time. The siting of these plants did not reverse this trend; however, the employment of the processing plants did help slow the depopulation trend.

The availability of 'affordable' housing was a concern in most of the communities. Most of the plant workers wages (\$9-13/hour) would not allow for purchasing a new or existing homes in these communities. In one community, there were vacant homes which had been forfeited to the city in-lieu of property taxes. These homes have since been sold and are contributing property taxes to the community.

Availability of day care was an issue in all communities. Also, if the plants operated on a 24 hour schedule, extended hour day care was an issue. Two of the communities in which the processing plants operated 24 hours per day offered extended hour day care, but in both cases the demand for extended day care did not justify the additional expense.

The short- and long-term implications of local tax abatements were an issue for all communities. Some felt that local governments were leveraging the community's fiscal resources too much, while others believed that the community needed to be more concerned with the longer-term implications of tax abatements. At any rate, the consensus was that residents needed to be kept informed regarding commitments being made to a project and the implications of those commitments.

Community leader advice to other communities considering economic development projects could generally be categorized as 1) appropriateness of project and compatibility with community, 2) infrastructure planning and financing, 3) anticipating issues and needs, and 4) development approach and attitude.

**Key Words:** agricultural processing, community impact, economic development

## Highlights

The purpose of this project is to assess the socioeconomic impacts of new agricultural processing plants located in rural (nonmetropolitan) areas of North Dakota. The specific objectives are (1) to evaluate the impact of plant construction and operation on economic, demographic, public service, and fiscal structures of rural areas and (2) to develop a set of general principles and recommended actions for community leaders to follow when a new agricultural processing facility is being considered.

Four agricultural processing plants were selected which had been developed during the 1990s in nonmetropolitan counties of North Dakota. In-depth interviews with a cross-section of community leaders were conducted in each site community, with the aim of gaining an understanding of the community, the effects of project development, other socioeconomic changes that might have either exacerbated or offset the project's effects, and the community's response to the situation. Representatives of each of the processing plants also were interviewed. Subsequently, a short survey was completed by a random sample of residents in each community. The survey was administered using a drop-off and pick-up procedure and focused on the residents' satisfaction with their community and the effects of processing plant construction and operation on the community. The survey resulted in 469 usable responses, for a response rate of 85 percent.

Avico, Inc., located in Jamestown (Stutsman County), was the only one of the four plants which is not organized as a cooperative. It processes potatoes and started operating in 1996. Its current employment is 260. Dakota Growers is located in Carrington (Foster County). It processes durum wheat into pasta products and began operating in 1993. Dakota Growers current employment is 275 people. The North American Bison Cooperative is located in New Rockford (Eddy County). It slaughters and processes bison. It began operating in 1994 and its current employment is 50 people. ProGold, located near Wahpeton, processes corn into high fructose corn syrup. It began processing corn in 1996 and its current employment is 120 people.

Improved job opportunities and enhanced incomes were seen as major benefits to the local communities with the addition of the agricultural processing plants. Except for a few management and engineering positions, most of the available jobs were filled by area residents. Therefore, the addition of the plants did not result in a large in-migration of people to fill positions. The residents' incomes were enhanced by the payroll of the plants. The areas where these plants are located had experienced a declining population base for some time. The siting of these plants did not reverse this trend; however, the employment of the processing plants did help slow the depopulation trend.

The availability of 'affordable' housing was a concern in three of the four communities. Most of the plant workers' wages (\$9-13/hour) would not allow for purchasing a new or existing home in these communities. In one community, there were vacant homes which had been forfeited to the city in-lieu of property taxes. Since the plant began operating, these homes have since been sold back to private homeowners.

Availability of day care was an issue in all communities. Also, if the plants operated on a 24 hour schedule, extended hour day care was an issue. Two of the communities in which the



processing plants operated 24 hours per day offered extended hour day care, but in both cases the demand for extended day care did not justify the additional expense.

The short- and long-term implications of local tax abatements were an issue for all communities. Some felt that local governments were leveraging the community's fiscal resources too much, while others believed that the community needed to be more concerned with the longer-term implications of tax abatements. At any rate, the consensus was that residents needed to be kept informed regarding commitments being made to a project and the implications of those commitments.

The second objective dealt with community leaders' suggestions to other communities when they may be faced with the prospect of similar projects. Their advice generally fell within four categories.

**Appropriateness of Project and Compatibility with Community.** Leaders felt that the first consideration must be determining that the project is economically feasible. In that regard, it might be noted that all four of the projects examined in this study had feasibility studies professionally prepared. The leaders also emphasized the importance of determining if the project is a "good fit" for the community, as regards infrastructure and labor force. This means that the leaders must have a thorough understanding of local capabilities (e.g., a local labor survey may be helpful to determine if the labor force will be sufficient to meet the firm's needs). In general, the community should ask how the company fits into the community's long-term plan.

**Infrastructure Planning and Financing.** The leaders emphasized the importance of evaluating the costs of infrastructure improvements that might be required and, more generally, the short-term and long-term implications of the project and the incentive package that might be proposed. These issues need to be considered on a case-by-case basis. Also, in planning for infrastructure needs, the community should keep in mind that the effect of a project may be to offset decline in other sectors, thus stabilizing the community rather than resulting in substantial growth.

**Anticipating Issues and Needs.** Leaders felt that examining experiences of other communities that had been sites of similar projects might be helpful in identifying issues or needs that are likely to arise. Based on the experiences of the communities in this study, it appears that three issues which can be expected to arise with many agricultural processing projects are affordable housing, day care (especially for shift workers), and environmental (e.g., air and water) quality questions.

**Development Approach and Attitude.** Especially in the smaller towns, the leaders emphasized that attracting or developing a viable industry is a major challenge, and that the alternative is to watch the community decline into oblivion. Their advice was for rural communities to keep trying in their development efforts and to recognize that the number of failures in these endeavors will always exceed the number of successes. They also suggested that communities should take a more regional approach to development, as the benefits of projects like those studied are regional in nature.

# Agricultural Processing Plants in North Dakota: Socioeconomic Impacts

F. Larry Leistritz and Randall S. Sell<sup>1</sup>

Expanded processing of agricultural products in rural areas has been widely pursued as a strategy for rural economic development (Leistritz and Hamm 1994, Barkema et al. 1990). In recent years, a substantial number of rural communities in the western Corn Belt and northern Great Plains have succeeded in developing or attracting new agricultural processing facilities (Broadway 1994, Brown 1994, McGranahan 1998). Expansion of value-added agricultural processing in rural areas is generally seen as a positive development; cooperatively-owned, value-added processing plants may allow producers to integrate forward and capture potential profits from processing and marketing their products. Also, whether locally-owned or part of large, integrated agribusiness companies, new processing plants create new employment opportunities in rural areas previously hard-hit by the farm crisis of the 1980s and subsequent farm consolidation (Rathge and Highman 1998, Sommer et al. 1993, Murdock and Leistritz 1988). As a result, the expansion of agricultural processing in rural areas receives broad-based support from commodity groups, rural development interests, and state political leaders.

The expansion of value-added processing in rural areas, while widely supported, has not been without its problems. Some host communities have found that the new plants offered more jobs than the local labor supply could fill and/or at wages lower than local workers would accept (Broadway 2000, Allen 1995). Commuters and in-migrants filled many of the jobs, changing the age and racial/ethnic composition of some towns (Stull et al. 1992). An influx of newcomers, many with racial/ethnic backgrounds different from those of long-term community residents, has led to social disruption in some communities (Allen 1995). Even when new agricultural processing plants have not led to major changes in the host community's population and population composition, a variety of questions and issues have arisen as local officials and service providers attempted to prepare for/cope with the effects of the new facility. Many of these issues have related to the local and regional socioeconomic effects of a new plant, including the number of new jobs that may be created, the proportions of these jobs that will be filled by local residents versus in-migrants, needs for housing and various community services, and effects on costs and revenues of local governments.

In North Dakota, agricultural processing has been a cornerstone of state economic development efforts for more than two decades. In 1979, the state established an Agricultural Products Utilization Commission (APUC) to promote value-added agricultural processing. APUC has played a key role in predevelopment financing for a number of agricultural processing initiatives, and APUC grants have funded numerous feasibility studies. Efforts to expand North Dakota's agricultural processing sector received a boost in 1991 when the state legislature enacted a comprehensive economic development program called **Growing North Dakota**. **Growing North Dakota** provided for subsidized interest rates for loans to primary sector (basic sector) ventures, such as agricultural processing facilities, as well as additional funding for APUC. These economic stimulus programs in turn helped to energize rural development efforts statewide.

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<sup>1</sup>Leistritz is a professor and Sell is a research scientist in the Department of Agricultural Economics, North Dakota State University, Fargo.

During the 1990s, several new agricultural processing facilities have been developed in North Dakota. These plants process a number of the region's agricultural products, including durum wheat, corn, potatoes, oilseeds, and bison. Because some of these plants have been operational for several years, it is now possible to determine what changes have occurred in the communities where they are located.

The purpose of this project is to assess the socioeconomic impacts of new agricultural processing plants located in rural (nonmetropolitan) areas of North Dakota. The specific objectives are (1) to evaluate the impact of plant construction and operation on economic, demographic, public service, and fiscal structures of rural areas and (2) to develop a set of general principles and recommended actions for community leaders to follow when a new agricultural processing facility is being considered.

## **Methods**

The research plan first required selection of processing plants and communities to be studied. The authors identified agricultural processing plants which had been developed during the 1990s in nonmetropolitan counties of North Dakota. Four projects were identified which met these criteria and employed at least 40 workers as of the third quarter of 1998 (when selection decisions were made) (Table 1). In each of the site communities (Figure 1), the authors conducted in-depth interviews with a cross-section of community leaders, with the aim of gaining an understanding of the community (i.e., its population, economic base, etc.), the effects of project development, other socioeconomic changes that might have either exacerbated or offset the project's effects, and the community's response to the situation. These persons were identified based on their elected or appointed governmental positions (e.g., mayor, county commissioner, economic development director) and roles in business, community, and educational organizations. Other community leaders were identified using a snowball technique (i.e., leaders interviewed were asked to identify others who would be knowledgeable about the issues discussed). Representatives of each of the processing plants also were interviewed. Subsequently, a short survey was completed by a random sample of residents in each community. The survey was administered using a drop-off and pick-up procedure and focused on the residents' satisfaction with their community and the effects of processing plant construction and operation on the community. The survey resulted in 469 usable responses, for a response rate of 85 percent (see Appendix Table 1).

### **Description of Agricultural Processing Projects Studied**

The four projects summarized in Table 1 are the result of substantial development efforts over a period of several years. Some key attributes of each project and the major milestones in its development are outlined in the sections that follow.

#### **Aviko USA**

The Aviko project began with a group of agricultural and agribusiness leaders who met in Jamestown in 1991 to consider how agriculture in south central North Dakota could be intensified (Radke 1999). Irrigated crop production and processing was seen as a good possibility because the region has underground aquifers and sandy soils suitable for irrigation. Potatoes were viewed as one of the more promising crops based on (a) a growing market for processed products (like frozen french fries) and (b) a desire by major processors to base their supply on irrigated acres, not dryland (based in part on problems with inconsistent yields and quality from dryland in the northern Red River Valley during the drought years of the 1980s).

Table 1. Recently Initiated North Dakota Agricultural Processing Projects Included in the Study

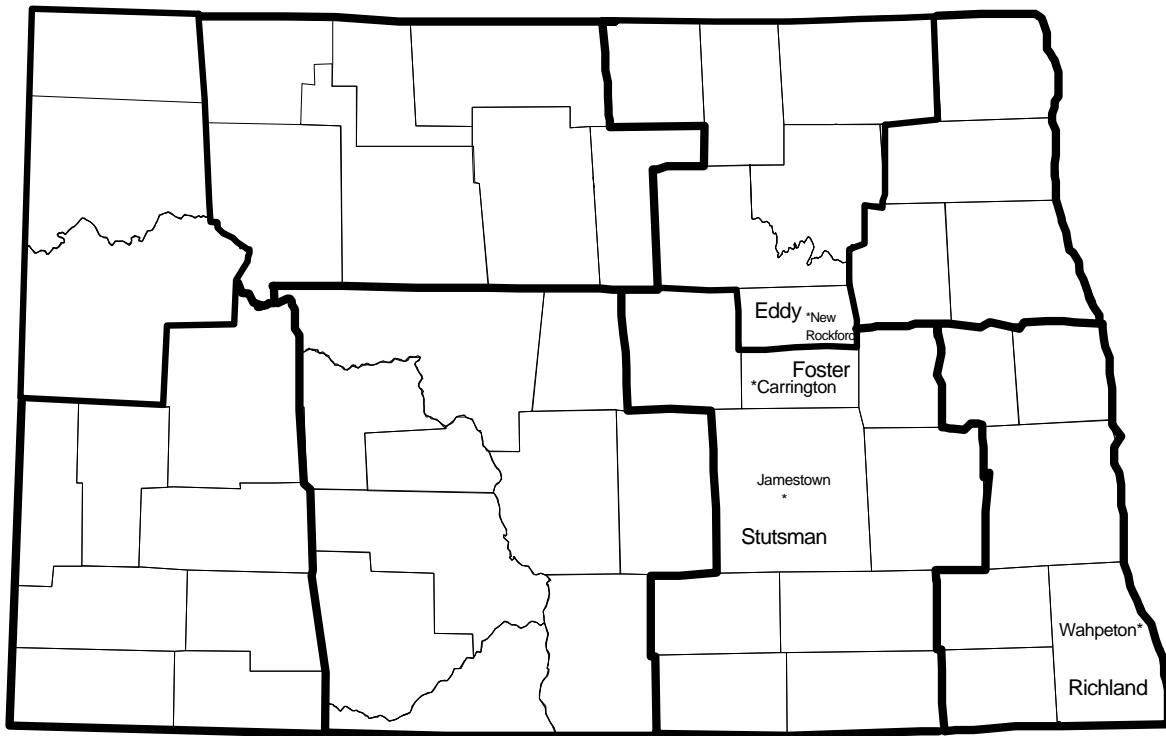
| Project              | Form of Organization <sup>1</sup> | Date Started |           | Operating Employment |                   |         | Initial Investment<br>--\$ million-- |
|----------------------|-----------------------------------|--------------|-----------|----------------------|-------------------|---------|--------------------------------------|
|                      |                                   | Construction | Operation | Initial <sup>2</sup> | 1998 <sup>3</sup> | Current |                                      |
| Avico USA            | IOF                               | 1995         | 1996      | 160                  | 220               | 260     | 70                                   |
| Dakota Growers Pasta | C                                 | 1992         | 1993      | 100                  | 275               | 275     | 43                                   |
| North American Bison | C                                 | 1993         | 1994      | 9                    | 46                | 50      | 1.6                                  |
| ProGold              | C                                 | 1995         | 1996      | 120                  | 120               | 120     | 260                                  |

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<sup>1</sup> C = cooperative, IOF = investor-oriented firm

<sup>2</sup> Employment after one year of operation.

<sup>3</sup> As of third quarter, 1998.



**Figure 1. Study Communities and Counties**

The group organized themselves as the High Value Irrigated Crop Task Force and hired a coordinator. The farmers involved in the task force also created a cooperative which they called Central Dakota Growers. The Central Dakota Growers group originally planned to build their own plant and operate it as a closed cooperative. However, after making a preliminary assessment of capital requirements, they decided that they could not realistically cover the equity requirements to both (a) grow irrigated potatoes on an economic scale and (b) build a processing plant. Hence, Central Dakota Growers sought an alliance with a processor who could finance the plant.

During the period 1993-94, the growers initiated feasibility and market studies with partial funding from APUC, and entered into discussions with potential processors. Aviko, one of the largest frozen potato processors in Europe, entered the picture in 1995. Announcement that the plant would be built at a site just east of Jamestown came in August 1995, and ground breaking occurred in early September. The construction period was about 14 months, and several hundred construction workers were involved at the peak of activity.

The processing plant, organized as a limited liability company (LLC), began operation in the fall of 1996 (Pates 1996). The plant, which cost about \$60 million to build, processed about 2.8 million hundredweight (cwt) of potatoes into frozen french fries during its first year of operation, which represents the production from about 66 center pivot irrigation systems (with

132 irrigated acres per system and a yield of about 320 cwt/acre). During their most recent year of operations, the plant processed about 4.6 million cwt. of potatoes. The plant employs about 260 people (Decoteau 2000).

## **Dakota Growers Pasta**

North Dakota is the nation's leading producer of durum wheat, accounting for 66 percent of national production in 1997 (North Dakota Agricultural Statistics Service 1998). Durum wheat is used almost exclusively in the production of a variety of pasta products (e.g., spaghetti, macaroni, noodles). As a result, agricultural leaders in North Dakota have long been interested in the concept of locating durum milling/pasta processing facilities in the state. As early as 1974, North Dakota State University conducted a study on the economic feasibility of processing pasta products in the state (Fraase et al. 1974). Interest in agricultural processing grew during the 1980s as low returns in agriculture stimulated farmers' desire to integrate forward into processing and depressed economic conditions throughout the state's rural areas heightened state leaders' interest in creating new job opportunities (Murdock and Leistritz 1988). In particular, several farm leaders who were also durum producers became convinced that they should attempt to create a durum processing venture organized in the closed cooperative format that had been successful for the sugarbeet industry. This form of cooperative (also sometimes referred to as "new generation cooperatives") differs from other types in that membership is restricted (i.e., to those growers who purchase shares). In addition, the grower members are typically obligated to deliver specified quantities of product (e.g., X bushels of wheat) to the plant for processing each year.

The initial board of directors of Dakota Growers came together early in 1991. With funding from APUC, they commissioned a feasibility study (conducted by SJH & Co. of Danvers, MA), which indicated that a plant processing durum wheat into finished pasta products could potentially add \$1 to a farmer's return on a bushel of durum. Encouraged by this result, the organizers incorporated the cooperative on December 16, 1991, and early in 1992 they began holding informational meetings for potential members (Zeuli 1998). Interested growers were asked to purchase one share of membership stock for \$125 plus at least 1,500 shares of equity stock at a cost of \$3.90 per share, for a minimum total investment of \$5,975. Each farmer received delivery rights of one bushel of durum wheat per share of equity stock (i.e., they had both the right and the obligation to deliver the grain).

