

***THE NORTH DAKOTA ELEVATOR INDUSTRY &
RAIL CARRIERS' CUSTOMER SERVICE***

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INTRODUCTION

Promoting a strong agricultural sector is important to North Dakota's economy. Although demand by local processors has increased with the expansion of value-added processing, a majority of the grain and oilseed production is still exported from the state. Over the past decade trucks and railroads have been utilized to ship over 527 million bushels of grain and oilseeds annually from North Dakota elevators to domestic processors and export positions (Table 1). About 26 percent of these shipments were loaded onto trucks for shipment while the larger share was marketed via rail.

**Table 1. North Dakota Grain & Oilseed Shipments,
1983-84 to 1993-94**

Year	Rail Share	Truck Share	Total Shipments (000 Bu)
1983-84	73%	27%	538,818
1984-85	73%	27%	511,855
1985-86	74%	26%	478,390
1986-87	79%	21%	571,319
1987-88	75%	25%	517,838
1988-89	73%	27%	372,376
1989-90	73%	27%	478,421
1990-91	74%	26%	506,220
1991-92	73%	27%	612,376
1992-93	74%	26%	704,083
1993-94	76%	24%	515,357
Average	74%	26%	527,914

Rail remains the dominant mode for grain shipments originating from the state. Although trucks effectively compete for short-haul, smaller shipments, railroads can generally haul large quantities of bulk agricultural commodities more efficiently over longer distances because economies of scale allow railroads to lower per-bushel fixed costs. The comparison of dry van,

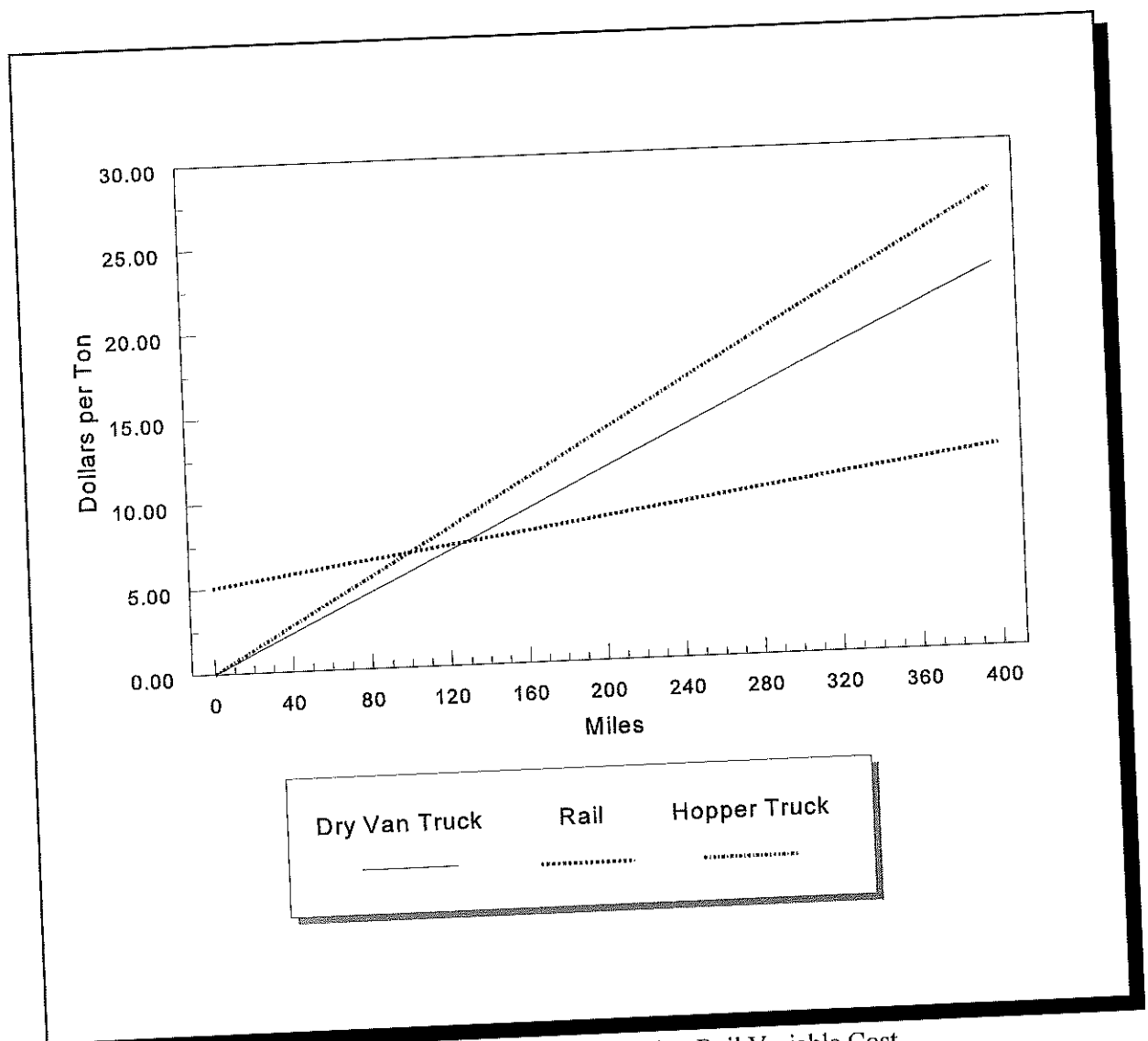


Figure 1. Dry Van and Hopper Truck Costs Compared to Rail Variable Cost

hopper truck¹ and single car rail costs for shipping grain illustrates that trucks have lower costs than rail shipments for up to about 100 to 130 miles (Figure 1). Although trucks consistently serve about a quarter of the outbound grain market, it is evident that railroads have been and will continue to be a vital link in the farm-to-market chain.

Encouraging competition within the transportation sector is important because rates and service influence the competitiveness of products, and thus the profitability of the state's agricultural sector. Specific market forces that affect rates offered by trucks and railroads include intramodal, intermodal, geographic and production competition (Figure 2).

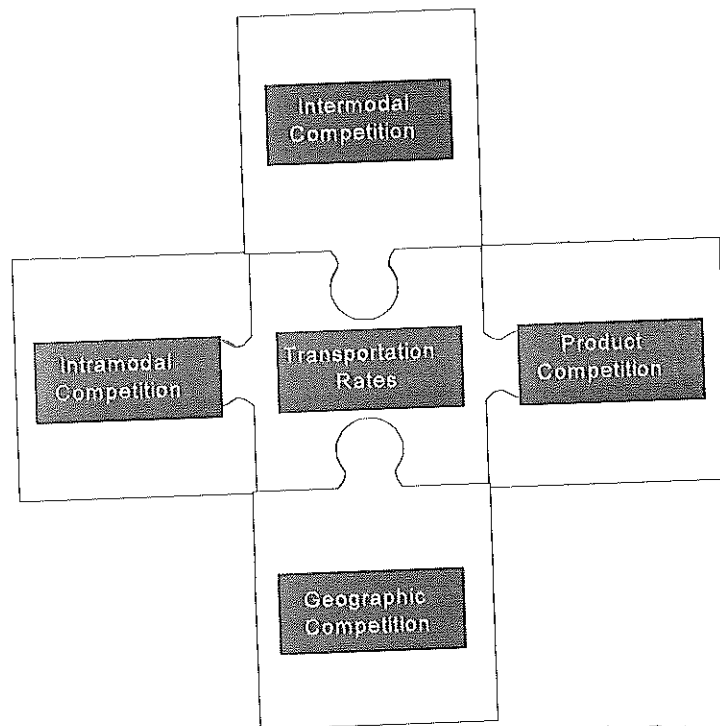


Figure 2. Market Forces Influence Transportation Rates

¹ The truck costs are based the average backhaul activities for the alternative truck types: 85% loaded miles for dry van trucks and 60% loaded miles for hopper trucks (Faucette).