Dakota Growers' goal was to sell 3 million shares, and this was accomplished in less than a month. By February 7, 1992, a total of 1,040 durum growers had purchased 3.1 million shares (an average of 2,997 shares per farmer). This equity drive provided about 30 percent of the initial capital for the project, with the remainder coming from loans from the St. Paul Bank for Cooperatives, the City of Carrington, the Tri-County Electric Cooperative, and Dakota Central Telecommunications. The St. Paul Bank was the major lender and obtained a first lien on plant and equipment.

Carrington (county seat of Foster County) was chosen as the plant site in June, 1992. Carrington was chosen over 28 other site proposals, based on a number of factors including excellent highway and railroad access, an adequate water supply, a good strategic location, and

community support (Zeuli 1998). Community support included the loans from local entities mentioned previously, as well as local tax abatements. Construction of the plant began in 1992, and production began in 1993. In 1998, Dakota Growers had 1,084 durum growers as members, with about 96 percent located in North Dakota and the remainder in Minnesota and Montana. Since beginning operations, the company's average annual growth rate of 38 percent had made Dakota Growers one of the five largest pasta producers in the U.S. Today, the plant employs about 275 workers (Table 1).

### **North American Bison Cooperative**

The North American Bison Cooperative was formed in 1993 by a group of bison ranchers in order to build and operate a modern, efficient processing plant. After a feasibility study supported by APUC, shares were sold at \$250 per share (bison) to generate initial equity. Construction of the \$1.6 million plant began later in 1993 and was completed in 1994. The plant, located just south of New Rockford, initially employed 20 workers.

Plant capacity was expanded in 1996 and again in 1998, to a capacity level of 10,000 head per year, at a cost of \$750,000. The cooperative's membership expanded with the growing market for its products. In 1998, there were 270 members representing 15 states and 4 Canadian provinces (compared to 182 members when the plant opened in February 1994), and the cooperative announced plans to build a second plant (subsequently sited at North Battleford, Saskatchewan). The cooperative members received their first dividend checks in 1998, for animals delivered in 1997. The dividend was \$41.06 per share, and the share value was reported to have increased to about \$500 (Johnson 1998).

The cooperative currently employs about 50 workers at the New Rockford plant and processes about 10,000 bison annually.

### **ProGold**

The ProGold corn plant project began in the early 1990s as a concept discussed by corn and sugarbeet producers in the southern Red River Valley of North Dakota-Minnesota and adjacent counties. The proponents had two major goals: (1) forward integration and (2) local economic development. Many of the original group of proponents were involved in either sugarbeet cooperatives or the Dakota Growers Pasta project, so they were familiar with the closed cooperative concept. As discussions progressed, the management of American Crystal Sugar Company (Moorhead, MN) and Minn-Dak Farmers Cooperative (Wahpeton, ND) expressed interest in marketing the corn sweeteners that might be produced by a mill where corn would be processed into higher value products.

The project gathered momentum in 1993, as American Crystal assigned personnel to help with analysis and financial contributions were received from a number of sources, including APUC. A feasibility study was undertaken by SJH and Company (Danvers, MA) and was completed in February 1994. In January 1994, the group filed papers to create Northern Corn Processors Cooperative as a legal entity. Later that spring a fund drive was undertaken. Farmers were offered the opportunity to purchase shares at \$3.35 per share (with an initial additional contribution of \$0.10 per share and the remainder due when the equity drive was successfully completed). Growers could subscribe for 4,000 to 100,000 shares, plus one voting share per

member, which cost \$150. The fund drive was declared complete late in 1994, with more than 2,000 farmers in the three state area (North Dakota, Minnesota, and South Dakota) subscribing for more than 15 million shares (each representing a commitment to deliver 1 bushel of corn annually). The growers thus committed more than \$50 million of equity to the project.

During 1994, the project was organized as a limited liability company (LLC) which would be a joint venture by the grower cooperative (which would own 49 percent), American Crystal (owning 46 percent), and Minn-Dak (owning 5 percent). The LLC was named ProGold Limited Liability Company, and the grower co-op changed its name to Golden Growers Cooperative.

During the summer of 1994, discussions of the siting of the plant began. ProGold initially considered sites in each of the states where its members were located. In June 1994, a special session of the North Dakota Legislature was convened to examine the state's statutes for taxing agricultural processing facilities. The result was more favorable tax treatment for these plants. In particular, a new facility could now be granted property tax abatements for up to 20 years (whereas the maximum period previously had been 5 years), and provisions for exempting equipment and machinery installed in such plants from state sales taxes were liberalized. Subsequently, on March 14, 1995, ProGold announced that the plant would be located at a site about four miles north of Wahpeton.

Ground breaking for the plant occurred on May 22, 1995, and construction of the \$261 million facility continued into the fall of 1996. At the peak of construction in the spring and summer of 1996, about 1,200 workers were employed. Both in terms of the cost of the facility and the size of the construction work force, ProGold was the largest construction project undertaken in North Dakota since the coal conversion plants built during the 1980s. Plant startup began in October of 1996. The plant produced its first commercial quality high fructose corn syrup (HFCS) in December 1996 and was fully operational early in 1997. The plant has the capacity to grind about 85,000 bushels of corn per day, producing corn sweeteners, corn-based feed ingredients, and corn germ.

While the project was completed on schedule and within budget, the plant experienced difficulty in marketing its corn sweeteners because several other major firms in the industry had recently expanded their production capacity, resulting in an oversupply in the HFCS market. HFCS prices fell to all time lows, and the grower co-op sustained a net loss of \$11.7 million in fiscal year 1997. To reduce losses and improve the likelihood of future dividends to members, ProGold management negotiated an agreement to lease the plant to Cargill, Inc. effective in November 1997. Since the lease went into effect, the plant has been operating with stable employment -- about 120 employees.

### **Description of Study Communities**

The site communities represent a cross-section of the nonmetropolitan trade centers in eastern and central North Dakota. With 1990 populations ranging from 15,571 (Jamestown) to 1,604 (New Rockford), these towns all have traditionally served as trade centers for areas whose principal industry is agriculture (Table 2). All four communities experienced population declines during the 1980s, which can be largely attributed to adverse economic conditions affecting the



Table 2. Population, Adjusted Taxable Sales, and Pull Factors for Agricultural Processing Site Communities, North Dakota, 1980 and 1990-1998

| Item   | City       |           |              |          |
|--|------------|-----------|--------------|----------|
|  | Carrington | Jamestown | New Rockford | Wahpeton |
| Population:  |            |           |              |          |
| 1980   | 2,641      | 16,280    | 1,791        | 9,064    |
| 1990   | 2,267      | 15,571    | 1,604        | 8,751    |
| 1996   | 2,163      | 14,983    | 1,525        | 9,039    |
| 1998   | 2,111      | 14,713    | 1,497        | 9,322    |
| Percent Change:  |            |           |              |          |
| 1990-98  | -6.9       | -5.5      | -6.7         | 6.5      |
| 1996-98  | -2.4       | -1.8      | -1.8         | 3.1      |
| Adjusted Taxable Sales & Purchases (1997 dollars - 000): |            |           |              |          |
| 1980   | 39,751     | 174,720   | 17,217       | 72,789   |
| 1990   | 25,106     | 134,997   | 6,237        | 67,967   |
| 1996   | 31,075     | 150,950   | 6,270        | 79,732   |
| 1998   | 29,121     | 159,114   | 6,092        | 76,408   |
| Percent Change:  |            |           |              |          |
| 1990-98  | 16.0       | 17.9      | -2.3         | 12.4     |
| 1996-98  | -6.3       | 5.4       | -2.8         | -4.2     |
| Pull Factors:  |            |           |              |          |
| 1980   | 0.98       | 0.88      | 0.76         | 0.71     |
| 1990   | 0.88       | 0.80      | 0.39         | 0.79     |
| 1996   | 0.97       | 0.76      | 0.36         | 0.79     |
| 1997   | 0.90       | 0.77      | 0.36         | 0.77     |

agricultural sector (Albrecht et al. 1988, Leistritz et al. 1987). In addition, long-term trends of farm consolidation have been affecting North Dakota's rural communities for several decades.

The four site communities differ substantially in their retail trade volume and in the goods and services they provide. Jamestown and Wahpeton are classified as complete shopping centers (Coon and Leistritz 1998), while Carrington and New Rockford are classified as a partial shopping center and a minimum convenience center, respectively. This classification reflects the wider range of goods and services provided by the larger towns. All four towns suffered decreases in their inflation-adjusted taxable sales and purchases during the 1980s, with the decreases ranging from about 7 percent for Wahpeton to 22 percent for Jamestown, 37 percent

for Carrington, and 64 percent for New Rockford. Thus, these communities entered the decade of the 1990s with a substantial need for economic revitalization.

Data for the site counties show similar patterns (Appendix Table 2). From 1980 to 1990, employment grew by 2.9 percent in Richland County and 0.9 percent in Stutsman County while decreasing by 9.8 percent in Foster County and 10.2 percent in Eddy County. The four site counties all lost population during the 1980s, with the decreases ranging from 3.5 percent (Eddy County) to 5.7 percent (Stutsman County). All four counties also recorded losses in inflation adjusted taxable sales during the 1980s, with the sales trends of the counties mirroring those of their respective communities, each of which is the major trade center and county seat.

### **Local Effects of Processing Plant Development**

Community leaders in each of the site communities were interviewed regarding the effects of processing plant development on their area, other major economic changes that may have affected the area, the community's experience in dealing with project developers and responding to impacts, and their advice for other communities facing the prospect of similar projects in the future.

#### **Carrington**

When the local leaders were asked about major economic changes or developments that had affected their community, Carrington leaders were unanimous in citing the Dakota Growers (DG) plant as the major economic change for the area. They frequently mentioned that the advent of DG had changed the attitude of local businesses and residents -- to such an extent that they commonly measure time in terms of "Before Dakota Growers" and "After Dakota Growers." A major manifestation of the changes in local attitudes is that people are now willing to invest in the community. This willingness includes local government deciding to make infrastructure improvements, business people improving their business places, and home owners refurbishing their houses.

#### **Efforts to Attract Industry**

Carrington had made efforts to attract industry, but DG was their first major success. The community has a city Jobs Development Authority (JDA), which administers revenue received from a local option sales tax (1% with 3/4 of this earmarked for economic development). Since DG, local development efforts have focused on firms that would offer "quality jobs" (i.e., good pay). Firms that would initially employ 20 or fewer persons would be preferred as the local labor market is seen as very tight.

The DG's location decision was a classic recruitment competition (29 towns submitted bids). The package that Carrington offered included (1) developing an industrial park (\$1 million cost), (2) providing a 5-yr. tax abatement after which the facility enters the tax rolls at 20 percent per year, (3) developing a rail spur (paid for by the city), (4) donating the land for the site, and (5) providing water and sewer with a 3-yr. abatement (no cost) and a graduated schedule working up to full cost. The leaders felt that the community's investment had been well worth the cost.

Some mentioned that DG has been especially good for the town because most of the management team lives in Carrington (they built or purchased nice homes and are seen as a real community asset).

#### Aspects of the Community Most Affected

Carrington leaders often mentioned the positive effect on community attitude and confidence as the community aspect most influenced by DG' development. This has been manifested by new or expanded businesses and major improvements in public infrastructure.

Jobs and wages were the area of most immediate impact. The plant's direct employment (about 275), comprises 12 to 13 percent of the county's total employment. The area now has nearly zero unemployment, and some local employers (like nursing homes and motels) feel the pinch. DG has automated some of its processes and located its distribution center in Fargo, at least partly in response to the labor situation. The plant now draws workers from a 40-mile radius. The local labor market is tightest from May to November, when seasonal demands from agriculture and construction peak. Leaders believe lack of affordable housing has limited immigration and local population and labor force growth.

Residents' incomes have clearly benefited from DG. While the line workers' jobs are not highly paid, these jobs have often been a second income for a household. Also, the benefit package is attractive to some. The priority for the town now, though, is new employers with higher skill, higher paying jobs.

Impacts on housing were moderate; DG has served more to stabilize the community, rather than to create a massive influx of people. The vacant houses around town were quickly filled, and some nice new homes have been built. Many of the plant workers commute from smaller towns around the area (Sykston, New Rockford, and Fessenden were mentioned). Vacant farmsteads around Carrington have been occupied too, which creates new demands for road maintenance (especially winter snow removal). The community feels that it has a shortage of "affordable housing" (i.e., something that \$10-12/hr. plant workers can afford). They have explored various ways to stimulate housing development, but a program equitable to existing property owners is difficult to find. Some would really like to get more of the DG workers to live in Carrington, pay taxes, etc., but housing is not as big an issue now as in the early days of DG.

Housing values have definitely been affected. One example cited was a house that was listed for \$115,000; the asking price went up to \$157,000 overnight after the DG announcement. A real benefit of increased values has been a greater willingness of both residents and businesses to renovate, refurbish, and upgrade their properties.

The local retail sector has been stimulated. Carrington has one of the best pull factors for towns of their size (their 1996 pull factor of 0.97 is third best among all the state's partial shopping centers, and their pull factor improved substantially from 0.88 in 1990) (Table 2). Still, the businesses that must compete with urban malls (clothing stores, etc.) have suffered. Their strong businesses include the motels, the new Super Valu grocery, service (gas) stations (including a big new Stop & Go), drug stores, hardware stores, a lumber yard, car dealers, and farm implement dealers. They have a new car dealership (Ford) since DG, and a new Alco store.

An additional perspective on changes in retail sales during the 1990s is given by Appendix Table 3. Carrington's taxable sales and purchases (inflation adjusted) rose 42 percent from 1991 to 1994 (i.e., from the year before announcement to the first full year of plant operation), then dropped about 16 percent from 1994 to 1998. However, the 1998 level of sales represents a gain of 19 percent over the 1991 level.

Among the local services, day care/child care has been a challenge. The community has a relatively new day care facility plus a pre-school for 3-5 yr.-olds. It has been challenging to keep the day care rates affordable while meeting state and federal requirements. The Health Center and DG (both staffed 24 hr./day) have created a demand for longer hours at the day care, which now operates from 6 AM to 6 PM. They have considered even longer hours to accommodate workers on other shifts, but the numbers did not justify it.

Since the DG' location decision, Carrington has upgraded its water treatment plant and expanded its sewage lagoon (added a cell). These were improvements that had been anticipated before DG, but they accelerated their schedule partly to meet the plant's needs. They have also replaced some old water lines, but these improvements would have been needed even without DG. The plant has not placed a major burden on utilities. The city did need to put water, sewer, and a road out to the industrial park (where DG is located). This was a significant cost, but grants funded most of it.

DG' development and related growth did not have a major effect on streets and roads. Leaders acknowledge that there is more traffic because of commuting workers and trucks delivering durum. However, movements of Canadian grain (unrelated to DG) also adds to traffic, as does Carrington's location at the intersection of three major highways (Hwys # 52, 281, and 200). Some street upgrades may be a priority in the future.

One transportation issue during DG construction was that the access road to the plant site had not been completed when the plant construction was scheduled to begin. Hence, the construction people had to "work in the mud" to some extent, which was a problem. Also there are now somewhat greater demands for rural road maintenance and snow removal as a result of plant workers living on farmsteads.

The area of police, crime, and public safety drew a mixed reaction. Several leaders said this was not an issue at all. Others close to the law enforcement situation reported that rates for some types of offenses are up since DG. The Foster County Sheriff's Dept. has seen some increases in most offenses, except violent crime. There has been a big increase in civil paper service (re. unpaid bills, bad checks, etc.). They also see a bit more activity in the area of drugs, bar fights, and domestic violence. They aren't sure how much of this to attribute to DG, as opposed to more general changes in our society. However, one view is that, when DG has done a major expansion and increased its workforce, it has attracted a new set of people to the community. A small percentage of these seem to have a knack for getting into trouble.

While the demands on fire and related safety services have not been greatly affected, service capabilities have been improved through addition of a new fire hall which was built as part of a new City Hall complex.

Health services have been affected indirectly by DG's development. The medical sector, including a relatively new hospital and clinic and two nursing homes, is a pillar of the community. The hospital/clinic has been able to add several doctors during the period since DG and now has seven on staff. On the other hand, the tight labor market has made it harder to hire and retain some types of employees.

The effect on local schools was largely indirect. The students that arrived served largely to stabilize enrollment (see Appendix Table 4). The plant will enhance the school district tax base (it is coming on the tax rolls at 20% per year). When fully taxed, it will contribute about \$75,000 per year in school tax revenue. Now outlying districts are looking to Carrington as a district to join (one smaller nearby town [Woodworth] did this recently), and parents are often sending their children to Carrington under open enrollment.

Social services was another service area with mixed reviews. Most leaders did not feel that there had been any noticeable effect in this area. However, county social services personnel report some increase in cases. Many of their clients are employed, but unable to make ends meet. These are often single parent households. (A hypothesis might be that the availability of jobs in Carrington may have led to retention of some of these households, which might otherwise have relocated to a larger city).

Recreational opportunities are an area that Carrington is upgrading, but not particularly in response to DG. The Armory (which is used by the National Guard, but also provides community recreational opportunities) has been upgraded. The community is now working on a project which will feature an 18-hole golf course and bike paths.

The quality of the natural environment is not seen as a big issue by local leaders. DG is regarded as a very clean industry with little in the way of emissions or resource demands.

Public revenues have been affected in two ways. Taxable sales are up, so the community is receiving more revenue from their local option sales tax. The plant is now coming onto the tax rolls, which will help the county and school district (the plant is outside the city limits). The city provides sewer and water to DG on a user fee basis and maintains the road to the Industrial Park.

The incentive package for the plant was the major local government expenditure commitment. They have made some improvements to water and sewer and built a new City Hall, but these were more a function of the community attitude and willingness to invest than a result of new demands.

When asked about specific groups that might have been affected by DG development, leaders mentioned that some families displaced from farming had been able to remain in the area because of the plant jobs, while other families had been able to remain in farming because of supplemental income provided by plant work.

When asked about characteristics of new people the project might have attracted, the leaders indicated that the DG management personnel were recruited from a wide area with many coming from out of state. The other relocating workers were generally from North Dakota or

surrounding states and included a few return migrants (i.e., persons who had lived in the area, moved away, and were now returning). The new residents are seen as well educated people who bring lots of skills and experience and are a major asset to the community. There was no mention of an influx of minority workers.

Regarding social interactions with the newcomers, the leaders believed that the newcomers are generally seen as a good thing for the community. They bring new talents, experiences, and abilities and have provided “new blood” for community organizations. The leaders did not feel that there has been much change in participation in community organizations and the willingness of residents to volunteer their time for such activities. The usual comment was that Carrington has a history of strong involvement and participation, and these may be even stronger now.