Intramodal competition refers to competition within a modal sector. For example, in a region with excess truck capacity rates would likely be low relative to an area with limited access to truck capacity. Intermodal refers to competition between modes. Intermodal competition for rail may be realized from trucks for short-haul shipments and from truck-barge combinations for long-haul shipments. Little opportunity exists for intermodal forces to influence North Dakota rail grain transportation rates because of the long distances to most major domestic demand centers, export ports and barge facilities.

The Interstate Commerce Commission defines geographic and product competition as follows: "Geographic competition is a restraint on rail pricing stemming from a shipper's or receiver's ability to get the product to which the rate applies from another source, or ship it to another destination. Product competition occurs when a receiver or shipper can use a substitute for the product covered by the rail rate."² The influences of geographic and product competition on N.D. rail rates are restricted because North Dakota is a primary supplier in the United States for many of the commodities it produces, but the influences of these forms of competition may become more prevalent in a North American grain system and a globalized world market place. The information contained in this report concentrates on intramodal rail competition, addressing the customer service concerns of N.D. elevators regarding rail carriers that serve them.

The purpose of this study is to encourage competition among rail carriers by facilitating communication between N.D. elevators and their rail carriers regarding customer service issues. By conveying marketing and customer service information for the four railroads, the competition for business originating from N.D. elevators may be enhanced. Although railroads generally track

²Ex Parte No. 320.

performance and conduct customer service surveys in-house, this project uses summaries of actual shipment levels, elevator characteristics, and survey results for making comparisons among rail carriers serving elevators in North Dakota.

Primary Objective: Encourage a competitive rail rate structure and service agenda by providing performance benchmarks and customer service comparisons for rail carriers serving N.D. elevators.

Secondary Objectives:

1. Describe current characteristics and capabilities of the N.D. elevator industry,
2. Compile marketing information for elevators that are served by the four railroads, using the North Dakota Public Service Commission grain movement database,
3. Summarize survey data to evaluate how railroad customer service activities are perceived by N.D. elevators, and
4. Discuss the implications of actual marketing activities and customer service perceptions of shippers.

Two primary sources of data for this study are (1) the North Dakota Public Service Commission grain movement database and (2) a 1995 survey of N.D. elevator managers. The grain movement database consists of a collection of monthly reports from each of the elevators in North Dakota. In these reports elevators specify mode, destination and volume for shipments of grains and oilseeds they originate. These data provide unbiased information about the activities of elevators across the state including truck/rail decisions and actual marketing volumes. The grain movement information is supplemental to the data collected in the survey.

The survey, titled *N.D. Elevator Evaluation of Railroad & Truck Service*, was mailed to 425 elevators in the state that shipped grain beyond the N.D. elevator system during the 1993-94 crop

year (Appendix A). The survey was returned by 123 elevators, with 120 usable replies generating a response rate of 28 percent. The distribution of the survey responses provides a cross-sectional representation of the shipper population characterized by alternative transportation options, storage capacities, and shipment levels.

The elevator survey was developed with the cooperation of several elevator managers and the North Dakota Grain Dealers Association. The objective of the survey was twofold. The first objective was to obtain general information about marketing activities that are valuable to elevator managers and to researchers in discussing future projects. The second objective was to gather information about the service elevators that was received from carriers.

This report is comprised of four sections. Section two provides a description of the N.D. country elevator network and the rail system. Survey results and corresponding grain movement information are discussed within the context of customer service in section three. A respondent customer profile is developed for the discussion, based on the marketing activities and characteristics of elevators that returned the survey. The project conclusions are summarized in the final section.

Project Framework

Rail carriers serving North Dakota elevators compete on two identifiable bases: rates and service. Although rate competition is often the focal point of rail studies, customer service is receiving much attention as a means for maintaining and gaining market share. Customer service has been described as 'a process for providing significant value-added benefits to the supply chain in a cost-effective way' (LaLonde, Cooper and Nordeweier, 1988). The value attached to customer service activities is dependent on the expectation of customers. Thus, it is imperative that suppliers base customer service strategies on customer expectations and values.

Customer Service

Customer service is a unique aspect of business. Although imperfect flows of information provide opportunities for short-run competitive advantages, customer service may be an integral part of a company's long-term mission and organizational and operational strategies. Because the perceptions of customers determine the success of a company's customer service strategy, understanding the basic requirements and preferences of customers is vital. Superior customer service is realized when the customer service provided exceeds the customer expectations. Consider that an identical product provided by two firms may be differentiated solely by the customer service activities of each firm. Value may be created in many facets of the transportation process, including timely delivery, notice of delays, basic information transfers, etc. Value created through customer service activities may enhance the competitiveness of a firm.

The characteristics of the elevator system form the *customer profile* for this discussion of the customer service provided by N.D. rail carriers. These characteristics are used as a base for segmenting the elevator population for marketing and customer service discussions. Developing service comparison summaries for groups within the elevator population may prove more valuable in

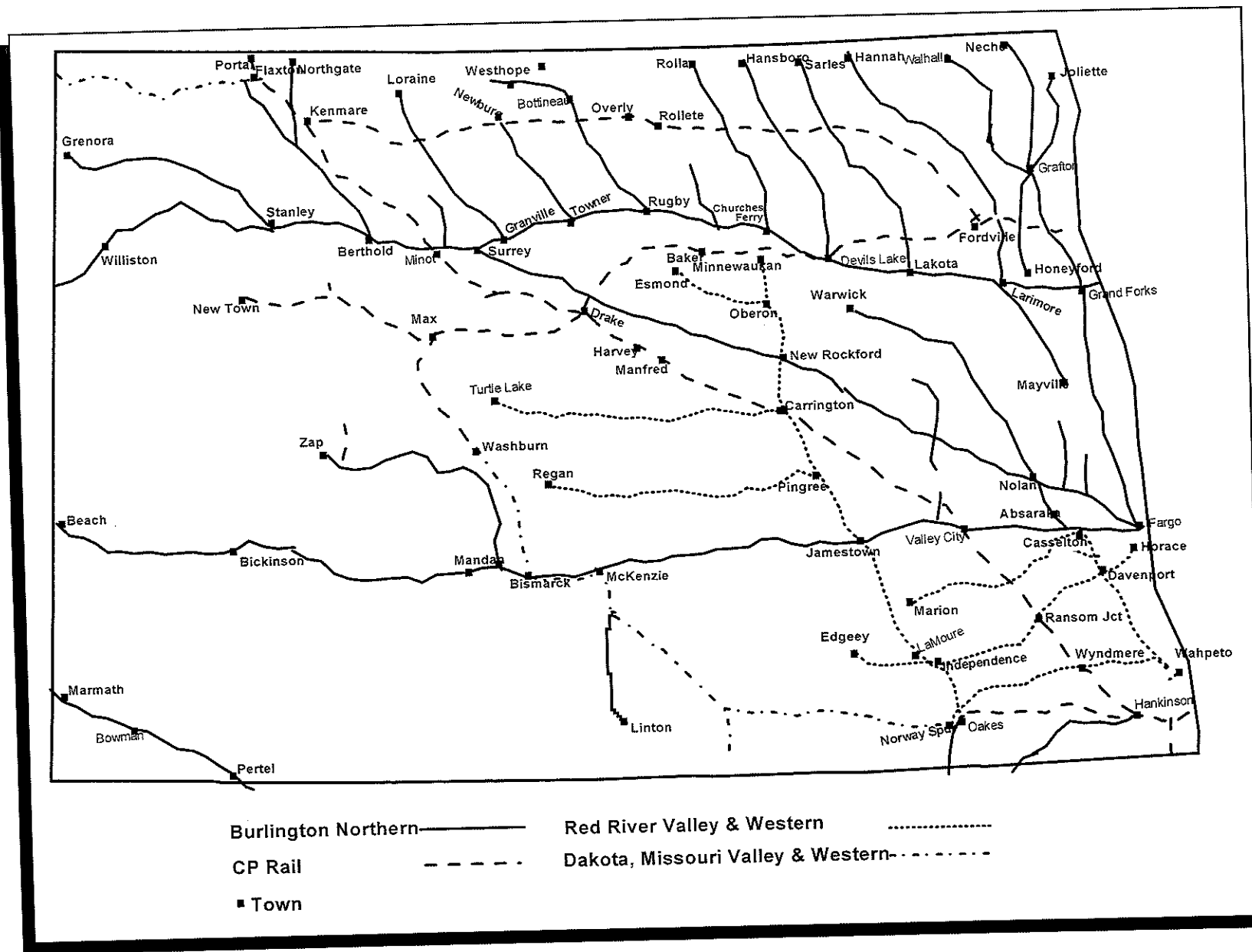
understanding the decisions, preferences and trends in the grain shipper-carrier relationship than making deductions based on the responses and activities of the entire population. For instance, a unit train loader and a single car loader may compete for the same bushel of grain, but their decision-making criteria and marketing alternatives differ. Likewise, it is important to distinguish the quality of service provided by Burlington Northern, Canadian Pacific, Red River Valley & Western and Dakota Missouri Valley & Western railroads. The success or failure of an elevator cannot be directly attributed to transportation decisions/opportunities, but it is evident that successful management of transportation provides an opportunity for elevators to gain some degree of competitiveness individually and for the region as a whole.