### Community/Industry Interaction

The types of information that the leaders felt a community needs about projects like DG include: (1) what are their needs for infrastructure, transportation, labor force, etc., and how do their needs fit with the community’s capabilities? and (2) what types of jobs will they provide, and what kind of people will these attract? When asked what types of entities should provide this information, the leaders felt that the company needs to answer many of these questions. However, the community needs to determine its capabilities especially in regard to infrastructure, etc. A local labor force inventory would also be helpful.

The relationship between local government/local leaders and the industry was viewed as very open. The local leadership has tried to be very professional and honest about their capabilities. They feel that they now have a reputation for fulfilling their commitments.

The leaders believed that local attitudes concerning DG are very positive. Local residents and leaders alike feel very fortunate that they were able to attract DG.

### Advice for Other Communities

In summarizing the advice they would offer to a community considering a similar facility, the leaders said the community needs to examine their capabilities regarding infrastructure, and then they need to be honest with the company regarding those capabilities. They need to make sure that the community groups and local governmental bodies have a common vision before starting to recruit a company. A community needs to look for a company that is a good fit with the local infrastructure and labor force. Then they need to make sure that the prospect is legitimate before spending a lot of money on upgrades, etc. Also, they need to consider how the new infrastructure will be financed until the plant starts paying taxes. At the same time, consider the longer term effects and benefits to the community, rather than focusing on short-term costs.

## **Jamestown**

When local leaders were asked about major economic changes or forces affecting their area, they most often mentioned that the period from about 1980 to 1992 had been a difficult one for the Jamestown area. It was a period of stagnation for the community, caused in part by the depressed farm economy. In 1989, there were an estimated 400 vacant housing units in Jamestown. These trends caused local leaders to be very concerned with promoting economic development and diversification.

Growth in employment began about 1993. Major new projects or expansions by existing employers included:

**Lucas Western** (aerospace mfg.) --This plant has been in Jamestown since the 1970s, but grew from 250 to 500 workers in the 1996-98 period and now employs more than 550. Lucas now is Jamestown's largest employer, recently surpassing the State Hospital. The company has been successful in shifting from defense to commercial contracts.

**Aviko** -- began construction in 1995, operational in 1996. The plant now has 260 employees, of which 215 live in Jamestown.

**DuraTech Industries** (formerly Haybuster) has repositioned itself to be less dependent on agriculture. It now employs 160+, of which 50 have been added in the last few years.

**Wedgcor/Sunward Corp.** -- manufactures steel buildings and employs more than 200 people.

**Rosenbluth Travel** --has employed about 15 people in an accounting office since 1998, but is now hiring about 75 additional persons to work as travel agents.

**DG Pasta** -- located in Carrington (45 mi. NW of Jamestown). The Jamestown Jobs Development Corporation put some resources into this project. Some Jamestown people commute to the plant to work, and Jamestown receives some spin-off benefits.

Jamestown is the largest trade and service center between Fargo and Bismarck. Accordingly, retail and service sector businesses are among the major employers. The medical sector (3 clinics, a hospital, 4 nursing homes, and the state mental hospital) has been a growth sector. The state hospital has been cutting down its patients and staff but still employs about 500. Part of the facility is being converted to house prisoners, which means adding staff (an estimated increase of 120 jobs over the past two years). WalMart and K-Mart are among the major retailers. A new grocery store (Hugo's) has recently entered the market. Overall, the combination of new and expanding businesses in Jamestown resulted in a growth of wage and salary employment of about 1,000 jobs from 1996 to 1998. Several sectors contributed to this growth, including manufacturing (440 jobs), services (208 jobs), government (205 jobs), retail trade (135 jobs), and finance, insurance, and real estate (FIRE) (102 jobs).

An important point is that the Aviko plant is not the dominant employer in Jamestown, although it is an important one. Thus, many of the community effects to be examined subsequently should be viewed as effects of manufacturing growth or of primary sector (basic

sector) job growth generally, rather than as effects that can be identified with the Aviko project specifically.

Another issue mentioned by several leaders is trends of economic and population decline in the smaller communities of Stutsman County, as well as in the more rural counties in the Jamestown trade area. These patterns have been evident for several decades and are resulting in business closures, school consolidation, and depopulation of many outlying rural communities. In addition, the area's farm population continues to dwindle, as farms become fewer and larger.

### Efforts to Attract Industry

Jamestown has made substantial efforts to attract new industry. Around 1990, the city and county formed the Jamestown-Stutsman County Jobs Development Corporation (JDC). This entity is funded with (1) a 1 percent city sales tax and (2) a 4 mill county property tax levy. The ability of the JDC to use these funds as "venture capital" is seen as a key to local development efforts. The JDC has a full-time director and about \$2 million in annual revenue (\$1.7 to \$1.8 million from sales tax and \$160-\$170,000 from the county mill levy).

Jamestown has actively recruited new business and industry. Agricultural processing firms are seen as a key target because of the area's agricultural base and its water resources. Major agricultural processors in the area include (1) Ladish Malting, (2) Aviko, and (3) DG Pasta. Ladish is located about 10 miles east of Jamestown. Begun in the 1970s, it is now owned by Cargill. Telecommunications-linked firms are another group that has been targeted for recruitment. Dynamics Marketing employs about 100 telemarketers and has been in Jamestown for several years. Rosenbluth Travel is a new employer and is hiring with a total employment goal of around 100 employees.

### Aspects of Community Most Affected

Recent new projects and expansions were generally credited with tightening the housing market, bolstering the retail and service sector, and enhancing local job opportunities. At the same time, community population is seen as stable or possibly declining, so services like schools were minimally affected. Most of the new jobs (except for a few top management positions) have been filled by residents of the area, including many who commute from smaller communities. There have been a lot of farm wives entering the labor force, and some farmers are seeking seasonal jobs. Perhaps the most important effect of projects like Aviko has been improvement in community morale. Businesses are now more willing to reinvest and refurbish. A new grocery store (Hugo's) and two new motels (Comfort Inn and Holiday Inn Express) are examples of upgrades in the local trade and service sector.

There has been a fair amount of new housing construction in recent years. One estimate is that there have been more housing starts in the last 3-4 years than in the previous 15 to 20. (The Jamestown housing situation had been quite stagnant from about 1980 to 1992.) Leaders felt that there had been a shortage of houses in the \$70-90,000 range. Some felt that much of the new housing had been in this price range, while others felt that \$120,000 was a better estimate of typical price. There also have been some new apartments, high-end condos, and elderly housing



developed. The current expansion of housing in Jamestown may be influenced by retired farmers and residents of smaller towns moving to Jamestown to retire, as well as by manufacturing expansion.

Building permit data provide a perspective on housing construction (Appendix Table 5). From 1995 through 1998, building permits for 126 new single family homes were issued in Jamestown, compared to 70 during the previous four years (i.e., 1991-94). From 1995 through 1998, permits were issued for 8 new apartment complexes (totaling 62 units), compared to 4 apartment buildings (86 units) from 1991 through 1994.

Taxable sales (inflation-adjusted) in Jamestown grew 11 percent from 1992 to 1998. Manufacturing growth is seen as boosting retail sales. Aviko has been particularly positive because of the irrigation development it stimulated. Also, local contractors did a lot of work on the Aviko plant, which helped stimulate the local economy. A new grocery (Hugo's) was established in Jamestown recently. The two malls in town had been struggling but are now both doing well.

Expanded job opportunities have been the most noticeable effect of recent growth. The jobs at Aviko, as at most other major employers, are mostly in the \$8 to \$13/hr. range (except for a few managers). Most of the workers came from the local/regional labor pool. A lot of job shifting occurred as people moved from other local employers to the plants. (Fast food restaurants were mentioned as a group who lost experienced workers.) However, concerns were expressed that wages at Aviko and other plants are generally not adequate to attract young people to stay in the area. Many firms have raised their wages and/or benefits a bit in the battle for available workers. While plentiful job opportunities and somewhat higher wages have raised incomes somewhat, the wages paid to line workers at the new/expanding employers are still considered low.

Real estate values have risen during the period since the Aviko project began. Jamestown residential housing values have gone up 5 to 8 percent per year over the past four years. The tax base (taxable valuation) is growing.

Little change in needs for police services is reported over the past several years. The County Sheriff reports more work in Jamestown (civil services, etc.) but less in rural parts of the county (because of depopulation). The city police have somewhat more work with NSF checks, and the police have more area to patrol since the city annexed the Aviko plant site area. The new prison also leads to new demands on law enforcement (e.g., prison fighting).

Local leaders did not perceive much change in needs for fire and related safety services over the past few years, although a fire had occurred at one of the Aviko warehouses a few weeks before the interviews took place.

The increase in factory jobs has increased the need for day care. There are four day care facilities in town. The increase in shift work (at factories, nursing homes, and hospitals) has increased the demand for extended hours day care. However, when one of the day care facilities tried to offer extended hours, with financial support from County Social Services and Community

Action, demand proved to be insufficient to make the project feasible. Day care centers also are affected by the tight labor market and competition for workers.

The Jamestown Public School enrollment has been decreasing over the past 3 or 4 years, but is now stabilizing in the lower grades. School officials have noticed an increase in students needing special services, but they don't know the cause. Economic development is not increasing local school enrollment. (In the longer view, enrollment in grades 1-12 was 3,905 in 1970 and 2,741 in 1999 in the Jamestown public schools.)

Waste water treatment became a major issue. Aviko uses the city water and sewer. Because of the projected increase in load, the City built a new treatment plant (this would have been necessary in the future anyway). The treatment plant cost more than projected, and the plant's discharges also exceeded projections (in quantity, loading or both). As a result, the City wanted to raise the plant's sewer bill. The issue has been resolved, but it did generate some negative press and misunderstanding. The sewage treatment plant now has excess capacity to accommodate future growth.

Upgrading the county roads leading to the Aviko plant was a major undertaking with an estimated cost of \$2 million. This was necessary to accommodate both deliveries of potatoes and transport of products.

The medical sector has been expanding and upgrading. The hospital is offering more services, and one of the clinics is expanding (in one of the malls). The Jamestown clinics are tied in with Fargo and Bismarck hospitals, so patients with major problems are referred/transferred. The health sector changes likely are not directly tied to Aviko and other employers. Rather they can be attributed to Jamestown's role as a regional trade/service center.

The local social services agency reports a substantial drop in caseloads. The Stutsman County AFDC (now TEAM program) caseload dropped from 160 to 45 over the past four years. The improved local job market reduced welfare roles and associated financial stress.

Local officials feel that recent growth is enhancing the public revenue situation. The property tax base has been increasing, and property tax revenues are growing (with stable rates). Sales tax revenues are also growing. New projects like Aviko often receive tax exemptions. The usual deal is five years with no property taxes and a five year phase-in period; this is what was done with Aviko. Anyway, since local tax revenues are growing at stable tax rates, local officials feel that "growth is paying its own way," even with the exemptions.

Agricultural processing projects can make a real contribution to the local tax base. The Ladish Malting plant (Spiritwood) yields about \$500,000 per year in property taxes and is 8 percent of the Stutsman County total taxable valuation. Aviko will yield more than \$500,000 annually when fully on the tax rolls.

On the public expenditure side, the big ticket items were the waste water treatment plant and the access roads for the plant. These cost more than had been originally expected.

Some environmental quality concerns have been associated with the agricultural processing industry in the Jamestown area. There were some early concerns about the quantity of water that Aviko would require. Waste water has been an issue for both Aviko and Ladish Malting, although the problems seemingly have been resolved. A few downwind neighbors complained about the smell from Aviko, but this is not believed to be a major problem.

When asked about specific groups that might have been particularly affected by projects like Aviko, the leaders mentioned that Jamestown seems to be keeping more of its young people now, compared to 1990. However, developing jobs with wage/salary levels sufficient to retain more young people, or attract them from other areas, is seen as a major challenge/need for the near future. The utility companies (Ottertail Power and Montana-Dakota Utilities) are seen as major beneficiaries of the Aviko plant, as it has major requirements for electricity and natural gas.

When asked about changes in population and characteristics of new residents, the overriding response is that the economic growth of the 1990s hasn't resulted in significant population growth. In fact, population estimates indicate some population decline through the decade (and Credit Bureau reports based on changes in addresses tend to confirm this). Key informants were a bit puzzled about how to reconcile the amount of new jobs and new housing they see with a decrease in population and school enrollments. The usual explanation is that many of the new jobs have been filled by workers commuting from out of town or by persons entering the (wage and salary) work force (such as farmers and housewives). Also, the population is aging so family sizes are getting smaller.

A few people mentioned that there were early concerns that the new plant and other projects would lead to an influx of minority population, but this never occurred. (One leader mentioned that a few minority workers were involved in the construction phase of Aviko.)

Concerning changes in social interactions, the general reaction was that there had not been much change, since economic growth has resulted in few new people. Likewise, leaders reported little change in community involvement. The leaders feel Jamestown has a good mix of community programs. Lucas Western employees are credited with excellent community involvement. Aviko management personnel have been busy with start-up and expansion, but are expected to participate more in the future.

### Community/Industry Interaction

Concerning the type of information that communities need about a prospective company, leaders' comments followed two lines. Several mentioned not receiving enough information about the infrastructure costs (e.g., roads and wastewater) encountered with Aviko. They felt that the community needs to know more about the "true social costs" of such projects. A second theme was that local residents needed to be better informed about the benefits provided by new manufacturing/ag. processing companies (re. tax base, etc.). Also local leaders need to investigate a prospective firm (re. how solid are they?, what is their track record?, how are they to deal with?). Some leaders commented that company personnel and local development representatives often are so focused on "making the project happen" that they have little time for dealing with community impacts. Also, several leaders felt that *ex post* studies of communities

where processing plants have located (e.g., the present study) would be useful to communities that might host such projects in the future by giving them some idea of potential problems/issues.

The relationships between local government and local development groups with the companies were rated as generally good, even though there have been some well publicized problems. The most recent was a controversy between the city and Aviko over wastewater charges. Also, the city had a disagreement with one or more of the landowners in the plant site area. Some years ago, the county and Ladish Malting went to the state Supreme Court over valuation issues. However, the consensus was that the companies are generally reasonable. They are willing to pay their fair share -- but they don't want to pay more than their share.

While relationships between local groups and state and federal agencies, as well as those among local groups, were generally rated as good, a concern was raised that major service providers like schools should have a voice in decisions about tax abatements, which will affect their revenue base for years. (A counterpoint was also raised, that those who complain about abatements should realize that 100% of 0 is still 0 and that after ten years Aviko will be paying more than \$500,000 annually in local property taxes.)

Concerning community residents' view of recent development projects, the leaders feel the overall view is positive, but there are mixed emotions. They mention that the 1990s developments, and especially Aviko, have improved the local attitude and morale. They also said that many local residents and leaders felt that "we had to do something or just resign ourselves to the slow death of our town." The major benefits that many would identify include new jobs and a broadened tax base. Also, the retail and service sector is doing better and there seems to be a synergy whereby improvements in one business stimulate others. Major problems that might be identified include infrastructure costs for roads and wastewater treatment for Aviko, competition for labor with other local employers, and a concern that the company has received "handouts" based on local resources, and/or that it isn't paying "its fair share" of infrastructure costs. In addition, some of the older residents are conservative and aren't sure why we need to be making some of these development efforts (i.e., "things are OK now").

#### Advice for Other Communities

Jamestown leaders were nearly unanimous that recent development projects have been good for Jamestown. Their advice for other communities considering new agricultural processing projects included:

1. Develop a positive attitude toward development and diversification. Don't believe that it can't be done -- nonmetro North Dakota has more to offer than we give ourselves credit for.
2. Take a more regional approach to development. Aviko benefits surrounding counties through plant jobs, irrigated farming, etc. Also the DG Pasta plant helps Jamestown.
3. Consider the true social and infrastructure costs associated with a new project. Know what the risks are and don't "give everything away" through incentives and exemptions.
4. Overall, based on the experience with Aviko, they'd like to see more projects like this.

## **New Rockford**

When asked about major economic changes or developments affecting their community, New Rockford area leaders generally identified the North American Bison Cooperative (BC) as the project with the greatest impact. The DG cooperative located in Carrington, only about 17 miles south of New Rockford, was also mentioned as having a significant effect. Some New Rockford residents are working at DG. Many leaders felt that the combination of the two projects had helped to stabilize their community and the surrounding area. However, many leaders also pointed out that the impact of the recent downturn in the agricultural economy may be outweighing the positive impacts of the processing plants. New Rockford recorded a population decrease of 6.7 percent from 1990 to 1998 and a drop in taxable sales of 2.3 percent over the same period (Table 2). The town no longer has a hospital or an implement dealership.

### **Efforts to Attract Industry**

New Rockford has made an effort to attract new businesses. The development organization, referred to as the Economic Development Board, has one paid position, the secretary/treasurer. The Board receives about \$2,500 per month from a 1 percent local option city sales tax. The Board and other leaders regard the Bison Cooperative as their first real recruiting success, although some would categorize the project more as one based on community support for a local entrepreneur (Ken Throlson, leader of the bison growers' association and a local resident). More recently, the Board has been targeting potential employers with labor needs of 50 or less, because of the tight local labor market. Most of the businesses that are being investigated are either agriculturally-linked or are deemed to have a synergistic relationship with existing businesses. One such firm is Dakota Halal Processing, which seeks to slaughter and process halal livestock. It is hoped that such a firm would contribute to a critical mass of meat processing in the area, which might attract linked enterprises such as food processing, cold shipping, and meat cutter training. The city has recently purchased property just south of town for development as an industrial park.

### **Aspects of Community Most Affected**

The Bison Cooperative, together with DG cooperative, have helped to stabilize the economy and population of the New Rockford area but have not led to an influx of workers. Among the community aspects most affected by the processing plants, local leaders indicated the housing market as having the most noticeable effect. Some houses which were vacant and had been forfeited to the city (i.e., for non-payment of real estate taxes) have been purchased and are once again providing property tax revenue. While the quality of some of these residences may be suspect, at least the city is not in the business of residential property ownership and management. One leader mentioned that prior to the advent of the cooperatives, they couldn't give these properties away, but recently one of these homes sold for \$6,000.

While the cooperatives are credited with stabilizing the local economy, retail sales at New Rockford's grocery and hardware stores were estimated to have fallen 20 percent in the past year (i.e., 1998 to 1999). The depressed farm economy of the area was blamed for the recent slump, along with enrollment of land into the Conservation Reserve Program (CRP), which reduces use of agricultural inputs. Nevertheless, the leaders pointed out that without the jobs provided by the

two cooperatives, the situation would be much worse; most could identify several farm families who had quit or cut back farming in the past three years and could have been forced to leave the area had they not been able to work at the plants.

Effects on residents' incomes were also seen as stabilizing rather than increasing area disposable income. The view was that work at the plant had supplemented many families' incomes from farm-related sources (which had been declining).

While the Bison Cooperative had not resulted in new home construction in New Rockford (only one new home building permit was issued from 1994 to 1998, see Appendix Table 5), it has caused existing homes to appreciate in value. This was especially true for lower value homes. The occupancy rate for apartments, as well as homes, is higher than prior to the cooperatives' development.

Leaders' opinions differed regarding effects of the cooperatives on the need for police and public safety services. Most felt that there was no effect on these services, while a few felt that the cooperatives had attracted or retained younger people to the area, which increased demands for policing. The Eddy County Sheriff and New Rockford police functions were combined several years ago.

Medical services were viewed as largely unaffected, except to the extent that plant jobs help stabilize local population and incomes. The New Rockford hospital closed in the late 1980s (but the very modern Carrington facility is less than 20 miles away). New Rockford currently has medical and dental clinics, which are staffed during regular business hours, and a volunteer ambulance service, which is well regarded.

Fire protection services are provided by a volunteer fire department, which recently purchased a new truck. The plants were not believed to have affected demands for this service.

The Bison Cooperative is served by a rural water system and has its own waste water treatment. Leaders were somewhat concerned that New Rockford's wastewater collection and treatment facilities are antiquated, but the cooperatives have not affected demands, beyond causing some vacant housing units to be occupied.

Local roads and streets are viewed as being little affected by the Bison Cooperative (BC). Some leaders did mention that the trucks delivering grain to DG might cause more wear on roads than those hauling bison to the BC.

Local recreation opportunities also do not appear to be affected by the cooperatives. New Rockford's golf course has been the focus of substantial investment in recent years; the clubhouse has been remodeled/expanded and the number of golf cart garages has been increased. New Rockford has a public swimming pool and a proactive parks and recreation department. However, some local leaders expressed concern that some activities have become unavailable to area residents in recent years (e.g., tennis lessons, city basketball leagues, city bowling leagues).

The demand for social services support programs has definitely decreased since the cooperatives began operating. The number of persons requiring services from the county welfare programs has decreased substantially.

Day care has not been as difficult for the BC workers as for those at DG, because BC has a standard work day whereas DG operates around the clock. However, because a number of New Rockford residents work at DG, demand for day care offering extended hours does exist. Another local issue is that there has been some turnover among day care providers.

School enrollments in New Rockford decreased about 11 percent from 1990 to 1999 (Appendix Table 4). However, local officials believe that the advent of the cooperatives reduced the rate of decline of enrollments by enabling some families to remain in the area. The rate of enrollment decline was less from 1993 to 1999 (3.9%) than from 1990 to 1993 (7.2%).

The Bison Cooperative is located outside the city limits, and its tax abatement has another year to run. Then the plant will be phased onto the tax rolls at 20 percent per year and will add to county and school district tax revenues. Property tax rates have not changed, but city revenues have increased as houses that had been forfeited to the city have now been sold and are generating tax revenue again.

Leaders did not mention major effects of the BC on public expenditures. Some incentives were provided to the BC to locate in New Rockford, but specific details were not volunteered.

The only environmental concerns mentioned were that the plant occasionally emits an objectionable odor. However, this apparently is not viewed as a major issue.

When asked about the effect of the BC project on local population, local leaders' consensus was that the effect was to reduce the rate of population loss from the area. None of the leaders felt that community involvement or social interactions had decreased, and some believed that volunteering had increased.

#### Community/Industry Interactions

Types of information these leaders feel a community needs about a company include (1) the likelihood that it can succeed and prosper, (2) the number and types of jobs that may be generated, both directly and indirectly, and (3) how much it may cost taxpayers to get the facility located in New Rockford. There was no clear consensus about who should provide this information, but none of the leaders felt that the company should provide it. Leaders may have felt that their local economic development personnel would be a more objective source of this type of information.

When leaders were questioned about their interactions with the new industry, it became clear that this was not a typical business recruitment. Rather, the project proponent was a local resident with long ties to the community. The leaders did not identify any problems in working with the BC.

The leaders believe that the effects of the Bison Cooperative have been very positive, providing local residents with job opportunities and bison growers with dividends. Two business owners mentioned that their business would be closed or sold by now if not for the BC. The main sources of concern have been occasional odors from the plant and questions about tax abatements. Some feel that large tax abatements represent a substantial opportunity cost and make it difficult for the community to get ahead. Finally, some area workers have problems with shift work (DG operates 24 hrs./day). However, the bottom line is that without the cooperatives, these leaders feel their community would face a bleak future.

#### Advice to Other Communities

The leaders' primary advice is to keep trying. They emphasize that unsuccessful recruitment efforts will always far outnumber the successful ones (their success with the BC came after a number of years of unsuccessful recruitment/development efforts). A community needs to identify its comparative advantages and resource limitations and use these to guide its development efforts.

#### Wahpeton

When local leaders were asked about major economic forces affecting their area, they always mentioned the advent and growth of the several major manufacturers located in the Wahpeton area as major influences. In addition, several mentioned the ups and downs of the agricultural sector as a force influencing the community. Related to the changes in agriculture, the depopulation of the smaller towns and countryside in the Wahpeton trade area was mentioned.

The growth of the manufacturing sector in Wahpeton dates back at least 25 years. **Minn-Dak Farmers Cooperative** established its sugarbeet processing plant north of Wahpeton in 1974. Minn-Dak employs 230 year-around and 550 at the peak of the processing season (winter). Most of the seasonal workers are area farmers who commute. Even before Minn-Dak, Willrich Manufacturing established a plant on the outskirts of Wahpeton in 1964. This firm makes farm equipment (cultivators, tillage equipment). They are reported to be subject to the ups and downs of the agricultural sector, and must frequently adjust their workforce level (the firm reportedly employed about 130 plus some temporary and seasonal help in April 1999).

The next major manufacturer to establish a presence in the area was the **3M Company**, which started up a branch plant in 1977. This plant was spun off by 3M in 1996, and now operates as **Imation, Inc.** There was a good deal of uncertainty at the time of the spin-off, and a few workers were laid off. In April 1999 Imation was hiring, and employed about 600 workers.

**Prime Wood** was established about 1986 by a local entrepreneur, to make oak veneer furniture based on particle board. When he experienced difficulty obtaining supplies of particle board, he began to experiment with making a substitute product from wheat straw. In the mid-1990s he set up a subsidiary (Prime Board) to make strawboard. Recently, Prime Wood was sold to Woodcraft Industries (based in St. Cloud, MN). At the time of the interviews, Prime Wood was estimated to employ about 600 and Prime Board another 80. One or both of the firms were



currently hiring, although many of their jobs were believed to be low-skill, minimum wage jobs. This complex also does a good deal of shift work (i.e., operates around the clock).

The ProGold plant was seen as a real prize, and “landing” it was considered a coup for Wahpeton. The construction period (1995-96) was hectic, with a peak of 1,200 workers. Subsequently, its employment has been stable (around 120 operating workers).

The growth of manufacturing has led to some spin-offs, including several businesses geared to service the many trucks that haul products to ProGold and Minn-Dak. Two new motels were established during the ProGold development period. The local retail sector has seen ups and downs, with some stores closing and others expanding. The State College of Science is seen as a major community asset for attracting employers (because of its strong voc-tech programs). It is a major employer in its own right, with about 350 employees, and has also experienced ups and downs in enrollment over time.

Similar to the situation in Jamestown, ProGold is not the dominant employer in Wahpeton. Many of the community effects described are therefore better interpreted as the result of manufacturing growth in general than as effects of ProGold.

#### Efforts to Attract Industry

Wahpeton has definitely made major efforts to attract, develop, and encourage new businesses and industries. The local Economic Development Corporation (EDC) has been active over a period of years. The group employs a full-time director and a full-time assistant. Their major revenue source is a local option sales tax (1%) which generates about \$700,000 annually. The EDC Board is made up of a cross-section of local business people and community leaders. The group administers a Revolving Loan Fund, which is used for commercial and housing rehab as well as to match some programs of the Lake Agassiz Regional Council (Micro Loan, Spec Builders, etc.). The funds for this program originally came from a Small Cities grant. Urban Renewal bonds were utilized in the 1980s, as were TIF (tax increment financing) bonds and abatements. TIF is being phased out now; the bonds will be paid off in 2003. MIDA (Municipal-Industrial Development Authority) bonds were used by 3M and Prime Wood back when they were starting, but are not used much now. Current plans call for more use of property tax exemptions to assist local retail expansion. (Imation may also use this program for a planned expansion.)

Until the past few years, the Wahpeton EDC had focused on building the primary sector (e.g., manufacturing), although the EDC personnel feel that they have done more to support the retail sector than is common for local organizations of this type. Recently, they have begun to put more emphasis on housing and infrastructure development.

Another recent shift in emphasis has been a focus on “quality jobs.” Some EDC board members commented that Wahpeton no longer needs more minimum wage, entry level jobs (as all of southeastern North Dakota has record low unemployment rates). Rather, future development efforts should focus on higher paying jobs, and on employers who are willing to invest in workforce development.

## Aspects of Community Most Affected

The overriding theme in discussions concerning the impacts of ProGold was that the local economic and population impacts had been less than expected. Some leaders commented that the community had perhaps expected too much from ProGold (ProGold-itis was a popular term). The reality has been that, although Wahpeton has been seeing an increase in manufacturing employment (other manufacturers were expanding during the ProGold development period), the city's population has increased very little. Most of the new jobs appear to be filled by persons who commute from outside the community, some from smaller towns nearby like Fairmont and Hankinson, but others from as far away as Fargo and Alexandria, MN. The prevalence of commuting is seen as a major impediment to the local retail sector's ability to capture spin-off benefits from the growth of ProGold and other manufacturers.

Specific local effects mentioned as being related to ProGold included increased truck traffic (which has positive effects for some local businesses engaged in truck sales, repair, and supply but also contributes to wear and tear on the roads), enhanced incomes for farmers through higher corn prices (a figure of \$0.10 per bushel was mentioned frequently), increased business for local construction sector firms, increased local sales tax revenue (especially during construction of the ProGold plant), and the advent of two new motels.

Housing is a major issue in Wahpeton, and is seen as a long-standing problem. Some would say that the inability to develop adequate amounts of affordable housing is the number one problem for the community, and the major reason why the community has not been able to capture more spin-off benefits from the substantial growth that has occurred in manufacturing employment.

Area leaders do not agree totally on what types of housing are needed. All agree that it needs to be affordable and attractive. Most also recognize that with the bulk of the plant workers earning \$8-15/hr., there are constraints on what the workers will be able to afford. Several leaders commented that Wahpeton is fundamentally a "blue-collar town" and that there is very limited demand for higher priced housing. Some leaders felt that Wahpeton has enough apartments, while others saw a need for more larger apartments suitable for families (e.g., 3 bedroom units). As noted earlier, stimulating housing development is one of the priorities for the city and the local EDC. A new subdivision is being developed in the northwest part of town which will include some low and moderate income housing, as well as lots that will be available to the general public. One of the town's mobile home parks also is being expanded.

A recent event that affected local housing availability to some extent is the Red River Flood of 1997. About 15 homes in Wahpeton and 120 in the twin city of Breckenridge, MN were heavily damaged and subsequently purchased and razed in the post-flood buy-out. These were predominantly older, smaller homes which would be in the lower price range that seems to be needed at this time. Wahpeton is planning an expanded dike system to protect the community from future floods. This has an effect on other community infrastructure investments, as they are not certain yet how many local resources will be needed to complete the dike project.

The local retail sector has been struggling. They hoped that ProGold would give them a big boost, but that really hasn't happened. Some stores have been successful, but others are just

hanging on and some have closed. The competition from Fargo (less than an hour away on 4-lane and Interstate) and Fergus Falls (about 23 miles east) has been tough for the local retailers. While the high level of commuting by the workers at the various plants has hurt the local retailers, leaders also feel that many Wahpeton residents do a very high percentage of their shopping out of town. The effects of ProGold were felt mainly during the construction period. The major beneficiaries were the eating and drinking places and motels.

The growth of the manufacturing sector has certainly resulted in more job opportunities, especially for entry-level people. One effect of this is that the Richland County social service case load is at the lowest level in 10 years. However, local leaders are now trying to emphasize “quality jobs” as the focus for future development efforts. ProGold was seen to offer better jobs than some of the other local employers, which could be seen as a pay off for the community’s investment in the project.

The major effect of manufacturing expansion on residents’ incomes has been through dual-earner households (and this was cited as almost universal now). There has been some increase in wage levels recently (like a \$0.50/hr. increase at the entry level over the past 2-3 years). However, the wage scales for most of the major employers are still pretty low.

Real estate values are definitely up. However, ProGold seemed to create unrealistic expectations for some local residents, and they have been disappointed that values haven’t increased as much as they had hoped. The combination of the employment growth which increased the demand for housing and the Flood of ‘97 which cut back the supply has put upward pressure on housing prices. Prices of existing housing have been bid up, but so far there hasn’t been a lot of response in terms of building new units. Increased costs of building materials may also contribute to high housing costs.

Local law enforcement personnel clearly divided the effects of ProGold into the construction phase and the subsequent operations period. During the operations period, the major issues have been associated with increased truck traffic and concerns about overloaded trucks. During the construction period, there were other concerns, as the project had up to 1,200 workers. These people came “from all over the country.” Drug activity, excessive drinking, and weapons concerns were the most frequent issues during the construction period. However, law enforcement officials felt that the company and the construction manager had been very effective in getting rid of troublemakers.

Commenting on the effects of manufacturing growth more generally, law enforcement officials felt that ProGold probably generates fewer problems related to their workers than area manufacturers generally. The feeling was that the management and technical personnel (engineers, etc.) recruited by the different manufacturing firms tend to be good citizens and real additions to the community. The line workers represent a “broad cross-section” of the regional population, and only a small percentage of these cause problems. The problems are generally related to drugs, alcohol, and personal finance (and often these seem to be inter-related). The Sheriff’s Department often gets involved in serving papers in civil suits related to nonpayment (e.g., of rent) and warrants in bad check cases.

Fire and other safety services were not believed to have been affected at all by the ProGold project, or other manufacturing expansion, except as these expansions contributed to overall community growth. A recent change in fire protection is that a new fire station is being incorporated into the new City Hall. This will allow the city to have two fire trucks on the north side of town (which is where much of the new residential growth and most of the new manufacturing is located).

Local leaders did not report any unusual effects on the local health care sector. A reoccurring comment was that the community has good medical facilities, with two clinics which are both branches of major Fargo clinics (Merit Care and Dakota) and a hospital in Breckenridge.

ProGold provides its own water and waste water treatment. The community is believed to have a good utility system with adequate capacity to handle foreseeable growth. The water supply comes from wells, and is seen as being good quality and reliable. The sewer system is also seen as quite adequate. One comment was that the sewage treatment system and lagoons could handle a population of 20,000. (The current population of Wahpeton is between 9,000 and 10,000.) However, new residential development will require new collector lines, etc. One expansion in the planning stages is a new sewer interceptor line (with lift stations) in the northwest part of Wahpeton, to facilitate future residential and/or industrial growth in that area.

The major effect of ProGold on streets, roads, and highways was increased truck traffic (grain trucks delivering corn), with resulting wear and tear on roads. There are also some local traffic concerns when shifts change (traffic spikes, which make it difficult to get onto the by-pass road). Some additional traffic signals may be needed. The community also needs to work on some residential streets, but this is because of damage caused by the Flood of '97, and is unrelated to industrial development.

Recreational opportunities and facilities is another area that is seen as basically unaffected by ProGold, or by manufacturing expansion generally. Leaders frequently commented on the community's excellent parks and recreation facilities and programs. The zoo is considered one of the finest in the area.

Growth in manufacturing employment has given many social service/welfare recipients an opportunity to obtain employment. The County social service caseload was at the lowest level in at least ten years.

Day care and other child care services are seen as a major need for the community. The community is trying to develop a 24 hr. child care facility. The prevalence of shift work at some of the major employers (Prime Wood was specifically mentioned) means that 24 hr. care is needed. The Chamber is spearheading the planning effort, and the major employers may contribute to making the facility's rates affordable. Even daytime care is in short supply now.

The Wahpeton school district's total enrollment (K-12) peaked during the 1995-96 school year (i.e., during ProGold construction) and has been trending downward since. The feeling is that lack of housing has discouraged families with children from moving to town. Also, the lack of retail growth may have limited employment opportunities for spouses, further discouraging families from moving to Wahpeton. Wahpeton schools have seen a substantial increase in special

education costs over the past 10 years. They feel that a lot of the increase in special education needs is tied to the influx of manufacturing workers, who seem to have a high percentage dysfunctional families.

Regarding effects on public expenditures, several leaders commented on the substantial commitment that the community made to ProGold, in terms of incentives, tax abatements, etc. Some of the larger items were provision of the land for the plant site (paid for with about \$1 million, drawn from sales tax revenues) and road improvements by the county to improve access to the site. The need for new dikes for flood control was also mentioned -- while this is in no way related to the manufacturing expansions, it does affect public decisions regarding almost all types of other expenditures.

Local sales tax revenues increased substantially during ProGold construction. Tax abatements granted to ProGold (the plant will not be fully on the tax rolls until 2017) mean that a great deal of potential revenue is being foregone by the county and school district (the plant is outside the city limits). Once the plant is fully on the tax rolls, it will add appreciably to the tax base (the plant cost was about \$261 million).

Regarding quality of the natural environment, there are occasional complaints about the smell of the plants (people are not sure whether the sugarbeet plant or ProGold is to blame). This only occurs with certain wind directions. There were some concerns about the quantity of water that ProGold would divert from the Red River. These issues were discussed extensively at the time of permitting, but leaders did not feel that there has been a problem since.

Leaders did not identify many effects specific to special groups. The elderly are acknowledged to be a growing group in the community and area. Some attention may be needed to providing housing appropriate for their needs (perhaps apartments or duplexes with easy access, snow removal, etc.). This could vacate some single family houses for new community residents. Children also were seen as a group with special needs. The school district has seen a substantial increase in special education needs over the past few years. They feel that these are predominately children from dysfunctional homes. Leaders believe many of these households have relocated to the Wahpeton area because of the job opportunities.