N.D. Rail Carriers

The North Dakota rail system is operated by two Class I and two regional railroads (Figure 3). The Burlington Northern (BN) operates a majority of the system with about 2,300 miles of track, serving 225 elevators across the state. Canadian Pacific Rail System (CP) controls over 900 miles of track, reaching just under 100 elevators in the northern, central and eastern regions of the state. BN is the largest single carrier of North Dakota grains and oilseeds, with market share averaging 38 percent over the past four years.

The Red River Valley & Western (RRVW), a regional railroad affiliated with BN, acquired about 650 miles track in the central and southeastern regions of North Dakota in the mid-1980s and is the primary rail carrier for 55 elevators. A second regional railroad, the Dakota, Missouri Valley & Western (DMVW), that is affiliated with CP, was formed in the early 1990s. The RRVW and DMVW handled 10 percent and 5 percent, respectively, of North Dakota grain and oilseed shipments between 1990-91 and 1993-94.

Figure 3. North Dakota Rail System



N.D. Elevator Industry Profile

Of the 484 sites licensed in 1993-94, 425 of elevators submitted North Dakota Public Service Commission grain movement reports totaling shipments of over 500 million bushels of grain to destinations beyond the N.D. elevator system during the 1993-94 crop year³. Structural and marketing characteristics associated with these elevators such as track space for rail cars, grain volume handled, modal shipment and turnover ratios establish a customer profile describing the North Dakota country elevator population.

Because the nature of the grain industry favors large shipment originators, an important distinction to be made among elevators is their access to rail service. About 10 percent of the elevators in North Dakota are limited to truck shipments because they are located where rail lines have been abandoned. Among the elevators with access to rail, track space for cars ranges from three to a hundred cars. To maintain consistency with the grain movement information and rail tariff quotes four segments of the elevator population, based on track space, are defined for this report:

<i>No Rail:</i>	No Access to Rail Service
<i>Single Car:</i>	Track Space for 1 to 24 Cars
<i>Multicar:</i>	Track Space for 25 to 49 Cars, and
<i>Unit Train:</i>	Track Space for 50 Cars or More.

³The difference between the 484 licensed sites and the 425 elevators that submitted reports to the North Dakota Public Service Commission are facilities such as processors, merged sites permitted to combine reporting information, and sites that did not ship grain or oilseeds beyond the N.D. elevator system.

A concentration of elevators exists in the single car group, as these 211 elevators account for nearly half of the elevator population in North Dakota. This group of elevators originated 72,775 thousand bushels of grain and oilseeds in 1993-94 (Table 4). Multicar loaders accounted for 20 percent of the elevator population and 22 percent of the shipments. The number of elevators with the ability to load unit trains has increased dramatically over the past decade. In 1984 only 28 elevators were equipped to load unit trains. By 1993-94, 112 elevators, or nearly a quarter of all the elevators in the state could load unit trains. The importance of the unit train sites is evident. Although they comprise only 24 percent of the sites, they accounted for 63 percent of the grain and oilseed handled and housed 45 percent of the licensed storage capacity in 1993-94.

Table 2. North Dakota Elevator System, 1993-94

	Number of Sites	Grain Handled (000 Bushels)	Storage Capacity (000 Bushels)
No Rail	45 10%	7,223 1%	13,259 5%
Single Car	211 46%	72,775 14%	65,496 26%
Multicar	91 20%	113,222 22%	59,963 24%
Unit Train	112 24%	322,133 63%	111,760 45%
Total	459	515,357	250,478

The turnover ratio is an indicator of resource utilization, comparing available storage to total shipments. Fixed costs per unit and bushels handled are inversely related. Fixed costs are tied to an elevator's structure so greater utilization of storage capacity and loadout facilities decrease per

bushel as additional bushels are handled through a facility. Turnover ratio may be influenced by factors such as harvest yields, competitiveness of an elevator's price, management, carrier service, and customer satisfaction.

Table 3. Turnover Ratios for N.D. Elevators Segmented by Track Space, 1993-94

	Shipped to End Users (000 Bushels)	Transshipped* to N.D. Elevators (000 Bushels)	Median Turnover: Ratio of Shipments to Capacity*
No Rail	7,223	6,757	1.43
Single Car	72,775	25,313	1.97
Multicar	113,222	6,336	2.63
Unit Train	322,133	5,153	4.07

*Shipments includes bushels shipped to end users and transshipped to other elevators, as reported to the N.D. PSC.

The median statistic is used to describe turnovers in Table 3. The median turnover ratio is equal to the turnover ratio for the elevator in the middle of an elevator group. For this calculation each of the four elevator groups were sorted by turnover from highest to lowest so the middle, or median, turnover ratio could be identified. Thus, in each elevator group there are an equal number of elevators operating above and below these median turnover ratio levels. These turnover ratio comparisons are important for assessing resource utilization among and within the alternative elevator groups.

These ratios account for all the grain handled by elevators, including grain transshipped to other North Dakota elevators. The bushels shipped between elevators are typically not included in the summation of total grain shipments because they would distort the count of bushels originated in North Dakota by making a double count of these transshipped bushels. The transshipped bushels are

an important source for grain handling, especially for the no rail and single car elevators. About 48 percent of the bushels originated by no rail elevators are transshipped to other N.D. elevators. Transshipment opportunities allow this elevator group to increase its median turnover ratio from 0.35 to 1.43. Turnover ratios of 1.97 and 2.63 for single-car and multi-car elevators, and to a lesser degree the 4.07 for unit train elevators are also enhanced by transshipped bushels. Unit train elevators distinguish themselves in the turnover comparison with a ratio of 4.07, meaning the typical unit train elevator shipped over four times as many bushels of grain as it had available storage capacity in 1993-94. Turnover ratios provide a means for comparing efficiencies of grain handling among facilities.

The rail network and elevator industry information provided in this section establishes a base for discussing the operation of the N.D. country marketing system. Many factors such as elevator size, location, commodities handled, and rail carrier service influence the marketing decision. It is important to understand the structure of the grain marketing system and the marketing opportunities/decisions that elevator managers face in interpreting the grain movement and survey information.

SURVEY RESULTS

The summaries compiled for this report combine North Dakota Public Service Commission grain movement data and survey responses. A customer profile characterizes the capabilities and marketing activities of the 120 elevators that responded to the survey. The customer profile establishes a base for segmenting the shipper population to discuss additional shipper characteristics and the ratings given to rail carriers. The description of the response group, marketing activities, and rail carrier service ratings provide a foundation for discussing trends in the grain marketing industry and projecting future needs of North Dakota elevators.

Customer Profile

The 120 elevators that responded to the survey shipped over 212 million bushels of grains and oilseeds, accounting for over 40 percent of the total bushels originated by North Dakota elevators. The response group included 15 elevators with no access to rail, 44 with track space to load one to 24 cars, 29 with track for 25 to 49 cars, and 32 with track space to load unit trains. About 65 percent of the shipments originated by survey respondents were handled by the 32 unit train shippers (Table 4). The distribution of responses for the survey provided good representation of each segment of the elevator population when grouped by track space (Table 5).

Table 4. Survey Respondents' Track Space, Shipments and Storage Capacities

	Number of Sites	Grain Handled (000 Bushels)	Storage Capacity (000 Bushels)
No Rail	15 13%	1,894 1%	3,741 4%
Single Car	44 37%	29,285 14%	17,102 20%
Multicar	29 24%	42,648 20%	23,778 28%
Unit Train	32 27%	139,005 65%	39,649 47%
Total	120	212,823	84,270

The single car representation in the survey response group is lower than the share of the population. The 9 percent deficiency in the single car response, when compared to the distribution of the population among track space groups, is shared equally among the other response groups, as they

each account for 3 percent more of the sites in the survey group than in the actual population. The response distribution is adequate for compiling summaries of marketing and customer service information based on track space.

Table 5. Distribution of Elevators Based on Track Space, Population and Survey Respondents

	Elevator Population	Survey Response
No Rail	10%	13%
Single Car	46%	37%
Multicar	20%	24%
Unit Train	24%	27%

In addition to survey respondents' marketing and storage selection information, more specific information about elevator infrastructure and marketing activities was gathered through the survey. The initial section of the survey was directed at gathering background information important in segmenting the elevator population, describing characteristics of the elevator industry, directing future research, and identifying trends in the elevator industry.

The average main-house loadout capacity for survey respondents was 403,379 bushels, with average loadout capacities of just under 10,000 bushels per hour for rail and 6,700 bushels per hour for truck (Table 6). Average rail loadouts per hour were 5,472 bushels for single-car shippers, 9,810 bushels for multicar shippers, and 16,927 bushels for unit train elevators. For loading wheat, (assuming 3,300 bushels per car) a single-car elevator averaged a loadout of two cars per hour versus five cars per hour for unit train shippers. For loading truck shipments no rail and single-car elevators

averaged five trucks per hour compared to ten and twelve trucks per hour for multi- and unit train loaders, respectively. The loadout capacities are important in comparing per bushel handling costs among elevators. Handling costs are influenced by fixed cost (e.g. investment in equipment) and variable cost (e.g. labor requirements).

Table 6. Average Main House Storage and Loadout Capacities

	Average Main House Storage Capacity	Average Rail Loadout	Average Truck Loadout
	- Bushels -	- Bushels per Hour -	
No Rail	159,929		4,264
Single Car	222,036	5,472	4,459
Multicar	450,103	9,810	7,892
Unit Train	716,890	16,328	9,640
Average	403,379	9,927	6,694

Grain Marketing and Purchasing Patterns of Survey Respondents

The importance of the railroads in the successful marketing strategies of these elevators is evident. The rail/truck modal ratio was 79/21 for survey respondents, meaning 79 percent was marketed by rail and 21 percent by truck. As a whole, these elevators relied on rail slightly more than the state elevator population. The rail shipments from the respondent elevators were split 28 percent, 21 percent and 30 percent among the 1-24 car, 25-49 car, and 50+ car shipments, respectively. As with the population, the bushels marketed by truck are relatively less important for unit train elevators than for other shippers.

Truck bushels represent only 14 percent of the unit train elevators annual shipments for 1993-94, compared to 42 percent and 28 percent for single- and multicar shippers (Table 7). The

relative importance of truck bushels for each elevator groups supports the premise that bushels marketed by truck become less important when elevators have access to multicar (25-49 cars) and especially unit train (50+ cars) rates.

Table 7. Mode for Shipments, Elevators Segmented by Track Space for 1993-94

Elevator Group	-Mode for Shipments - (000 Bushels)			Truck	All Modes
	1-24 Cars	25-49 Cars	50 Cars+		
No Rail				1,894 100%	1,894
Single Car	17,026 58%			12,259 42%	29,285
Multicar	20,093 42%	8,965 26%	1,670 1%	11,920 31%	42,648
Unit Train	26,702 21%	33,143 28%	59,878 38%	19,282 13%	139,005
Total	63,821 30%	42,108 20%	61,548 29%	45,355 21%	212,832

Diversification and specialization are directives that have been given much attention when elevators have developed the foundation for their strategic planning. While some elevators have chosen to add services and products to enhance competitiveness, other elevators have sought to gain a competitive edge by specializing in grain marketing. A typical elevator generated 68 percent of its gross annual income through grain sales, 8 percent from storage income, and the remainder through other supplies and services. Grain sales were a more important part of gross annual income for multicar and unit train shippers, accounting for 74 percent and 75 percent of the average income for elevators in these groups, compared to 59 percent and 62 percent of no rail and single car shippers' incomes, respectively (Figure 4).

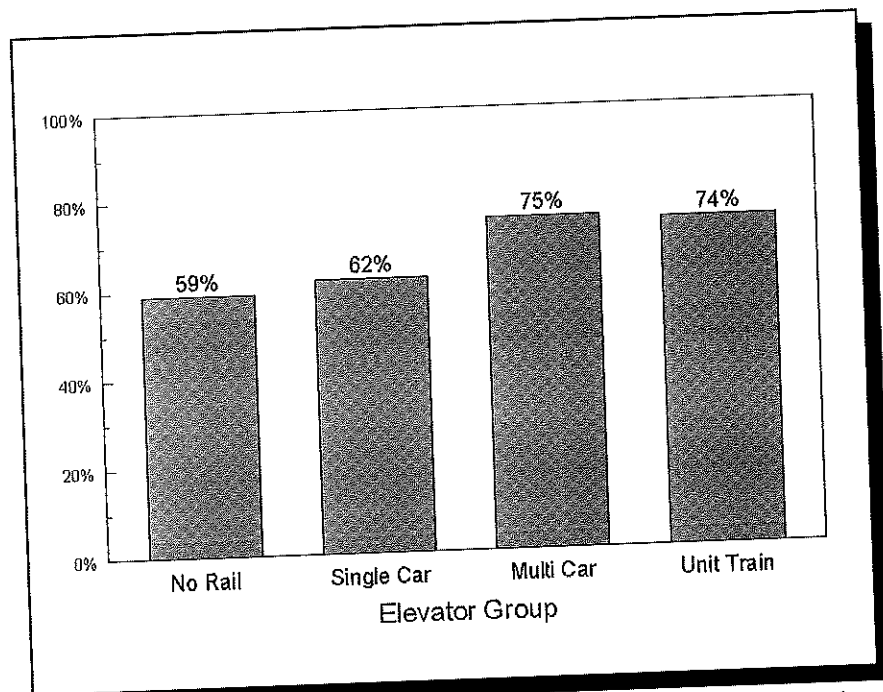


Figure 4. Percent of Gross Annual Income Generated by Grain Sales

Beyond the importance of grain marketing activities the grain purchasing/drawing characteristics of elevators should also be considered in identifying trends and discussing competitiveness. On average, elevators purchased 95 percent of the grain they shipped from farmers and 5 percent from other elevators. Among the elevators, unit train shippers did buy more grain than the average from other elevators. About 12 percent of their annual grain purchases were originated from elevators outside their organization, compared to 4 percent to 2 percent for other elevator groups. The ability of unit train elevators to draw from other elevators may contribute to their ability to specialize in grain marketing and access to unit train rates.