Concerning the effects of manufacturing growth on the local population, there were mixed reactions. While most agreed that there has not been much change in Wahpeton's total population, some commented that people working at the plants tend to be transient. Some concerns were expressed about problems that may be associated with a small segment of newcomers. On the other hand, the new management/engineering personnel recruited by some of the facilities are seen as assets to the community.

Questions about changes in social interactions did not elicit much response from the leaders. They generally commented that Wahpeton is more "transient" or perhaps more "diversified" than many towns in the region, so it is easy for newcomers to get involved. They did not feel there was a newcomer/old-timer split. Some said that participation in activities like softball and bowling teams has decreased, but felt perhaps this just reflects the aging population. A greater prevalence of dual-earner households might also be a factor. One leader commented that there seems to be a lot of divorce and single parent households in Wahpeton. Direct relation

to the plants was unclear. One belief is that demands of long hours and shift work could put a strain on home life.

The topic of changes in community involvement/self-investment/volunteering drew mixed reviews. Some said that there is reduced involvement in community organizations like Kiwanis (but also felt that this is a national trend). Others felt that there is more volunteering, and cited the Flood of '97 as a catalyst for community involvement. Some of those who indicated less involvement felt that dual-earner households might be an explanation.

### Community/Industry Interactions

The types of information that the leaders felt the community needs concerning new projects like ProGold included: (1) jobs -- the number and type of jobs (wage levels, qualifications, etc.); (2) local impacts -- especially effects on school enrollments and public costs/revenues; and (3) what can the company do for the community? (We should be asking this more, and not just asking what the community can do for the company!)

The entities they felt appropriate to provide this information were (1) the company -- they are the only ones who can address many of the questions; (2) area universities-- regarding impacts, what can communities expect, etc.; (3) state government -- regarding information on incentives available, etc.; (4) state and local economic development organizations.

The relationship among local organizations and companies seeking to develop in the area was generally rated as good. Now that the local development office has a full-time director, he facilitates much of the communication.

Relationships among local entities and between them and state and federal government bodies also were rated as good. Some leaders felt that the community needs to become more cautious about granting incentives and tax abatements. Also major service providers like schools should have an explicit voice in decisions regarding tax abatements (and similar decisions that may affect their revenue base for years to come).

The leaders were generally satisfied with their level of involvement in decisions concerning the ProGold project. The leaders felt that most residents view the recent developments positively, but felt that there has been some disappointment over the level of local benefits (and particularly the investment in incentives in relation to the perceived benefits).

The major benefits the local residents perceive are (1) jobs -- quality jobs are a positive outcome of ProGold; (2) broader tax base -- particularly once the facilities are on the tax rolls, and (3) ProGold's effect in producing higher prices for corn (\$0.10 to \$0.15/bu. higher). The major problems or costs that local residents perceive are (1) cost of incentives (especially for ProGold); (2) air quality (smell); (3) more truck traffic; (4) area grain elevators are concerned about the competition for corn; and (5) increased taxes and/or increased demands on city services (actual or potential). Perhaps the greatest concern has been that the costs of incentives was too high in relation to the benefits received to date.

## Advice for Other Communities

When asked about their advice for other communities considering similar projects, the leaders had several specific suggestions:

1. Make sure there is a sound economic foundation for the project. Don't put the community's limited resources into a plant that isn't likely to be a long-term success (need a good feasibility study).
2. Make the project part of the community's long-term growth plan (how does it fit into the bigger picture?)
3. Be cautious (fiscally conservative) regarding incentives. If a company requires massive incentives to come, is it really viable? (But a counterpoint that was also suggested, a good opportunity like ProGold may not come along very often -- so you better not let it get away!)
4. Keep lines of communication open with the company.
5. The community leaders should ask as many questions as possible about the company, the industry, possible impacts, etc. Try to learn from the experiences of other communities that have developed similar facilities (for instance, groups from Wahpeton visited Marshall, MN and Eddyville, IA). Also, leaders should try to get the whole community on board.
6. Proceed cautiously with investments in community infrastructure. Don't build a new school "until you see the whites of the new students' eyes."

## Survey of Study Community Residents

To gain a better understanding of residents' views of recent changes in their communities, a random survey was conducted. Questionnaires (see Appendix B) were distributed to residents of the four communities, using a drop-off and pick-up procedure. Response rates ranged from 84 to 86 percent (Appendix Table 1). In addition, the questionnaire was completed by 36 of the leaders who were interviewed (9 in each community).

Selected characteristics of the community resident respondents are summarized in Table 3. Overall, about 25 percent of the respondents were less than 30 years old, 24 percent were 30 to 39, 25 percent were 40 to 49, and 26 percent were age 50 or older. About 36 percent were males, and 97 percent were white. About 75 percent of respondents were married, 14 percent had never been married, and 11 percent were widowed, divorced, or separated. About 43 percent of respondents were college graduates, 31 percent reported some post-secondary education, and the remaining 26 percent had a high school education or less.

Table 3. Selected Demographic Characteristics of Community Resident Survey Respondents, by Community, North Dakota

| Item                            | Community         |           |              |          | Total |
|---------------------------------|-------------------|-----------|--------------|----------|-------|
|                                 | Carrington        | Jamestown | New Rockford | Wahpeton |       |
|                                 | -----percent----- |           |              |          |       |
| Age:*                           |                   |           |              |          |       |
| <30                             | 36.0              | 29.0      | 8.8          | 28.7     | 24.6  |
| 30-39                           | 36.1              | 24.7      | 26.3         | 10.9     | 24.1  |
| 40-49                           | 15.1              | 21.5      | 21.9         | 41.6     | 25.4  |
| 50-59                           | 4.7               | 16.1      | 19.3         | 10.9     | 13.2  |
| 60 or over                      | 8.1               | 8.6       | 23.7         | 7.9      | 12.7  |
| Sex:                            |                   |           |              |          |       |
| Male                            | 40.2              | 36.8      | 33.1         | 35.3     | 36.1  |
| Race:                           |                   |           |              |          |       |
| White                           | 99.0              | 96.6      | 98.4         | 95.8     | 97.4  |
| Marital Status:*                |                   |           |              |          |       |
| Married (or living as married)  | 75.4              | 74.4      | 79.7         | 67.2     | 75.1  |
| Widowed, divorced, or separated | 6.9               | 16.2      | 10.9         | 8.4      | 10.7  |
| Never married                   | 13.7              | 9.4       | 9.4          | 23.5     | 14.0  |
| Education:                      |                   |           |              |          |       |
| High school or less             | 24.5              | 25.6      | 36.2         | 17.1     | 26.2  |
| Some post-secondary             | 31.4              | 27.4      | 33.1         | 31.6     | 30.9  |
| College graduate                | 41.2              | 39.2      | 26.2         | 44.4     | 37.3  |
| Graduate degree                 | 2.0               | 7.7       | 4.6          | 6.8      | 5.4   |

\* Significant at the 1 percent level based on Chi Square test.

Age distributions were similar among the communities, except New Rockford which had substantially fewer persons under age 30 (9% vs. 29 to 36% in the other towns) and more over age 60 (24% vs. 8 to 9% elsewhere). The respondents' race and sex were similar among communities (96 to 99% white and 33 to 40% male). However, marital status varied somewhat with the percent married ranging from 67 percent in Wahpeton to 80 percent in New Rockford, while the percentage who were widowed, divorced, or separated ranged from 7 percent in Carrington to 16 percent in Jamestown, and the percent never married ranged from 9 percent to 23.5 percent (Table 3). Educational levels also varied somewhat among the communities. The percent of residents who were college graduates ranged from 51 percent in Wahpeton to 31



percent in New Rockford, while the percent with a high school education or less ranged from 36 percent in New Rockford to 17 percent in Wahpeton.

The demographic characteristics of the community leaders are compared with those of the residents in Appendix Table 6. The leaders were clustered in the age group 40 to 49 (50%), and almost 92 percent were male. All the leaders were white, and 94 percent were married. More than 74 percent were college graduates.

Selected economic characteristics of the community resident respondents are summarized in Table 4. Overall, 45 percent of the respondents indicated that they were the primary wage earner in their household. This ranged from 39 percent in Wahpeton to 57 percent in Jamestown. Almost 68 percent of respondents overall were employed by someone else, while 17 percent were self-employed, 9 percent were retired, and 5 percent were not employed. The percentage who were self-employed was highest in New Rockford (28%) and lowest in Wahpeton (11%). The percentage who were retired also was highest in New Rockford (16%) and lowest in Carrington (5%).

The services sector was the industry where the most respondents were employed (45% overall), followed by agriculture (11%), retail trade (10%), and transportation, communications, and utilities (9%). The services sector also accounted for substantially the largest share of employment in each community (Table 4).

Household income covered a wide range. In 1998, about 24 percent of respondents reported incomes less than \$25,000 while 25 percent had incomes over \$60,000. New Rockford, which had the highest percentage of retired persons, also had the highest percentage of households with incomes under \$25,000 (32%) and the lowest percentage with incomes of \$60,000 and over (14%).

Most respondents owned their residence (76% overall) while 19 percent rented and the remainder occupied their residence without cost but did not own it. Overall, 21 percent owned and/or operated a farm or ranch while almost 15 percent owned other property, aside from their residence and/or a farm or ranch.

When asked to rate their level of satisfaction with different aspects of their community, the community residents were most satisfied with the level of fire protection (84% were satisfied or very satisfied), followed by public schools (73%), law enforcement (68%), and utilities (67%). The aspects with which residents overall were least satisfied were employment opportunities to keep youth in the area (17% were satisfied or very satisfied), streets and roads (34%), and opportunity to earn an adequate income (39%). Satisfaction with different aspects varied somewhat by community. For example, only 4 percent of New Rockford residents were satisfied with employment opportunities compared with 30 percent in Wahpeton. However, when rating their community as a place to live, more than three-fourths of residents in each town were satisfied or very satisfied (Table 5).

Table 4. Selected Economic Characteristics of Community Resident Survey Respondents, by Community, North Dakota

| Item  | Community         |           |              |          | Total |
|---|-------------------|-----------|--------------|----------|-------|
|   | Carrington        | Jamestown | New Rockford | Wahpeton |       |
|   | -----percent----- |           |              |          |       |
| Respondent is primary wage earner in household  | 43.1              | 56.5      | 43.8         | 38.5     | 45.4  |
| Respondent is:                                  |                   |           |              |          |       |
| Not employed                                    | 5.4               | 2.8       | 3.4          | 8.7      | 5.1   |
| Retired   | 5.4               | 6.6       | 16.4         | 7.8      | 9.3   |
| Employed by someone else                        | 74.2              | 74.5      | 52.6         | 72.2     | 67.9  |
| Self-employed                                   | 14.0              | 16.0      | 27.6         | 11.3     | 17.4  |
| Industry respondent works in:                   |                   |           |              |          |       |
| Agriculture                                     | 17.1              | 2.9       | 17.2         | 7.7      | 10.9  |
| Manufacturing                                   | 6.8               | 4.8       | 2.1          | 14.3     | 6.9   |
| Trans., Comm., & Utilities                      | 19.3              | 7.8       | 5.3          | 2.2      | 8.5   |
| Retail trade                                    | 6.8               | 15.5      | 8.5          | 8.8      | 10.1  |
| F.I.R.E.  | 2.3               | 7.8       | 10.6         | 4.4      | 6.4   |
| Services  | 38.6              | 41.8      | 45.7         | 53.9     | 45.0  |
| Public administration                           | 5.7               | 9.7       | 7.4          | 1.1      | 6.1   |
| Other (mining, construction, & wholesale trade) | 3.4               | 9.7       | 3.2          | 7.7      | 6.1   |
| Household Income, 1998:**                       |                   |           |              |          |       |
| <\$25,000                                       | 20.6              | 20.0      | 32.3         | 22.3     | 23.6  |
| 25,000 - 34,999                                 | 20.6              | 16.5      | 24.2         | 12.5     | 18.2  |
| 35,000 - 49,999                                 | 18.6              | 24.4      | 24.2         | 12.5     | 19.9  |
| 50,000 - 59,999                                 | 11.3              | 13.9      | 5.1          | 20.5     | 13.0  |
| 60,000 - 79,999                                 | 19.6              | 15.6      | 4.0          | 17.0     | 14.2  |
| \$80,000 or more                                | 9.3               | 9.6       | 10.1         | 15.2     | 11.1  |
| Residence is:**                                 |                   |           |              |          |       |
| Owned   | 78.2              | 76.7      | 80.0         | 78.0     | 76.3  |
| Rented  | 20.8              | 22.4      | 16.2         | 18.6     | 19.4  |
| Occupied without cost                           | 1.0               | 0.9       | 3.8          | 3.4      | 2.4   |
| Respondent:                                     |                   |           |              |          |       |
| Owns/operates a farm/ranch                      | 24.5              | 13.0      | 30.8         | 15.0     | 21.0  |
| Owns other property                             | 10.8              | 14.9      | 16.9         | 15.8     | 14.8  |

\* Significant at the 1 percent level based on Chi Square test.

\*\* Significant at the 10 percent level based on Chi Square test.

Table 5. Community Residents' Satisfaction with Selected Community Attributes, by Community, North Dakota

| Attribute                                      | Community  |           |              |          | Total  |
|--|--|-----------|--------------|----------|--------|
|  | Carrington   | Jamestown | New Rockford | Wahpeton |        |
|  | -----percent <i>satisfied</i> or <i>very satisfied</i> ----- |           |              |          |        |
| Fire protection                                | 83.3   | 82.1      | 93.7         | 76.5     | 84.2*  |
| Public schools                                 | 80.2   | 70.9      | 67.7         | 75.6     | 73.2*  |
| Law enforcement                                | 67.7   | 73.5      | 52.4         | 80.0     | 68.1*  |
| Utilities                                      | 71.6   | 67.2      | 67.7         | 63.9     | 67.4   |
| Quality of the natural environment             | 72.3   | 70.1      | 63.8         | 59.6     | 66.2** |
| Medical services                               | 79.4   | 66.7      | 33.8         | 80.0     | 63.8*  |
| Housing  | 50.5   | 62.4      | 66.2         | 65.8     | 61.8** |
| Recreation facilities/<br>opportunities        | 39.6   | 54.7      | 45.4         | 66.4     | 51.8*  |
| Child care/day care                            | 50.0   | 68.4      | 43.7         | 40.7     | 50.5*  |
| Opportunity to earn an adequate income         | 47.5   | 39.3      | 23.1         | 55.0     | 39.3*  |
| Streets and roads                              | 39.2   | 29.9      | 43.9         | 23.3     | 34.1*  |
| Employment opportunities to keep youth in area | 19.8   | 14.5      | 3.9          | 30.0     | 16.7*  |
| -----  |  |           |              |          |        |
| Community as a place to live                   | 82.1   | 75.7      | 82.1         | 78.6     | 79.6   |

\* Significant at the 1 percent level based on Chi Square test.

\*\* Significant at the 10 percent level based on Chi Square test.

When the ratings by community leaders are compared to those of residents (Appendix Table 7), the leaders' ratings of the various community aspects are generally more favorable than those of the residents. The only two community attributes for which leaders' ratings were less favorable than residents' were child care/day care and employment opportunities for youth.

Nearly all of the community residents knew where the agricultural processing plant sited near their community is located (Table 6). However, less than half (44%) had actually visited the facility. The percentage who had visited the plant varied substantially between the two smaller towns (New Rockford and Carrington), where more than half had visited, and the larger towns, where only slightly more than one respondent in four had visited. Overall, only 3 percent of respondents currently worked for the plants in their community; this ranged from 7 percent for Carrington residents to less than 1 percent of those in Jamestown and Wahpeton. Nearly 8 percent of respondents had an immediate family member (spouse, parent, sibling, or child) who worked in the plant, ranging from 4 percent in Jamestown to 19 percent in Carrington. Overall, 18 percent of respondents owned or worked for a business that supplied goods or services to the plant, ranging from 13 percent in Wahpeton to 27 percent in Carrington.

Table 6. Community Residents' Relationships with Agricultural Processing Plants, by Community, North Dakota

| Item  | Community   |           |              |          | Total  |
|---|---|-----------|--------------|----------|--------|
|   | Carrington  | Jamestown | New Rockford | Wahpeton |        |
|   | -----percent who <i>somewhat</i> or <i>strongly agree</i> ----- |           |              |          |        |
| Respondent knows where plant is located                       | 100.0   | 98.3      | 100.0        | 95.0     | 98.3*  |
| Respondent has visited plant                                  | 55.9  | 27.4      | 64.3         | 28.3     | 44.0*  |
| Respondent works for plant                                    | 6.9   | 0.8       | 3.9          | 0.8      | 3.0**  |
| Family member works for plant                                 | 18.6  | 4.3       | 4.6          | 5.0      | 7.7*   |
| Respondent lived in community when plant was proposed         | 71.6  | 82.9      | 87.6         | 83.3     | 81.8** |
| Respondent owns or works for business that supplies the plant | 26.5  | 15.4      | 17.1         | 12.5     | 17.5** |
| Distance from residence to plant:*                            |   |           |              |          |        |
| < 1 mile  | 21.6  | 0.9       | 9.3          | 0.8      | 7.7    |
| 1-5 miles   | 51.0  | 59.0      | 81.4         | 55.8     | 62.6   |
| 6-10 "  | 3.9   | 22.2      | 3.1          | 24.2     | 13.5   |
| > 10 "  | 22.6  | 16.2      | 6.2          | 15.0     | 14.5   |

\* Significant at the 1 percent level based on Chi Square test.

\*\* Significant at the 10 percent level based on Chi Square test.

While less than 8 percent of the respondents overall lived within 1 mile of the plant in their community, almost 63 percent lived from 1 to 5 miles from the plant, 14 percent lived 6 to 10 miles away, and 15 percent lived more than 10 miles from the facility. Approximately 82 percent of the respondents had lived in the community when the plant was initially proposed, ranging from 72 percent in Carrington to 88 percent in New Rockford. More than 94 percent of the leaders had lived in the community when the plant was proposed.