Table 8. Grain Purchased from Farmers and the Distance of Deliveries

	% of Grain Purchased from Farmers	Deliveries Received from:			
		0-9 miles	10-19 miles	20-29 miles	Over 29 miles
No Rail	96%	42%	40%	11%	8%
Single Car	97%	52%	28%	12%	8%
Multi Car	98%	40%	29%	15%	16%
Unit Train	89%	43%	27%	17%	13%
Average	95%	45%	29%	14%	11%

An average, the drawing area for 88 percent of the grain purchased from farmers was defined by a 30-mile radius around the elevator (Table 8). About 45 percent of the grain was received from farmers within 9 miles and 74 percent was included when the distance was increased to 29 miles. A larger share of the grain drawn by elevators with single-car loading capabilities is concentrated in the 10-mile radius compared to the other elevator groups. Single-car elevators drew 52 percent of the producer-delivered grain they handled from within 9 miles while multicar and unit train facilities

reported they drew only 43 percent and 45 percent of their grain purchases from farmers within a 10-mile radius, respectively. Multicar and unit train shippers received 16 percent and 13 percent of the grain they purchased from origins over 29 miles, respectively, compared to 8 percent for no rail and single car shippers.

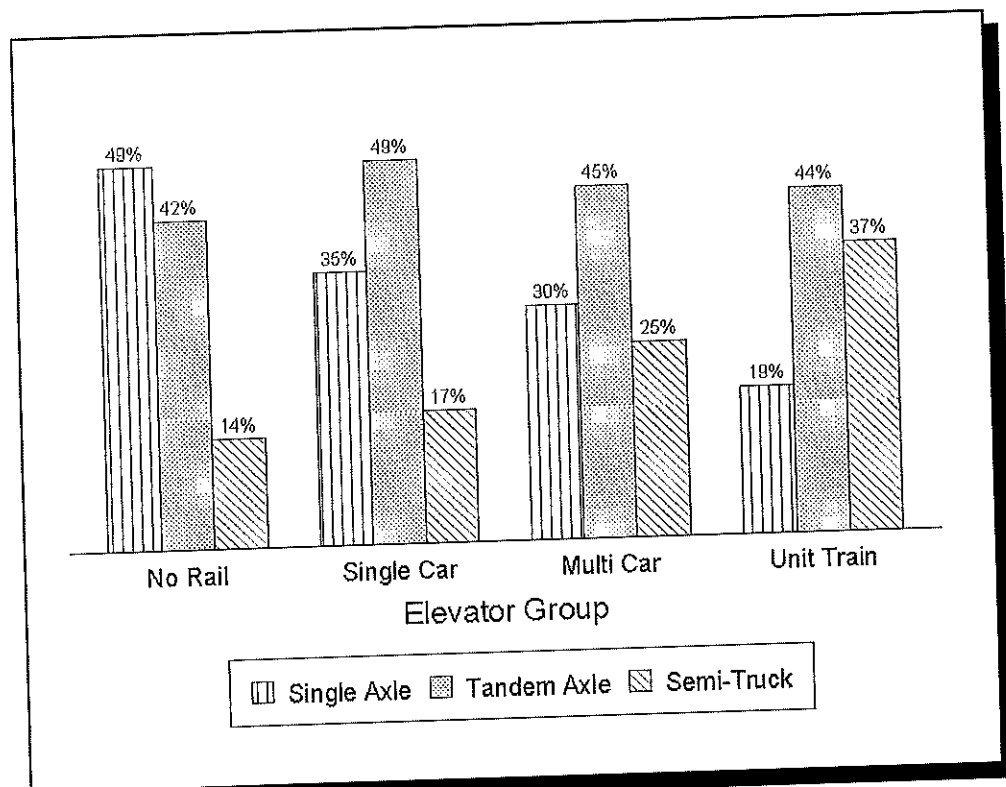


Figure 5. Truck Types Unloaded by Each Elevator Group

Because producer transportation costs play an important role in shaping an elevator's grain drawing area, the size of trucks that frequent an elevator is an important characteristic of producer deliveries. As farm truck capacity and average farm size increase, the area that producers consider in their grain marketing decision expands. On average, about 46 percent of the grain purchased by survey respondents was received on tandem axle trucks. The remaining inbound grain deliveries

were split 31 percent and 24 percent between single-axle and semi-truck loads, respectively (Figure 6).

Although tandem axle truck deliveries are the primary mode for grain purchased from farmers, there is a distinct difference in truck delivery traffic for the four elevator groups. The unit train loaders receive over 37 percent of the grain they purchase via semi-trucks. In contrast, elevators with no rail service unload grain from semi trucks for only 14 percent of the grain they purchase (Figure 6). A trend toward larger producer trucks may have important implications for no-rail elevators that are currently able to be competitive as grain collection sites for larger elevators.

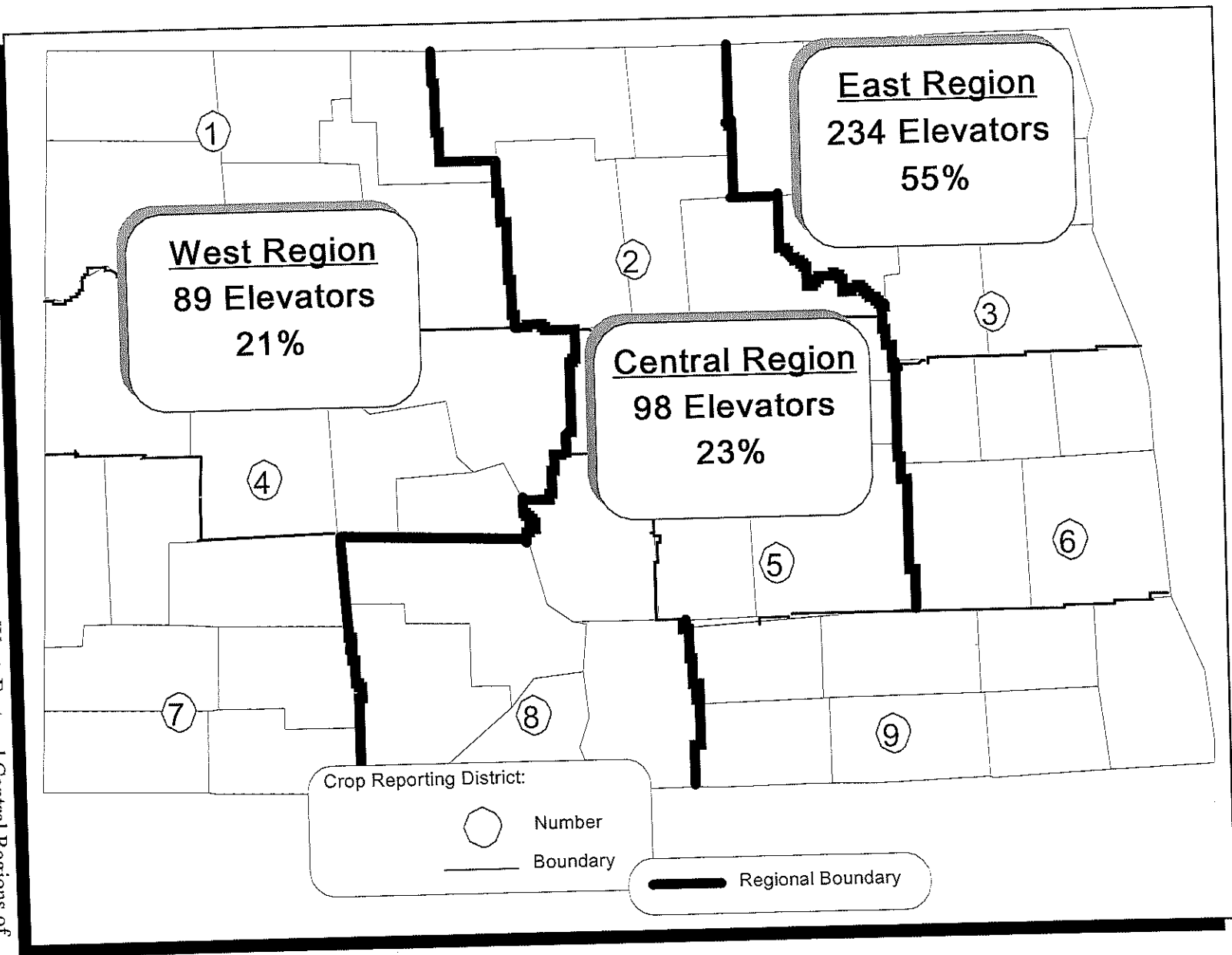
Truck Rates and Ownership

A wide variety of factors may influence an elevator's modal decision. Two important factors are truck rates, relative to rail, and the availability of truck capacity, both for-hire and elevator-owned/leased. Harvest, non-harvest, and backhaul rate information for wheat shipments was gathered for three markets: Minneapolis, Duluth, and the Pacific Northwest (PNW). Because truck rates are not expected to vary by elevator group, rate averages from North Dakota to three major markets are summarized by region rather than by elevator group. A good distribution of survey responses allowed the average rates to be estimated for shipments of wheat from the West, Central and East regions of the state to the three markets (Table 9).

Table 9. Elevator Location by CRD

CRD	Elevator Population	Survey Response
1 - Northwest	10 %	9%
2 - North Central	8%	5%
3 - Northeast	23%	23%
4 - West Central	5%	3%
5 - Central	10%	14%
6 - East Central	17%	16%
7 - Southwest	6%	5%
8 - South Central	5%	6%
9 - Southeast	15%	20%

Figure 6.
Distribution of the Elevator Populations Across West, East and Central Regions of
North Dakota



The distribution of survey responses held closely to actual elevator location at the CRD level, so regional divisions were based on crop reporting district boundaries as illustrated in Figure 6. Crop reporting districts 1, 4 and 7 form the west region, the central region encompasses CRDs 2, 5, and 8 and the east includes CRDs 3, 6 and 9. These regional definitions allow for segmentation of truck rates, as they are positively related to distance.

Truck rates were lower to Minneapolis and Duluth than to Pacific Northwest destinations (PNW) across all regions of the state, as expected. The average rate to Minneapolis during harvest was \$.90 per hundredweight and \$.84 during non harvest, ranging from \$1.12 per hundred weight from the West during harvest to \$.60 per hundredweight as a backhaul rate to the East region (Table 14). Rates to Duluth averages \$1.21 from the West, \$.98 from the Central region and \$.84 from the East during harvest. The PNW is the longest-distance market, so, as expected, it is accessed at the highest rates. The sample size for this market was small, but based on the reported rates little difference existed between West and Central region rates to the PNW, averaging \$1.64 per hundredweight during harvest and \$1.56 per hundredweight during the balance of the year.

Table 10. Truck Rates for Wheat Shipments to Minneapolis, Duluth, and the PNW, 1994

	Minneapolis			Duluth			PNW*		
				- cents per hundredweight -					
	West	Central	East	West	Central	East	West	Central	East
Harvest	112	95	83	121	98	84	167	162	n.a.
Non-Harvest	103	90	77	110	94	78	156	157	n.a.
Backhaul Rate	85	73	60	91	77	58	157	n.a.	n.a.

*small sample size may not provide representative rate levels
n.a. not available

In addition to rates, ease of access to truck service may influence marketing decisions. Direct access is common among North Dakota elevators, as 22 percent of survey respondents owned or leased semi-trucks. About 30 percent of the unit train shippers owned or leased trucks compared to 10 percent of the no-rail shippers. Twenty and 24 percent of single and multi car shippers respectively, reported owning or leasing trucks. Only 11 percent of the elevators that owned/leased trucks had an inventory that included more than two trucks. The range for hauls with these truck ranged from five to 475 miles, with a median haul of 32 miles.

The adequacy of hired truck services may also influence marketing decisions. According to survey response, trucks are readily available during the non-harvest season. The non-harvest supply may be enhanced by the availability of producer-owned trucks that are only employed in individual farm operation during harvest. Truck availability was rated less than adequate for the harvest season. The large increase in demand for trucks by elevators during the harvest season and the decrease in supply associated with the farmer-owned trucks both contribute to tight harvest-season truck capacity.

Elevators and Railroad Service

Railroads are an essential component in the N.D. elevator industry's ability to market large quantities of grain and oilseeds competitively. Access to rail cars is a vital component in the discussion of elevator marketing decisions and rail carriers' customer service agenda. N.D. elevators that market grain via rail buy service through tariff orders, forward car contracting programs and negotiated confidential contracts.

Tariff orders are a popular method for ordering cars as illustrated in Table 11. Forty-two percent of the cars originated by respondents were ordered through the tariff system. Prior to deregulation of the rail industry tariff cars were the only option for ordering cars. Today, tariff cars

are still used to satisfy the common carrier obligation of rail carriers. The common carrier obligation that is included in the Interstate Commerce Act requires carriers to serve all rail users on an equitable basis. Tariff orders are submitted directly to the railroad. Delivery of tariff cars is not guaranteed by the railroad and no penalty is assessed if the railroad fails to make timely delivery of the cars. In turn, the order for these cars may be canceled by the elevator without penalty if the cars are not delivered to the elevator within a specified time period, ie. 30 days. The rate charged for these cars is the tariff rate that is in place at the time the order is filled, thus the rate for the delivered tariff cars may be higher or lower than the rate that was in place when cars are ordered.

Another option for accessing rail service is buying a forward position for car delivery. The programs offered by the Class I railroads include the BN's Certificate of Transportation (COT) and Guaranteed Freight (GF) programs, and CP's Protected Rail Equipment eXchange (PERX) program. Elevators served by the two regional railroads order cars through their affiliated Class I's programs. With the COT and PERX forward ordering programs a fixed percent of the railroad fleet service is offered through an 'auction.' In the 'auction' process elevators submit bids for delivery of cars during the first or last half of a month for up to four or six months (depending in the program) into the future. The successful elevator bids may be accepted at a premium or a discount, relative to tariff, depending on the market. For the COT and PERX programs the equipment is railroad owned or leased.

The guaranteed freight program offered by BN allows elevators to lease cars from a firm other than the railroad and add the cars to its rail carrier's fleet in exchange for service. For most elevators in North Dakota the car leasing arrangement and the agreement with the railroad for the equipment/service exchange are handled by a parent company or merchandising firm. The elevators then purchase the guaranteed freight services from the parent company or merchandising firm. Terms of the guaranteed freight agreements are determined in individual contract agreements.

Delivery is provided within a 15-day window; it is not based on the first half/last half of the month schedule. In contrast to the COT and PERX programs, rates for guaranteed freight cars cannot be locked in when ordering. Rates for these cars are equal to the tariff rate in place when cars are delivered. Late delivery by the railroad or cancellation by the elevator result in a per-car penalty payment paid by the party violating the agreement.

Table 11. Survey Respondents' Use of Car Ordering Programs for Rail Shipments

for Rail Shipments				
	<u>Average</u>		<u>Average,Weighted by Bushels Shipped</u>	
	Total		Total	
Forward Contract:				
COT	29%		26%	
Guaranteed Freight	23%		29%	
PERX	6%	58%	14%	69%
Tariff Order:				
BN, CP, RRVW & DMVW Tariff	37%		24%	
CP Long-Term Tariff	4%	42%	7%	31%

A majority, 58 percent, of the survey respondents ordered cars via forward contracting car programs (Table 11). The COT program was most commonly used among shippers: 29 percent of the orders delivered were placed through this program. Guaranteed freight accounted for 23 percent of the forward contracted car participation, and PERX the remaining 6 percent. Higher participation in the COT and guaranteed freight programs relative to PERX, may be related to the number of shippers served by each railroad and the relative newness of the PERX program. The PERX program has been in place for only two years, compared to the BN COT program that was initiated seven years ago.