The community residents had been involved in a variety of activities related to development of the processing plants (Table 7). Almost 16 percent, overall, had attended a meeting or hearing about the plant, ranging from 10 percent in Jamestown to 22 percent in New Rockford. Nearly 11 percent had contacted company officials, ranging from 4 percent in Jamestown to almost 18 percent in Carrington. Much smaller percentages had contacted government officials regarding the plant (4% overall) or signed petitions concerning the plant (2% overall). Almost 10 percent reported participating in other activities concerning the plant, including open houses and employment informational meetings.

Table 7. Respondents' Involvement in Activities Related to Development of Agricultural Processing Plants, by Community, North Dakota

| Item  | Community         |           |              |          | Total  |
|---|-------------------|-----------|--------------|----------|--------|
|   | Carrington        | Jamestown | New Rockford | Wahpeton |        |
|   | -----percent----- |           |              |          |        |
| Attended meeting or hearing about plant     | 13.7              | 10.3      | 22.3         | 15.8     | 15.8** |
| Contacted a government official about plant | 4.9               | 5.1       | 2.3          | 4.2      | 4.1    |
| Signed a petition concerning plant          | 2.9               | 0.0       | 2.3          | 1.7      | 1.7    |
| Contacted company officials                 | 17.6              | 4.3       | 15.5         | 6.7      | 10.9*  |
| Written a letter to a newspaper about plant | 0                 | 0         | 0            | 0        | 0      |
| Other activities concerning plant           | 12.9              | 5.2       | 15.2         | 5.8      | 9.7**  |

\* Significant at the 1 percent level based on Chi Square test.

\*\* Significant at the 10 percent level based on Chi Square test.

When the community leaders' involvement in plant-related activities is compared with that of the residents (Appendix Table 8), the leaders' levels of involvement are several times greater

than those of the residents. For instance, 72 percent of leaders had attended meetings or hearings about the plant, compared to 16 percent of residents. Similarly, 44 percent of leaders had contacted a government official about the plant, compared to 4 percent of residents.

Residents' opinions about the general effects of agricultural processing plants were quite favorable (Table 8). Overall, 87 percent agreed that agricultural processing plants are economically beneficial to a community, and 82 percent agreed that the presence of an agricultural processing plant encourages other industries to locate nearby. Less than one-third of respondents (31%) agreed that agricultural processing plants cause environmental pollution, and only 16 percent agreed that these plants decrease property values. Finally, 59 percent agreed that agricultural processing plants increase residents' sense of well-being and community pride. When the responses by residents of the different communities are compared, the general pattern is for residents of the two smaller towns (Carrington and New Rockford) to be more favorable in their opinions than those who live in the two larger towns (Jamestown and Wahpeton).

Table 8. Community Residents' Opinions about Effects of Agricultural Processing Plants, by Community, North Dakota

| Item  | Community   |           |              |          | Total |
|---|---|-----------|--------------|----------|-------|
|   | Carrington  | Jamestown | New Rockford | Wahpeton |       |
|   | -----percent who <i>somewhat</i> or <i>strongly agree</i> ----- |           |              |          |       |
| Agricultural processing plants:                             |   |           |              |          |       |
| Are economically beneficial to a community                  | 94.1  | 78.6      | 89.8         | 84.2     | 86.5* |
| Encourage other industries to locate nearby                 | 92.2  | 72.6      | 86.8         | 75.6     | 81.6* |
| Result in decreases in property values                      | 11.8  | 21.4      | 8.5          | 23.7     | 16.3* |
| Cause environmental contamination                           | 20.6  | 30.8      | 20.2         | 51.3     | 30.8* |
| Increase residents' sense of well-being and community pride | 63.7  | 48.7      | 67.4         | 53.8     | 58.5* |

\* Significant at the 1 percent level based on Chi Square test.

When responses of leaders are compared with those of the residents (Appendix Table 9), the leaders' responses were generally somewhat more favorable to the plants.

When community residents were asked about the development of their community's processing plant (Table 9), they were least likely to agree that a majority of the facility's construction workers were area residents and most likely to agree that the economic impacts of the plant were positive. More than three-fourths of the residents somewhat or strongly agreed that the economic impacts had been positive, ranging from 87 percent in Carrington to 63 percent in Wahpeton. Almost 64 percent of residents somewhat or strongly agreed that the social impacts of the plant had been positive, ranging from 73 percent in New Rockford and Carrington to 50 percent in Wahpeton.

Table 9. Community Residents' Opinions about Circumstances of Agricultural Processing Project Development, by Community, North Dakota

| Item  | Community  |           |              |          | Total |
|---|--|-----------|--------------|----------|-------|
|   | Carrington   | Jamestown | New Rockford | Wahpeton |       |
|   | -----percent who <i>somewhat or strongly agree</i> ----- |           |              |          |       |
| Construction workers were area residents  | 19.6   | 27.6      | 37.5         | 4.2      | 22.5* |
| Operating workers were area residents   | 46.1   | 52.2      | 31.5         | 24.2     | 38.0* |
| State government officials provided complete and accurate information about potential local impacts | 37.3   | 30.8      | 27.7         | 29.2     | 30.9* |
| Company officials provided complete and accurate information about potential local impacts          | 44.1   | 35.9      | 34.6         | 21.8     | 33.8* |
| Social impacts of the plant are positive  | 72.6   | 56.4      | 73.1         | 50.0     | 63.9* |
| Economic impacts of the plant are positive  | 87.3   | 65.0      | 86.2         | 63.3     | 75.3* |

\* Significant at the 1 percent level based on Chi Square test.

While only 34 percent of residents agreed that company officials provided complete and accurate information about impacts, it should be noted that 40 percent of respondents neither agreed nor disagreed with the statement and another 3 percent indicated they did not know. Likewise, 46 percent neither agreed nor disagreed that state officials had provided timely and accurate information and 3 percent indicated they did not know. Of those expressing an opinion, the following percentages strongly or somewhat agreed with the statements:

|  |      |
|--|------|
| A majority of construction workers were area residents       | 38 % |
| A majority of operation workers were area residents          | 56 % |
| State officials provided complete and accurate information   | 61 % |
| Company officials provided complete and accurate information | 59 % |
| Social impacts were positive                                 | 86 % |
| Economic impacts were positive                               | 89 % |

When the opinions of leaders were compared with those of community residents (Appendix Table 10), leaders more often agreed that economic and social impacts were positive and that company officials provided complete and accurate information. The leaders were less likely to agree that the majority of construction workers were previous residents of the area. As with the residents, a number of leaders indicated that they neither agreed nor disagreed with some statements. Of those who expressed an opinion, the following percentages somewhat or strongly agreed with the statements:

|  |      |
|--|------|
| A majority of construction workers were area residents       | 19 % |
| A majority of operation workers were area residents          | 57 % |
| State officials provided complete and accurate information   | 50 % |
| Company officials provided complete and accurate information | 62 % |
| Social impacts were positive                                 | 90 % |
| Economic impacts were positive                               | 89 % |

The community residents were asked to rate the effects that development of the agricultural processing plant had on various aspects of their community (Table 10). Almost 85 percent felt the effect on job opportunities has been positive or very positive, ranging from 93 percent of Carrington residents to 73 percent of those in Wahpeton. More than 54 percent felt that plant development had a positive or very positive effect on community residents' incomes, ranging from 62 percent in Carrington to 42 percent in Wahpeton. Other aspects of the community that were seen as being positively affected by 30 percent or more of the residents included schools (35%), quality of life (33%), and local public revenues (31%).

The community aspect rated as most negatively affected was air quality (Table 11). Of the residents overall, 24 percent felt that air quality had been negatively affected, ranging from 3 percent in Carrington to 38 percent in Wahpeton. Streets, roads, and highways were the community aspect considered to be next most negatively affected (21% of residents overall indicated that effects were negative or very negative). Other community aspects that were viewed as being negatively affected by 10 percent or more of respondents were housing costs (20%), local public revenues (15%), and water quality (12%). Of all the community aspects listed, only two (air quality and water quality) were more often rated as being negatively affected than positively affected.



Table 10. Community Residents' Assessment of Positive Effects of Agricultural Processing Plants on Selected Community Attributes, by Community, North Dakota

| Attribute   | Community  |           |              |          | Total  |
|---|--|-----------|--------------|----------|--------|
|   | Carrington   | Jamestown | New Rockford | Wahpeton |        |
|   | -----percent who rated effect as <i>positive</i> or <i>very positive</i> ----- |           |              |          |        |
| Job opportunities                                   | 93.1   | 84.6      | 90.0         | 72.5     | 84.9*  |
| Residents' incomes                                  | 61.8   | 51.3      | 61.2         | 43.7     | 54.4   |
| Schools   | 59.8   | 30.8      | 29.5         | 25.2     | 35.3*  |
| Quality of life                                     | 45.1   | 24.8      | 30.8         | 31.1     | 32.5   |
| Local public revenues                               | 38.2   | 37.6      | 32.6         | 16.7     | 31.0*  |
| Social organizations (churches, civic groups, etc.) | 46.1   | 25.6      | 30.0         | 15.8     | 28.8*  |
| Child care/day care                                 | 40.6   | 34.2      | 22.5         | 17.6     | 28.1*  |
| Housing costs                                       | 27.4   | 29.9      | 28.7         | 20.8     | 26.7*  |
| Family life   | 22.6   | 24.8      | 26.6         | 20.8     | 23.8   |
| Local public expenditures                           | 25.5   | 26.5      | 23.3         | 15.1     | 22.5** |
| Streets, roads, & highways                          | 10.8   | 36.8      | 14.0         | 24.4     | 21.6*  |
| Fire protection                                     | 28.4   | 16.4      | 17.1         | 21.7     | 20.6   |
| Police protection                                   | 24.5   | 12.0      | 11.5         | 17.5     | 16.0   |
| Crime/public safety                                 | 4.9  | 12.0      | 12.5         | 8.3      | 9.6    |
| Air quality   | 3.9  | 4.3       | 9.4          | 9.2      | 6.8*   |
| Water quality                                       | 2.9  | 7.7       | 8.6          | 6.7      | 6.6*   |

\* Significant at the 1 percent level based on Chi Square test.

\*\* Significant at the 10 percent level based on Chi Square test.

Table 11. Community Residents' Assessment of Negative Effects of Agricultural Processing Plants on Selected Community Attributes, by Community, North Dakota

| Attribute   | Community  |           |              |          | Total |
|---|--|-----------|--------------|----------|-------|
|   | Carrington   | Jamestown | New Rockford | Wahpeton |       |
|   | -----percent who rated effect as <i>negative</i> or <i>very negative</i> ----- |           |              |          |       |
| Air quality   | 2.9  | 35.0      | 18.0         | 37.5     | 24.0* |
| Streets, roads, & highways                          | 23.5   | 16.2      | 9.3          | 35.3     | 20.8* |
| Housing costs                                       | 33.3   | 18.0      | 3.9          | 29.2     | 20.3* |
| Local public revenues                               | 8.8  | 15.4      | 8.5          | 25.0     | 14.5* |
| Water quality                                       | 3.9  | 18.8      | 3.9          | 21.7     | 12.2* |
| Local public expenditures                           | 5.9  | 12.8      | 4.6          | 15.1     | 9.6** |
| Crime/public safety                                 | 10.8   | 6.0       | 7.0          | 10.8     | 8.6   |
| Child care/day care                                 | 10.9   | 6.8       | 2.3          | 1.7      | 5.2*  |
| Quality of life                                     | 3.9  | 2.6       | 2.3          | 6.7      | 3.8   |
| Schools   | 2.0  | 1.7       | 1.6          | 8.4      | 3.4*  |
| Police protection                                   | 2.9  | 2.6       | 4.6          | 3.3      | 3.4   |
| Family life   | 3.9  | 0.9       | 3.1          | 4.2      | 3.0   |
| Social organizations (churches, civic groups, etc.) | 1.0  | 1.7       | 2.3          | 4.2      | 2.4*  |
| Fire protection                                     | 2.0  | 1.7       | 1.6          | 2.5      | 1.9   |
| Residents' incomes                                  | 2.0  | 1.7       | 0.8          | 3.4      | 1.9   |
| Job opportunities                                   | 1.0  | 2.6       | 0.8          | 1.7      | 1.5*  |

\* Significant at the 1 percent level based on Chi Square test.

\*\* Significant at the 10 percent level based on Chi Square test.

When the ratings of leaders were compared with those of residents, the leaders rated most aspects as positively affected more often than residents (Appendix Table 11). In particular, almost 78 percent of leaders, compared to 31 percent of residents, believed that local public revenues had been positively or very positively affected. Similarly, 81 percent of leaders (54% of residents) felt that residents' incomes had been positively affected, and 61 percent of leaders (35 % of residents) felt that the effects on local schools had been positive or very positive. Concerning negative effects, leaders identified the same community aspects as residents, but in only one area (local public expenditures) were leaders more likely to rate effects as negative, compared to residents.

Most community residents who expressed an opinion felt that the economic benefits of developing the agricultural processing facility in their community exceeded the costs (Table 12). Approximately 47 percent of respondents overall indicated that economic benefits exceeded costs, ranging from 65 percent in Carrington to 33 percent in Wahpeton. Another 40 percent of respondents overall indicated they did not know if benefits exceeded costs; therefore, of those who expressed an opinion, 79 percent believed that economic benefits exceeded costs. Similarly, 34 percent of respondents overall (68% of those expressing an opinion) believed that the social benefits of plant development exceeded the costs, ranging from 44 percent in Carrington to 25 percent in Wahpeton. If an election were held today, almost two-thirds of the residents agreed that most people in their community would vote in favor of the plant, and almost 72 percent would vote in favor themselves. The percentage who would vote in favor themselves ranged from 83 percent in Carrington and New Rockford to 56 percent in Wahpeton. The community leaders' responses to all of these questions were substantially more favorable to the plants than those of the residents (Appendix Table 12).

### **Implications**

Increased processing of agricultural products has become a popular strategy for rural economic development. North Dakota has been actively attempting to promote growth of the agricultural processing sector for more than two decades. The state's efforts have been based on the hope that increased processing of North Dakota's agricultural products would lead to a variety of positive effects for the areas where the processing facilities were located. These local/regional benefits were believed to include improved job opportunities for area residents, improved incomes for farmers and other area residents (e.g., through improved employment opportunities, opportunities to produce higher-value crops, and/or better prices/returns for existing crops), enhanced economic stability for communities that were heavily dependent on agriculture, population stabilized and reduced outmigration, stabilized local services (e.g., schools), and enhanced the local tax base. A goal of this study was to examine several recently developed agricultural processing plants to determine how their actual outcomes compared with initial expectations. In addition, the experiences of North Dakota communities where processing plants have been developed can be compared with other communities experiencing expansion in agricultural processing. Finally, a major aim of the study was to examine the experiences of these North Dakota communities to determine what lessons might be learned and used by other areas contemplating similar developments.

Table 12. Community Residents' Assessment of Costs and Benefits of Agricultural Processing Plants, by Community, North Dakota

| Item  | Community         |           |              |          | Total |
|---|-------------------|-----------|--------------|----------|-------|
|   | Carrington        | Jamestown | New Rockford | Wahpeton |       |
|   | -----percent----- |           |              |          |       |
| Economic benefits to community exceeded costs:*                                     |                   |           |              |          |       |
| Yes   | 64.7              | 40.2      | 52.3         | 33.3     | 47.1  |
| Don't Know  | 31.4              | 45.3      | 40.0         | 42.5     | 40.1  |
| Social benefits to community exceeded costs:**                                      |                   |           |              |          |       |
| Yes   | 44.1              | 29.9      | 37.7         | 25.2     | 34.0  |
| Don't Know  | 48.0              | 51.3      | 46.2         | 53.8     | 49.8  |
| If an election were held, most people would vote in favor of ag. processing plant:* |                   |           |              |          |       |
| Somewhat or strongly agree  | 78.2              | 61.5      | 65.6         | 58.0     | 65.4  |
| If an election were held, I would vote in favor of ag. processing plant:*           |                   |           |              |          |       |
| Somewhat or strongly agree  | 82.6              | 66.7      | 82.7         | 55.6     | 71.8  |

\* Significant at the 1 percent level based on Chi Square test.

\*\* Significant at the 10 percent level based on Chi Square test.

### Outcomes Compared to Expectations

Concerning the actual outcomes and how these compared with expectations, improved job opportunities and enhanced incomes were generally seen as major positive effects from the new processing plants. Further, aside from some management and engineering positions, most of the plant jobs appeared to represent employment opportunities for area workers, rather than being taken primarily by immigrants. Residents' incomes were enhanced both by the plants' jobs and payroll (which often represented second incomes for area households) and by increased incomes for area farmers. Because most of the plant jobs were taken by persons already living in the area, the new plants did not lead to substantial immigration or major population growth in the host communities. Rather, a reoccurring comment by local leaders was that the plant in their community had stabilized the local economy and population.

The plants' effects on the infrastructure and service needs of their host communities varied. For the two smaller communities (New Rockford and Carrington), the processing plants

were the major economic change that had affected the local area, whereas in Jamestown and Wahpeton, the agricultural processing plant was only one of several major employers which had been expanding in recent years. In these towns, it was sometimes difficult to separate the effects of the agricultural processing plant from the effects of growth in manufacturing sector employment generally. In all communities, the additional employment opportunities had resulted in an increased demand for housing, which initially led to increased occupancy of vacant units but also sometimes was perceived to result in a local housing shortage. The type of housing units that were generally believed to be in short supply were affordable housing (i.e., units that plant workers paid \$9-13/hr. can afford).

Day care was a service that was reported to be affected by plant development and/or manufacturing growth in each community. Two issues concerning day care were general affordability and the need for extended hours. The affordability issue relates to the challenge of meeting federal and state requirements while keeping rates at levels affordable to plant workers. The need for extended hours was a special concern with respect to facilities that operate around the clock. Most day care facilities have schedules geared to the standard workday, so workers on other shifts have difficulties arranging for child care. However, two of the communities had attempted to offer day care for shift workers and determined that numbers were insufficient to support the service.

The effects on other services were mixed. Streets and roads were affected to some extent, with three of the four site areas reporting expenditures to improve access roads to the plant. In addition, increased road use by trucks delivering products to the plants and/or by workers during shift changes was reported but was generally not seen as a serious concern. Fire and police protection were not seen as issues in most communities, although the large construction work force associated with the ProGold project led to some short-term policing issues. Schools were generally seen as having few effects as the plants led to little immigration. New school-age children mainly stabilized local enrollments during a period characterized by declining school-age population across the state. Increased needs for special education services were reported by the two larger school districts, but informants were not sure to what extent this should be attributed to a specific project, or to manufacturing growth in general, as compared to general changes in society. On the other hand, demands on social services had generally eased with the advent of plant-related job opportunities. In three of the four study communities, case loads were reported to be down substantially over the past few years, and leaders credited improved job opportunities for the change.