While a straight average provides information about the number of elevators participating in the alternative car ordering options, a weighted average is used to estimate the share of cars that are originated by N.D. elevators under the alternative ordering options. When car ordering was weighted by bushels shipped, the importance of forward contracting programs is enhanced (Table 11). Over two-thirds of the cars shipped by the respondents were ordered via forward contract programs. Thus, while 58 percent of the respondents utilized the forward contracting option(s), 69 percent of the cars that were loaded by respondents were ordered through forward contract programs. When program participation was weighted by bushels shipped, the Guaranteed Freight program is used slightly more than the COT program for cars shipped via elevators on the BN, as the Guaranteed Freight orders accounted for 29 percent of the cars shipped compared to 26 percent of the cars for the COT program. The importance of the PERX program is enhanced in the weighted average relative to the straight average as it increased from 6 percent in the average to 14 percent under the weighted average. This increase in importance suggests that respondents who originated relatively more bushels were more likely to use the PERX program.

Preferences of shippers and use of alternative car ordering programs vary based on capabilities, capacities, markets, etc. In addition, different forms/levels of risk are associated with the rail car ordering options. Risk is associated with the cancellation penalties, rates, transferability, and reliability of delivery under the alternative programs. For example, one identifiable risk associated with both tariff and guaranteed freight cars is that the per-car rate is not established until cars are delivered. This risk does not exist for COT and PERX orders, as rates are locked in upon ordering. Risks associated with COT, PERX, and Guaranteed Freight orders include the penalties attached to cancellation. While some of this risk may be eliminated due to the existence of secondary markets for COTS, PERX, and GF orders, the risk is not eliminated. COT and PERX rates can be established when the order is in place (up to six months ahead of time for COTs and four

months for PERX) and the cancellation penalty for these cars is substantial if unneeded cars cannot be sold (transferred) in the secondary market. Notice of transfers made in the secondary market must be given to the respective railroad ten days before the beginning of the delivery period for PERX and five days before the beginning of the delivery period for COTs.

Car Ordering by N.D. Elevators - Segmented by Railroad and Shipper Type

The use of the alternative car ordering programs is summarized by elevator group for each railroad in Table 12. Among the elevator groups, the single-car elevators ship the largest share of tariff cars. Elevators served by CP do not depend on forward ordering of cars to the extent of either BN or RRVW served shippers. Single-car elevators located on the CP used the tariff program to order 93 percent of the cars they shipped during the year. Multicar and unit train shippers use a mix of tariff and forward contracted car orders, as they use the PERX program for 34 percent and 40 percent, respectively, of the cars they originate. Elevators along the RRVW continue to ship a majority of their cars via the tariff system, as more than half the car orders are made through the tariff program. Moreover, the split between tariff and forward purchasing options is fairly uniform for all elevator sizes on the RRVW. For the BN and CP, unit train shippers make substantially more shipments under the forward contracting car programs than the single-car shippers. For the BN, single-car elevators use tariff orders for 31 percent of their shipments compared to only 16 percent of the unit train elevators. CP has an even larger difference between shipper groups as single-car elevators use of tariff order is 33 percent higher than that of unit train elevators. The premiums and discounts and the waiting times associated with the alternative programs are listed in Appendix C. The use of alternative car ordering programs will continue to change as railroads modify programs and elevators revise marketing plans.

Table 12. Participation in Alternative Car Ordering Programs and the Percent of Rail Shipments Originated Via Each Car Ordering Method

	BN			CP			RRVW		
	Single	Multi	Unit	Single	Multi	Unit	Single	Multi	Unit
Share of Respondants Participating in their Rail Carriers Alternative Car Ordering Programs									
Tariff	54%	92%	83%	83%	100%	100%	89%	86%	100%
Forward Purchase	73%	100%	100%	60%	83%	75%	89%	86%	100%
Cars Shipped via Each Program (Weighted Average, Weighted by Bushels Shipped by Rail)									
Tariff	20%	11%	12%	90%	78%	57%	61%	59%	51%
Forward Purchase	80%	89%	88%	10%	22%	43%	49%	41%	49%

*DMVW: small sample size does not provide adequate representation among elevator groups

N.D. Elevator Rating of Car Ordering Programs

Shippers were asked to rate their railroad's car ordering programs to assess the success of railroads car ordering programs in a customer service context. RRVW was rated above average for each of the car ordering program characteristics, including a fair and convenient ordering procedure supported by timely delivery and adequate notification when delays occur. DMVW satisfied customers' expectations for notification of delays and convenience of ordering, but fell short in ensuring timely delivery and providing a fair system for ordering. The rail labor strike that occurred on the CP system in 1994 likely influenced the delivery efforts of DMVW.

BN was rated slightly below average for each of the characteristics, with notification of delays receiving the least favorable rating. CP received the lowest marks among the railroads for timely delivery and notification of delays. These marks can likely be attributed to the strike. The CP car ordering system was considered convenient, but was not always viewed by shippers as fair.

However, CP has made modifications to its PERX program and initiated a Guaranteed Equipment Exchange Program, similar to the BN guaranteed freight program, since this survey was completed.

Customer Service Activities

Based on a review of other customer service surveys and the input of elevator managers and railroads, five components of customer service were identified:

- ◆ Services of Marketing and Sales Personnel,
- ◆ Timely Delivery of Equipment,
- ◆ Convenience of Ordering,
- ◆ Availability of Order Information, and
- ◆ Condition of Equipment.

The initial question in the customer service section of the survey asked elevators to rank these components in order of importance. This ranking will provide a basis for prioritizing customer service activities and identifying success/failures in the current customer service venue.

Ratings of customer service activities for each of the four railroads serving North Dakota elevators were collected in the survey. Distribution of the responses was 56 percent, 20 percent, 19 percent, and 4 percent for BN, CP, RRVW, and DMVW shippers, respectively. The small number of responses from DMVW shippers limits the type summaries that can be reported for this railroad.

Fifteen percent of the survey respondents had access to more than one railroad. Eight of these elevators with access to more than one railroad are located on a junction of two railroads and the others access a second railroad through an affiliated elevator. To clarify customer service ratings, elevators were asked to specify a primary rail carrier and rate the customer service activities for only this carrier in the survey.

Elevators Rank Customer Service Activities

Timely delivery of equipment was identified as an important service activity by 93 percent of the respondents, with 81 percent of the elevator managers selecting it as the most important component (Table 13). Railroads have been directing efforts at on-time delivery of equipment by creating methods for guaranteeing cars through forward contracting and offering incentives for quicker loading and unloading of cars. In addition, railroads continue to encourage large shipments to domestic processors with large receiving capabilities and to port destinations, attempting to move more cars with less power than would be required with several smaller shipments. Forward contracting of cars, increased turnaround times, and assessments of car and power supply requirements are all potential sources for improving dependability of equipment delivery.

Table 13. Mean and Distribution of Responses Ranking the Importance of Railroad Customer Service Activities

Customer Service Activities						
Customer Service Activity:	Average Ranking	Distribution of Responses				
		1	2	3	4	5
		(Scale 1=most important to 5=least important)				
1. Timely Delivery of Equipment	1.4	81%	10%	2%	2%	5%
2. Convenience of Ordering	2.8	14%	27%	33%	18%	8%
3. Condition of Equipment	2.9	17%	28%	21%	18%	18%
4. Availability of Order	3.0	14%	20%	28%	27%	11%
5. Marketing and Sales Personnel	3.4	14%	19%	19%	8%	40%

The importance of the convenience of ordering, condition of equipment and availability of order information ranked second, third and forth, respectively, with rankings of 2.8 to 3.0 in importance on a scale of 1 to 5 (1=most important and 5=least important). The services offered by

marketing and sales people received the lowest rating as an important customer service component when overall and elevator group summaries are compared, but was given a greater degree of importance by regional rail line shippers when responses are summarized by rail carrier (Table 14).