Public expenditures and revenues were topics of interest for both leaders and residents of the affected communities. Each project had involved some commitments of public resources, generally associated with provision of a plant site and some services, and each plant had received an abatement of local property taxes. The cost of providing services became a major issue only in Jamestown, where the cost of an expanded waste water treatment facility was greater than expected and the city and company disagreed about the appropriate sharing of the costs. In Carrington and New Rockford, the resources committed were generally seen as appropriate in view of the plant's contribution to the community. In Wahpeton, the concern seemed to be not so much the costs incurred as the fact that local benefits had been less than anticipated.

The pros and cons of local tax abatements and other incentives were discussed in all the communities. A reoccurring theme was that these decisions should be made based on an understanding of both short- and long-term implications for local government budgets, as well as the broader implications of having the facility in the community. School officials sometimes expressed concern that they should have a voice in tax abatement decisions that will affect their revenue base for years to come. On the other hand, county officials mentioned a need to look beyond the abatement period and appreciate the plant's long-term contribution to the local tax base. However, there was general agreement that local residents should be kept informed regarding the commitments being made to a project and the implications of those commitments.

Of all the effects, only air quality and water quality were more often rated as negative than positive by local residents. Objectionable odors were reported in connection with three of the four plants, although local leaders generally considered these to be minor issues. Water requirements were a pre-development concern with respect to two of the plants, while waste water treatment became a major issue with one. These issues appear to have been resolved, but the inherent nature of some types of agricultural processing suggests that air and water quality are issues that should be considered when such plants are proposed for development.

### **Outcomes Compared to Other Studies**

Recent literature regarding agricultural processing plants in rural areas is dominated by accounts of the effects of a shift of meatpacking plants from urban to rural areas in the Great Plains (Broadway 2000). These studies have emphasized a variety of social problems, including housing shortages, increases in crime, and increased demands for social assistance and special services (Broadway 1994, Doeksen 2000, Stull et al. 1992). Some of these issues are similar to those reported in connection with rapid population growth in rural energy communities in the western states during the 1970s and early 1980s (Leistritz and Murdock 1981, Murdock and Leistritz 1979).

When the impacts associated with recent agricultural processing plant development in North Dakota are compared to those reported in previous studies of meatpacking and energy communities, it is clear that the North Dakota communities did not experience either the levels of immigration or the social problems reported in the other studies. Although the employment requirements of the North Dakota plants were sometimes substantial in relation to the local labor pool (e.g., DG' work force of 275 represents 15 percent of Foster County's pre-project employment), most of the jobs were filled by local workers. Those workers who relocated to the host communities were reported as easily assimilated. While a thorough analysis of the reasons behind the differences in community effects is beyond the scope of this study, these differences appear to be substantial.

### **Lessons Learned**

The community leaders interviewed in the course of this study were specifically asked about their advice for other communities that might face the prospect of a similar project. Their advice fell into four major categories.

**Appropriateness of Project and Compatibility with Community.** Leaders felt that the first consideration must be determining that the project is economically feasible. In that regard, it might be noted that all four of the projects examined in this study had feasibility studies professionally prepared. (In each case the study was funded by APUC and prepared by SJH & Co.) The leaders also emphasized the importance of determining if the project is a “good fit” for the community, as regards infrastructure and labor force. This means that the leaders must have a thorough understanding of local capabilities (e.g., a local labor survey may be helpful to determine if the labor force will be sufficient to meet the firm’s needs). In general, the community should ask how the company fits into the community’s long-term plan.

**Infrastructure Planning and Financing.** The leaders emphasized the importance of evaluating the costs of infrastructure improvements that might be required and, more generally, the short-term and long-term implications of the project and the incentive package that might be proposed. These issues need to be considered on a case-by-case basis. Also, in planning for infrastructure needs, the community should keep in mind that the effect of a project may be to offset decline in other sectors, thus stabilizing the community rather than resulting in substantial growth.

**Anticipating Issues and Needs.** Leaders felt that examining experiences of other communities that had been sites of similar projects might be helpful in identifying issues or needs that are likely to arise. Based on the experiences of the communities in this study, it appears that three issues which can be expected to arise with many agricultural processing projects are affordable housing, day care (especially for shift workers), and environmental (e.g., air and water) quality questions.

**Development Approach and Attitude.** Especially in the smaller towns, the leaders emphasized that attracting or developing a viable industry is a major challenge, and that the alternative is to watch the community decline into oblivion. Their advice was for rural communities to keep trying in their development efforts and to recognize that the number of failures in these endeavors will always exceed the number of successes. They also suggested that communities should take a more regional approach to development, as the benefits of projects like those studied are regional in nature.

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## **Appendix A**

### **Appendix Tables**

Appendix Table 1. Number of Community Resident and Leader Survey Respondents and Response Rate for Resident Survey, by Community

| Community    | Completed<br>Leader<br>Surveys | Completed<br>Resident<br>Surveys | Completion<br>Rate (%) for<br>Resident Surveys |
|--------------|--------------------------------|----------------------------------|--|
| Carrington   | 9                              | 102                              | 85.6   |
| Jamestown    | 9                              | 117                              | 85.0   |
| New Rockford | 9                              | 130                              | 86.3   |
| Wahpeton     | 9                              | 120                              | 83.9   |
| Total        | 36                             | 469                              | 85.1   |

Appendix Table 2. Employment, Population, and Adjusted Taxable Sales for Agricultural Processing Site Counties, North Dakota, 1980 and 1990-1998

| Item   | County |        |          |          |
|--|--------|--------|----------|----------|
|  | Eddy   | Foster | Richland | Stutsman |
| Average Annual Employment:                                 |        |        |          |          |
| 1980   | 1,508  | 2,075  | 7,999    | 10,772   |
| 1990   | 1,354  | 1,872  | 8,229    | 10,879   |
| 1991   | 1,270  | 1,829  | 7,904    | 10,623   |
| 1992   | 1,094  | 1,802  | 7,961    | 10,383   |
| 1993   | 1,132  | 1,851  | 7,956    | 10,559   |
| 1994   | 1,245  | 1,978  | 9,010    | 10,948   |
| 1995   | 1,195  | 2,080  | 8,757    | 10,858   |
| 1996   | 1,207  | 2,120  | 8,897    | 11,145   |
| 1997   | 1,241  | 2,127  | 9,501    | 11,686   |
| 1998   | 1,210  | 2,191  | 9,431    | 11,648   |
| Population:  |        |        |          |          |
| 1980   | 3,554  | 4,611  | 19,207   | 24,154   |
| 1990   | 2,951  | 3,983  | 18,148   | 22,241   |
| 1991   | 2,923  | 3,882  | 17,901   | 21,988   |
| 1992   | 2,861  | 3,831  | 17,911   | 21,812   |
| 1993   | 2,841  | 3,861  | 18,299   | 21,765   |
| 1994   | 2,863  | 3,888  | 18,293   | 21,725   |
| 1995   | 2,860  | 3,912  | 18,206   | 21,436   |
| 1996   | 2,871  | 3,843  | 18,248   | 21,195   |
| 1997   | 2,848  | 3,764  | 18,175   | 21,067   |
| 1998   | 2,847  | 3,802  | 18,272   | 20,964   |
| Adjusted Taxable Sales<br>& Purchases (1997 dollars -000): |        |        |          |          |
| 1980   | 21,032 | 41,152 | 106,757  | 184,476  |
| 1990   | 7,565  | 25,723 | 88,195   | 140,693  |
| 1991   | 7,931  | 24,985 | 82,410   | 145,080  |
| 1992   | 6,688  | 27,537 | 83,268   | 148,412  |
| 1993   | 7,809  | 32,637 | 86,233   | 159,342  |
| 1994   | 8,064  | 35,921 | 90,743   | 158,668  |
| 1995   | 7,311  | 31,020 | 93,471   | 153,652  |
| 1996   | 7,918  | 31,972 | 100,366  | 155,257  |
| 1997   | 7,532  | 30,363 | 101,412  | 162,720  |
| 1998   | 7,103  | 29,853 | 95,439   | 163,798  |

Appendix Table 3. Population and Adjusted Taxable Sales for Agricultural Processing Site Communities, North Dakota, 1980 and 1990-1998

| Item   | City       |           |              |          |
|--|------------|-----------|--------------|----------|
|  | Carrington | Jamestown | New Rockford | Wahpeton |
| Population:  |            |           |              |          |
| 1980   | 2,641      | 16,280    | 1,791        | 9,064    |
| 1990   | 2,267      | 15,571    | 1,604        | 8,751    |
| 1991   | 2,202      | 15,431    | 1,582        | 8,608    |
| 1992   | 2,166      | 15,315    | 1,545        | 8,659    |
| 1993   | 2,178      | 15,285    | 1,528        | 8,984    |
| 1994   | 2,188      | 15,245    | 1,533        | 8,969    |
| 1995   | 2,197      | 15,027    | 1,523        | 9,028    |
| 1996   | 2,163      | 14,983    | 1,525        | 9,039    |
| 1997   | 2,097      | 14,791    | 1,504        | 9,096    |
| 1998   | 2,111      | 14,713    | 1,497        | 9,322    |
| Adjusted Taxable Sales & Purchases (1997 dollars - 000): |            |           |              |          |
| 1980   | 39,751     | 174,720   | 17,217       | 72,789   |
| 1990   | 25,106     | 134,997   | 6,237        | 67,967   |
| 1991   | 24,505     | 139,596   | 6,278        | 63,201   |
| 1992   | 26,793     | 143,167   | 5,150        | 66,008   |
| 1993   | 31,717     | 153,616   | 5,661        | 69,148   |
| 1994   | 34,880     | 154,532   | 6,001        | 72,008   |
| 1995   | 30,139     | 149,840   | 5,859        | 74,695   |
| 1996   | 31,075     | 150,950   | 6,270        | 79,732   |
| 1997   | 29,447     | 157,691   | 6,441        | 80,778   |
| 1998   | 29,121     | 159,114   | 6,092        | 76,408   |

Appendix Table 4. Public School Enrollment in Agricultural Processing Site Communities, North Dakota, Grades K-12 Total, 1989-1999

| School Year Beginning | City       |           |              |          |
|-----------------------|------------|-----------|--------------|----------|
|                       | Carrington | Jamestown | New Rockford | Wahpeton |
| Enrollment:           |            |           |              |          |
| 1989                  | 638        | 3,087     | 431          | 1,624    |
| 1990                  | 630        | 3,050     | 443          | 1,668    |
| 1991                  | 640        | 3,067     | 423          | 1,696    |
| 1992                  | 666        | 3,044     | 429          | 1,696    |
| 1993                  | 710        | 3,073     | 411          | 1,739    |
| 1994                  | 715        | 2,990     | 413          | 1,753    |
| 1995                  | 702        | 2,908     | 419          | 1,771    |
| 1996                  | 745        | 2,861     | 418          | 1,753    |
| 1997                  | 757        | 2,867     | 424          | 1,693    |
| 1998                  | 763        | 2,797     | 408          | 1,650    |
| 1999                  | 755        | 2,741     | 395          | 1,580    |

Appendix Table 5. Building Permits Issued in Study Communities, 1990-98

| Community/Type                       | Year |      |      |      |      |      |      |      |      |
|--------------------------------------|------|------|------|------|------|------|------|------|------|
|                                      | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
| -----No. of permits -----            |      |      |      |      |      |      |      |      |      |
| <b>Carrington</b>                    |      |      |      |      |      |      |      |      |      |
| Residential:                         |      |      |      |      |      |      |      |      |      |
| Single Family homes <sup>1</sup>     | 1    | 0    | 2    | 3    | 6    | 2    | 2    | 4    | 6    |
| Other residential (sheds, garages)   | 9    | 6    | 13   | 14   | 17   | 5    | 16   | 18   | 13   |
| Residential remodel/additions        | 3    | 2    | 1    | 6    | 7    | 2    | 7    | 2    | 2    |
| Commercial/Industrial <sup>2</sup> : |      |      |      |      |      |      |      |      |      |
| New                                  | 2    | 2    | 4    | 5    | 3    | 2    | 8    | 6    | 2    |
| Remodel/additions                    | 1    | 3    | 0    | 5    | 3    | 3    | 3    | 0    | 0    |
| <b>Jamestown</b>                     |      |      |      |      |      |      |      |      |      |
| Residential:                         |      |      |      |      |      |      |      |      |      |
| Single Family homes <sup>1</sup>     | 9    | 14   | 20   | 9    | 27   | 50   | 26   | 20   | 30   |
| Apartments                           | 0    | 2    | 1    | 0    | 1    | 4    | 1    | 2    | 1    |
| Other residential (sheds, garages)   | 28   | 40   | 37   | 37   | 51   | 50   | 58   | 49   | 52   |
| Residential remodel/additions        | 22   | 21   | 29   | 18   | 27   | 27   | 25   | 26   | 49   |
| Commercial/Industrial <sup>2</sup> : |      |      |      |      |      |      |      |      |      |
| New                                  | 8    | 11   | 7    | 15   | 13   | 16   | 20   | 19   | 18   |
| Remodel/additions                    | 36   | 20   | 16   | 19   | 30   | 12   | 21   | 23   | 21   |
| Other building                       | 30   | 33   | 26   | 35   | 30   | 14   | 31   | 42   | 20   |

----- continued -----

<sup>1</sup> Includes duplexes.

<sup>2</sup>Includes church and government facilities.

Appendix Table 5. Continued

| Community/Type                       | Year                      |      |      |      |      |      |      |      |      |
|--------------------------------------|---------------------------|------|------|------|------|------|------|------|------|
|                                      | 1990                      | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|                                      | -----No. of permits ----- |      |      |      |      |      |      |      |      |
| <b>New Rockford</b>                  |                           |      |      |      |      |      |      |      |      |
| Residential:                         |                           |      |      |      |      |      |      |      |      |
| Single Family homes <sup>1</sup>     | 1                         | 1    | 0    | 0    | 0    | 0    | 0    | 1    | 0    |
| Residential remodel/additions        | 10                        | 6    | 9    | 6    | 13   | a    | a    | a    | a    |
| Commercial/Industrial <sup>2</sup> : |                           |      |      |      |      |      |      |      |      |
| New                                  | 1                         | 3    | 3    | 2    | 2    | a    | a    | a    | a    |
| Remodel/additions                    | 3                         | 1    | 1    | 1    | 0    | a    | a    | a    | a    |
| Other building                       | 0                         | 0    | 0    | 0    | 1    | a    | a    | a    | a    |
| <b>Wahpeton</b>                      |                           |      |      |      |      |      |      |      |      |
| Residential:                         |                           |      |      |      |      |      |      |      |      |
| Single Family homes <sup>1</sup>     | 4                         | 7    | 11   | 16   | 11   | 21   | 14   | 15   | 10   |
| Apartments                           | 0                         | 0    | 1    | 0    | 4    | 3    | 1    | 11   | 0    |
| Residential remodel/additions        | 50                        | 62   | 37   | 56   | 32   | 42   | 47   | 34   | 36   |
| Commercial/Industrial <sup>2</sup> : |                           |      |      |      |      |      |      |      |      |
| New                                  | 3                         | 1    | 5    | 2    | 15   | 14   | 19   | 14   | 11   |
| Remodel/additions                    | 16                        | 20   | 30   | 38   | 33   | 24   | 24   | 20   | 26   |
| Other building                       | 6                         | 17   | 52   | 45   | 60   | 57   | 42   | 81   | 72   |

<sup>1</sup>Includes duplexes.<sup>2</sup>Includes church and government facilities.<sup>a</sup>Information not available.



Appendix Table 6. Selected Demographic Characteristics of Community Resident Survey Respondents and Community Leaders, North Dakota

| Item                            | Community Residents | Community Leaders |
|---------------------------------|---------------------|-------------------|
|                                 | -----percent -----  |                   |
| Age:*                           |                     |                   |
| <30                             | 24.6                | 0                 |
| 30-39                           | 24.1                | 20.0              |
| 40-49                           | 25.4                | 50.0              |
| 50-59                           | 13.2                | 23.3              |
| 60 or over                      | 12.7                | 6.7               |
| Sex:*                           |                     |                   |
| Male                            | 36.1                | 91.7              |
| Race:                           |                     |                   |
| White                           | 97.4                | 100.0             |
| Marital Status:*                |                     |                   |
| Married (or living as married)  | 75.1                | 94.3              |
| Widowed, divorced, or separated | 10.7                | 0                 |
| Never married                   | 14.0                | 5.7               |
| Education:*                     |                     |                   |
| High school or less             | 26.2                | 5.7               |
| Some post-secondary             | 30.9                | 20.0              |
| College graduate                | 37.3                | 48.6              |
| Graduate degree                 | 5.4                 | 25.7              |

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\* Significant at the 1 percent level based on Chi Square test.

Appendix Table 7. Community Residents' and Community Leaders' Satisfaction with Selected Community Attributes, North Dakota

| Attribute                                      | Community Residents  | Community Leaders |
|--|--|-------------------|
|  | -----percent <i>satisfied</i> or <i>very satisfied</i> ----- |                   |
| Fire protection                                | 84.2   | 97.2*             |
| Public schools                                 | 73.2   | 88.8**            |
| Law enforcement                                | 68.1   | 91.6*             |
| Utilities                                      | 67.4   | 82.8*             |
| Quality of the natural environment             | 66.2   | 86.1*             |
| Medical services                               | 63.8   | 88.9*             |
| Housing  | 61.8   | 69.4              |
| Recreation facilities/<br>opportunities        | 51.8   | 75.0*             |
| Child care/day care                            | 50.5   | 44.1              |
| Opportunity to earn an adequate income         | 39.3   | 61.1**            |
| Streets and roads                              | 34.1   | 50.0**            |
| Employment opportunities to keep youth in area | 16.7   | 13.9              |
|  |  |                   |
| Community as a place to live                   | 79.6   | 94.4              |

\* Significant at the 1 percent level based on T test.

\*\* Significant at the 10 percent level based on T test.

Appendix Table 8. Respondents' Involvement in Activities Related to Development of Agricultural Processing Plants, North Dakota

| Item  | Community Residents | Community Leaders |
|---|---------------------|-------------------|
|   | -----percent -----  |                   |
| Attended meeting or hearing about plant     | 15.8                | 72.2*             |
| Contacted a government official about plant | 4.1                 | 44.4*             |
| Signed a petition concerning plant          | 1.7                 | 8.3               |
| Contacted company officials                 | 10.9                | 58.3*             |
| Written a letter to a newspaper about plant | 0                   | 5.6               |
| Other activities concerning plant           | 9.7                 | 28.6**            |

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\* Significant at the 1 percent level based on T test.

\*\* Significant at the 10 percent level based on T test.

Appendix Table 9. Community Residents' and Leaders' Opinions about Effects of Agricultural Processing Plants, North Dakota

| Item  | Community Residents   | Community Leaders |
|---|---|-------------------|
|   | -----percent who <i>somewhat</i> or <i>strongly agree</i> ----- |                   |
| Agricultural processing plants:                             |   |                   |
| Are economically beneficial to a community                  | 86.5  | 97.2*             |
| Encourage other industries to locate nearby                 | 81.6  | 91.7              |
| Result in decreases in property values                      | 16.3  | 5.6*              |
| Cause environmental contamination                           | 30.8  | 0.0*              |
| Increase residents' sense of well-being and community pride | 58.5  | 66.7**            |

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\* Significant at the 1 percent level based on T test.

\*\* Significant at the 10 percent level based on T test.

Appendix Table 10. Community Residents' and Leaders' Opinions about Circumstances of Agricultural Processing Project Development, North Dakota

| Item  | Community Residents   | Community Leaders |
|---|---|-------------------|
|   | -----percent who <i>somewhat</i> or <i>strongly agree</i> ----- |                   |
| Construction workers were area residents  | 22.5  | 13.9*             |
| Operating workers were area residents   | 38.0  | 44.5              |
| State government officials provided complete and accurate information about potential local impacts | 30.9  | 30.6              |
| Company officials provided complete and accurate information about potential local impacts          | 33.8  | 44.4              |
| Social impacts of the plant are positive  | 63.9  | 77.8*             |
| Economic impacts of the plant are positive  | 75.3  | 88.9*             |

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\* Significant at the 1 percent level based on T test.

Appendix Table 11. Community Residents' and Leaders' Assessment of Positive and Negative Effects of Agricultural Processing Plants on Selected Community Attributes, North Dakota

| Attribute   | Residents   | Leaders | Residents                                       | Leaders |
|---|---|---------|---|---------|
|   | ---% <i>positive</i> or <i>very positive</i> ---- |         | -- % <i>negative</i> or <i>very negative</i> -- |         |
| Job opportunities                                   | 84.9  | 91.6    | 1.5   | 2.8     |
| Residents' incomes                                  | 54.4  | 80.6    | 1.9   | 2.8     |
| Schools   | 35.3  | 61.1    | 3.4   | 2.8     |
| Quality of life                                     | 32.5  | 36.1    | 3.8   | 0.0     |
| Local public revenues                               | 31.0  | 77.8    | 14.5  | 11.1    |
| Social organizations (churches, civic groups, etc.) | 28.8  | 36.1    | 2.4   | 0.0     |
| Child care/day care                                 | 28.1  | 42.8    | 5.2   | 2.9     |
| Housing costs                                       | 26.7  | 50.0    | 20.3  | 19.4    |
| Family life   | 23.8  | 25.0    | 3.0   | 0.0**   |
| Local public expenditures                           | 22.5  | 36.1    | 9.6   | 22.2*   |
| Streets, roads, & highways                          | 21.6  | 41.7    | 20.8  | 13.9    |
| Fire protection                                     | 20.6  | 22.2    | 1.9   | 0.0     |
| Police protection                                   | 16.0  | 22.2    | 3.4   | 0.0     |
| Crime/public safety                                 | 9.6   | 5.6     | 8.6   | 8.3**   |
| Air quality   | 6.8   | 8.3     | 24.0  | 19.5    |
| Water quality                                       | 6.6   | 8.3     | 12.2  | 0.0     |

\* Significant at the 1 percent level based on T test.

\*\* Significant at the 10 percent level based on T test.

Appendix Table 12. Community Residents' and Leaders' Assessment of Costs and Benefits of Agricultural Processing Plants, North Dakota

| Item   | Residents         | Leaders |
|--|-------------------|---------|
|  | -----percent----- |         |
| Economic benefits to community exceeded costs:*                                    |                   |         |
| Yes  | 47.1              | 83.3    |
| Don't Know   | 40.1              | 8.3     |
| Social benefits to community exceeded costs:*                                      |                   |         |
| Yes  | 34.0              | 75.0    |
| Don't Know   | 49.8              | 16.7    |
| If an election were held, most people would vote in favor of ag. processing plant: |                   |         |
| Somewhat or strongly agree   | 65.4              | 77.8    |
| If an election were held, I would vote in favor of ag. processing plant:**         |                   |         |
| Somewhat or strongly agree   | 71.8              | 91.4    |

\* Significant at the 1 percent level based on Chi Square test.

\*\* Significant at the 10 percent level based on Chi Square test.

## **Appendix B**

### **Questionnaire**



## COMMUNITY

*This group of questions deal with your community ties and how you feel about your community.*

1. Please indicate how satisfied you are with the following factors in this community.

|  | Completely<br>dissatisfied | Somewhat<br>dissatisfied | Neither<br>satisfied nor<br>dissatisfied | Somewhat<br>satisfied | Completely<br>satisfied |
|--|----------------------------|--------------------------|--|-----------------------|-------------------------|
| a. Public schools  | ①                          | ②                        | ③  | ④                     | ⑤                       |
| b. Housing   | ①                          | ②                        | ③  | ④                     | ⑤                       |
| c. Medical services                                      | ①                          | ②                        | ③  | ④                     | ⑤                       |
| d. Childcare/daycare                                     | ①                          | ②                        | ③  | ④                     | ⑤                       |
| e. Fire protection                                       | ①                          | ②                        | ③  | ④                     | ⑤                       |
| f. Law enforcement                                       | ①                          | ②                        | ③  | ④                     | ⑤                       |
| g. Streets and roads                                     | ①                          | ②                        | ③  | ④                     | ⑤                       |
| h. Utilities   | ①                          | ②                        | ③  | ④                     | ⑤                       |
| i. Recreation<br>facilities/opportunities                | ①                          | ②                        | ③  | ④                     | ⑤                       |
| j. Opportunity to earn an adequate<br>income             | ①                          | ②                        | ③  | ④                     | ⑤                       |
| k. Employment opportunities to<br>keep youth in the area | ①                          | ②                        | ③  | ④                     | ⑤                       |
| l. Quality of the natural<br>environment                 | ①                          | ②                        | ③  | ④                     | ⑤                       |

2. Using the scale below, please mark the response that best indicates how satisfied you are with this community as a place to live.

|                            |                          |                                       |                       |                         |
|----------------------------|--------------------------|---------------------------------------|-----------------------|-------------------------|
| ①                          | ②                        | ③                                     | ④                     | ⑤                       |
| Completely<br>dissatisfied | Somewhat<br>dissatisfied | Neither dissatisfied<br>nor satisfied | Somewhat<br>satisfied | Completely<br>satisfied |

3. On average, about how many hours do you ordinarily spend in a normal month attending or taking part in any kind of organized or planned group activity or event (not associated with your work or job) that involves other members of this community?

- ① More than 10 hours per month
- ② 5-10 hours per month
- ③ 1-4 hours per month
- ④ Less than one hour per month

4. Using the scale below, how would you describe your feelings toward your neighbors? Would you say you are:

---

|            |                |         |                  |              |
|------------|----------------|---------|------------------|--------------|
| ①          | ②              | ③       | ④                | ⑤            |
| Very close | Somewhat close | Neutral | Somewhat distant | Very distant |

---

5. Do you have any plans to move away from this community in the next five years?

- ① Definitely will not move
- ② Probably will not move
- ③ Probably will move
- ④ Definitely will move

Why? \_\_\_\_\_

### AGRICULTURAL PROCESSING PLANTS

*The next set of questions asks what you think and how you feel about certain aspects of the agricultural processing industry.*

6. Please indicate whether you disagree or agree with the following statements.

|  | Disagree<br>strongly | Disagree<br>somewhat | Neither<br>agree nor<br>disagree | Agree<br>somewhat | Agree<br>strongly |
|--|----------------------|----------------------|----------------------------------|-------------------|-------------------|
| a. An agricultural processing plant is economically beneficial to a community                                      | ①                    | ②                    | ③                                | ④                 | ⑤                 |
| b. The presence of an agricultural processing plant encourages other industries to locate in the surrounding area  | ①                    | ②                    | ③                                | ④                 | ⑤                 |
| c. An agricultural processing plant results in a decrease in property values in the surrounding area               | ①                    | ②                    | ③                                | ④                 | ⑤                 |
| d. Environmental contamination is likely to occur as a result of an agricultural processing plant being in an area | ①                    | ②                    | ③                                | ④                 | ⑤                 |
| e. An agricultural processing plant increases the area residents' sense of well-being and community pride          | ①                    | ②                    | ③                                | ④                 | ⑤                 |

### DAKOTA GROWERS PASTA PLANT

7. Please read the following statements about the Dakota Growers Pasta plant, and mark "Yes" if the statement is true and "No" if the statement is false.

- |   |       |      |
|---|-------|------|
| a. I know where the Dakota Growers Pasta plant is located   | ① Yes | ② No |
| b. I have visited the Dakota Growers Pasta plant  | ① Yes | ② No |
| c. I work for the Dakota Growers Pasta plant  | ① Yes | ② No |
| d. A member of my immediate family (i.e., husband/wife, son/daughter, father/mother, brother/sister) works for the Dakota Growers Pasta plant | ① Yes | ② No |
| e. I lived in this community when the Dakota Growers Pasta plant was first proposed to be located here  | ① Yes | ② No |
| f. I own or work for a company that provides materials, goods, or services to the Dakota Growers Pasta plant                                  | ① Yes | ② No |

8. How close do you live to the Dakota Growers Pasta plant?

- a. less than 1 mile
- b. 1 to 5 miles
- c. 6 to 10 miles
- d. 11 to 20 miles
- e. more than 20 miles
- DK - don't know

9. Please indicate whether you disagree or agree with the following statements.

|  | Disagree<br>strongly | Disagree<br>somewhat | Neither<br>agree nor<br>disagree | Agree<br>somewhat | Agree<br>strongly |
|--|----------------------|----------------------|----------------------------------|-------------------|-------------------|
| a. The majority of the construction workers at the Dakota Growers Pasta plant were residents of this area before the project was begun                                     | ①                    | ②                    | ③                                | ④                 | ⑤                 |
| b. The majority of the employees who operate the Dakota Growers Pasta plant were residents of this area before the project was begun                                       | ①                    | ②                    | ③                                | ④                 | ⑤                 |
| c. State government officials have provided the public with complete and accurate information about the potential local impacts of the Dakota Growers Pasta plant          | ①                    | ②                    | ③                                | ④                 | ⑤                 |
| d. Officials representing the Dakota Growers Pasta plant have provided the public with complete and accurate information about the potential local impacts of the facility | ①                    | ②                    | ③                                | ④                 | ⑤                 |
| e. The social impacts of the Dakota Growers Pasta plant are positive   | ①                    | ②                    | ③                                | ④                 | ⑤                 |
| f. The economic impacts of the Dakota Growers Pasta plant are positive   | ①                    | ②                    | ③                                | ④                 | ⑤                 |

10. Please read the list below and indicate whether you have done any of the following activities.

- |   |       |      |
|---|-------|------|
| a. Attended a public meeting or hearing about the Dakota Growers Pasta plant            | ① Yes | ② No |
| b. Contacted a government official about the Dakota Growers Pasta plant                 | ① Yes | ② No |
| c. Signed a petition about the Dakota Growers Pasta plant                               | ① Yes | ② No |
| d. Contacted Dakota Growers Pasta plant officials                                       | ① Yes | ② No |
| e. Written a letter to a newspaper about the Dakota Growers Pasta plant                 | ① Yes | ② No |
| f. Other activities concerning the Dakota Growers Pasta plant that are not listed above | ① Yes | ② No |
- 

If you answered “Yes” to question 10f. above, please list the activities below.

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11. The following is a list of community factors that can be affected by development and/or economic change. Please indicate what kind of effect you think that the Dakota Pasta Growers plant has had on each aspect of your community.

|  | Very negative effect | Negative effect | Neither positive nor negative | Positive effect | Very positive effect | Don't know |
|--|----------------------|-----------------|-------------------------------|-----------------|----------------------|------------|
| a. Job opportunities   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| b. Residents' incomes  | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| c. Schools   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| d. Childcare/daycare   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| e. Housing costs   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| f. Police protection   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| g. Fire protection   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| h. Streets, roads, and highways  | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| i. Local public revenues (taxes, fees, etc.)                                 | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| j. Local public expenditures (funds, spent in service provision)             | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| k. Crime/public safety   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| l. Family life   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| m. Air quality   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| n. Water quality   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| o. Social organizations, such as churches, civic groups, and business groups | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |
| p. Quality of life   | ①                    | ②               | ③                             | ④               | ⑤                    | DK         |

12. Of all the factors listed in question 11 above, which two or three do you think have been most significantly affected by the Dakota Pasta Growers plant and why do you think this might be so? Please use the space below for your answer.

1 \_\_\_\_\_

\_\_\_\_\_

2

\_\_\_\_\_

3

\_\_\_\_\_

13a. Do you think that the economic benefits to your community of the Dakota Pasta Growers plant have been greater than the economic costs?

① - Yes

② - No

DK - Don't know or have no opinion

13b. Do you think that the social benefits to your community have been greater than the social costs?

① - Yes

② - No

DK - Don't know or have no opinion

14. Looking back on this area's experience with the Dakota Pasta Growers plant, is there anything you think that should be done differently the next time such a company chooses to locate in your community or a similar community?

① - Yes

② - No

DK - Don't know or have no opinion

If you answered Yes, please use the space below to explain why you think this is so.

\_\_\_\_\_

\_\_\_\_\_

15. If an election were held today, most people in my community would vote in favor of having an agricultural processing plant.

Strongly  
disagree

①

②

③

④

Strongly  
agree

⑤

\_\_\_\_\_

7

16. If an election were held today, I would vote in favor of having an agricultural processing plant located in our area.

---

|                   |   |   |   |                |
|-------------------|---|---|---|----------------|
| Strongly disagree |   |   |   | Strongly agree |
| ①                 | ② | ③ | ④ | ⑤              |

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### BACKGROUND

*We would like to ask some questions about you and other members of your household. Please remember, all your answers are confidential and the information you provide will not be identified with you in any manner. Information about your background will be used in a statistical analysis that compares the answers of many different kinds of people.*

17. How old were you on your last birthday? \_\_\_\_\_ years

18. What is your sex?      ① - Male      ② - Female

19. Please indicate if you are

① - White

③ - Native American, Alaskan Native, or Aleut

② - Black

④ - Asian or Pacific Islander

⑤ - Other: \_\_\_\_\_

(please describe)

20. Are you of Spanish or Hispanic origin?

① - Yes

② - No

21. Including yourself, how many people live in this household? \_\_\_\_\_

22. How many in your household are less than 18 years of age? \_\_\_\_\_

23. How many in your household are 65 years of age or older? \_\_\_\_\_

24. What is your current marital status?

① - Married

④ - Divorced

② - Living as married

⑤ - Separated

③ - Widowed

⑥ - Never married

25. Please indicate the highest level of school that you have completed.

① - 8<sup>th</sup> grade or less

④ - Some college but no degree

② - 9<sup>th</sup> through 11<sup>th</sup> grade

⑤ - College degree

③ - High school graduate

⑥ - Graduate degree

8 or GED

26. Are you the primary wage earner in your household?



① - Yes

② - No

27. Please mark your current employment status

- ① Unemployed \_\_\_\_\_ (please go to **question 28**)
- ② Retired \_\_\_\_\_ (please go to **question 28**)
- ③ Employed by someone else \_\_\_\_\_
- ④ Self-employed \_\_\_\_\_

|  |
|--|
| <p>27a. What is your occupation? (Examples: Manager, Health Technician, Secretary, Waiter, Teacher, Laborer, Heavy Equipment Operator, Police Officer, Engineer, Carpenter, Farmer, Rancher, Salesperson)</p> <p>_____</p> <p>(Please write your occupation in the space above.)</p> <p>27b. Which of the following best describes the industry you work in; that is, the main kind of activity that is done by the place where you work?</p> <ul style="list-style-type: none"><li>1 - Agriculture, Forestry, or Fishing</li><li>2 - Mining, Oil and Gas Extraction</li><li>3 - Construction</li><li>4 - Manufacturing</li><li>5 - Transportation, Communication, or Public Utilities</li><li>6 - Wholesale Trade</li><li>7 - Retail Trade</li><li>8 - Finance, Banking, Insurance, or Real Estate</li><li>9 - Services (Business, Professional, Household, Personal, Social, Educational, or Health)</li><li>10 - Public Administration or Government (all governmental services including police and fire protection)</li></ul> |
|--|

28. If you are married and living with your spouse (or living as married with someone), please mark your husband's or wife's (or partner's) current employment status.

- ① Unemployed
- ② Retired
- ③ Employed by someone else
- ④ Self-employed

29. How long have you lived in this community?  
\_\_\_\_\_ Years (If less than 1 year, then put "<1".)

30. How long have you lived in your current house?

\_\_\_\_\_ Years (If less than 1 year, then put "<1".)

31. Which of the following describes the house in which you currently live?

- ① - Owned outright (that is, no mortgage payment)
- ② - Buying
- ③ - Renting
- ④ - Occupying at no cost but do not own

32. Do you own or operate a farm or ranch?

- ① - Yes
- ② - No

33. Excluding the house that you now live in and excluding farmland, do you own any other land or real estate in this area?

- ① - Yes
- ② - No

34. Please mark the number below that is closest to your household's 1998 personal income. (Include income from all sources before any deductions or taxes. This includes income from wages, salaries, self-employment, interest, rents, royalties, Social Security, other retirement income, child support, disability income, public assistance payments, and welfare income.)

- ① - Under \$15,000
- ② - \$15,000 to \$24,999
- ③ - \$25,000 to \$34,999
- ④ - \$35,000 to \$49,999
- ⑤ - \$50,000 to \$59,000
- ⑥ - \$60,000 to \$69,999
- ⑦ - \$70,000 to \$79,999
- ⑧ - \$80,000 or more

*Thank you for your cooperation!*