Table 14. Elevators' Ranking of the Importance of Railroad Customer Service Activities, Summarized by Railroad
(Scale 1st=most important to 5th=least important)

Customer Service Activity:	BN	CP	RRVW	DMVW
Timely Delivery of Equipment	1 st	1 st	1 st	1 st
Convenience of Ordering	2 nd	3 rd	2 nd	4 th
Condition of Equipment	2 nd	4 th	3 rd	5 th
Availability of Order Information	4 th	2 nd	5 th	2 nd
Marketing and Sales Personnel	5 th	5 th	3 rd	3 rd

When elevators are grouped by primary rail carrier, timely delivery of equipment is the most important service activity for each group (Table 14). Elevators served by CP and DMVW rank availability of order information second out of five in their lists of important customer service activities. BN and RRVW shippers list convenience of ordering second in importance on their railroads possible agenda of customer service activities. Services of marketing and sales personnel was ranked least important by elevators served by the Class I railroads, while the regional railroads listed it third among the five defined service components. The difference in the importance of marketing and sales personnel may be related to the expectations of shippers. Typically, regional railroads are characterized as being committed to providing more personalized marketing and sales services that take into account the needs of individual shippers. Because of their size and the number of shippers they serve, Class I carriers are usually not able to make the same commitment to individualized service.

Elevators Rate Customer Service

After establishing the importance of the alternative components of the customer service agenda, elevators rated the performance of their primary rail carrier in satisfying the shipper's expectations. Elevators rated railroads' customer service activities on a scale of 1 to 5, from poor to excellent. Overall, railroads performed better than average only for the services provided by marketing and sales personnel, as perceived by shippers. Expectations of shippers were met regarding the condition of equipment services as elevators rated this at 3.0, the average rating for services. The elevator ratings suggest that availability of order information and timely delivery of equipment do not meet the expectations of shippers. Forty-two percent of the respondents rated timely delivery of equipment below average and the availability of order information failed to meet the expectations of 36 percent of the elevator managers (Table 19).

Table 15. Elevators' Rating of Railroad Customer Service Activities

Customer Service Activity:	Average	Distribution of Responses				
		1 poor	2	3 average	4	5 excellent
Marketing and Sales Personnel	3.2	8%	12%	40%	30%	9%
Condition of Equipment	3.0	9%	22%	34%	27%	7%
Car Ordering System	3.0	12%	18%	38%	20%	11%
Timely Delivery of Equipment	2.7	23%	19%	25%	26%	6%
Availability of Order Information	2.7	20%	16%	38%	22%	3%

Elevator ratings of rail service were also summarized by elevator groups of single-car, multicar, and unit train facilities (Table 20). Single-car and multicar elevators rated the car ordering system, marketing and service personnel, and the condition of equipment as average or better than

average. Unit train shippers expected more from their railroad than they received in all areas of customer service except services of marketing and sales personnel. The differences between elevator groups may be associated with differences in perceptions due to differences in their relative use of rail and their expectations, or may be associated with real service differences.

Table 16. Elevators' Average Rating of Railroad Customer Service Activities, Summarized by Elevator Groups
(Scale 1=poor to 5=excellent)

Customer Service Activity:	Single Car	Multi Car	Unit Train
Services of Marketing & Sales Personnel	3.3	3.0	3.2
Condition of Equipment	3.0	3.2	2.8
Car Ordering System	3.1	3.2	2.7
Timely Delivery of Equipment	2.5	2.9	2.9
Availability of Order Information	2.6	2.8	2.8

Ratings of overall and individual customer service activities were also compared among railroads. The two regional railroads were rated first and second among the four carriers in overall customer service. The overall rating was calculated through a weighted average based on shipper ranking of the importance of alternative activities and the rating they gave their carrier. RRVW was given the top rating of 3.8 for overall customer service, with ease of car ordering, timely delivery and information regarding orders rated at 4.0, 3.9, and 3.8 on a scale of 1 (poor) to 5 (excellent). DMVW also received a better than average rating for its customer service activities. Although the railroad received worse than average ratings for timely delivery of equipment and for the services of marketing and sales personnel, these ratings were offset by the 5.0 rating for the car ordering system and 4.2 rating for availability of order information. Operations of the DMVW, and thus its customer service activities, were affected by a strike on its affiliated Class I, the CP.

Table 17. Elevators' Rating of Railroad Customer Service Activities, Summarized by Railroad (Scale 1=poor to 5=excellent)

Customer Service Activity:	BN	CP	RRVW	DMVW
Services of Marketing & Sales Personnel	2.8	1.9	3.3	2.5
Condition of Equipment	3.4	3.3	3.4	3.2
Car Ordering System	3.0	3.0	4.0	5.0
Timely Delivery of Equipment	2.8	2.8	3.9	2.7
Availability of Order Information	2.7	2.7	3.8	4.2
Weighted Average*	3.0	2.8	3.8	3.4

Weighted by the Importance of Each Customer Service Activity - See Table 18.

BN led the two Class I railroads in the area of customer service, receiving an overall rating of 3.0. The CP rating of 2.8 is slightly below average. BN and CP both met the expectations of managers for their car ordering systems and slightly exceeded expectations for the condition of the equipment they supplied. The Class I railroads received the same ratings for timely delivery of equipment and for their efforts to provide order information. CP was rated noticeably low for services of marketing and sales personnel. It should be noted that it is likely strike activities affected CP's ability to provide normal levels of marketing and sales support.

Weighted averages for customer service activities show that RRVW, DMVW and BN met or exceeded overall customer service expectations. Overall, the regional railroads performed slightly better in providing customer service. All the railroads were successful in meeting the expectations of shippers regarding car ordering systems and the condition of equipment. Based on ratings, the Class I railroads may improve their overall customer service ratings by improving delivery times, supplying more/better order information, and reassessing the services provided by their marketing and sales personnel. Improvement in one of these areas may contribute to the satisfaction of shippers, creating a higher overall value for resources committed to customer service.

CONCLUSION

The North Dakota elevator industry has undergone substantial changes ~ adjusting to deregulation of rail rates, changes in producer delivery options, and shifts in markets. Through these changes, rail has remained the dominant mode for grain and oilseed marketing. Typically rail is used in marketing three-fourths of the grain and oilseed shipments originated by elevators. Thus, it is important to encourage railroads to provide competitive rates and service to North Dakota shippers.

The purpose of this study is to encourage competition among rail carriers by providing marketing information and customer service comparisons for N.D. elevators. The value attached to customer service activities depends on expectations of customers. Thus, the initial step is to develop a 'profile' describing the structure and marketing characteristics of the elevator network. Based on this profile, survey responses are summarized to ascertain which customer service activities are most important to elevator managers and how their railroad performed in regard to satisfying the managers' customer service needs.

In 1993-94, 425 elevators in North Dakota contributed in shipping over 515 million bushels of grain and oilseeds to processors and export destinations. The 120 elevators that responded to the survey accounted for 40% of these bushels. Among the elevators were 15 with no access to rail, 44 with track space for 1 to 24 cars (single-car elevators), 29 with track space for 25 to 49 cars (multicar elevators), and 32 with the ability to load unit trains. The distribution of the elevators among the alternative car loading groups is important, as about 75% of the grain originated by N.D. elevators is marketed via rail and the rate structure for rail shipments gives unit train shippers an advantage relative to single-car and multicar shippers.

Beyond rate differences, many factors influence elevator marketing decisions such as the size/shape of an elevator drawing area, producer delivery patterns, the nature of the commodity,

truck/rail rates, and ease of access to truck/rail. Each of these factors is addressed in the customer profile section of the report, providing the base for the customer service comparison.

Based on a review of customer service surveys and the input of elevator managers and railroads, five components of customer service were identified:

- ◆ Services of Marketing and Sales Personnel,
- ◆ Timely Delivery of Equipment,
- ◆ Convenience of Ordering,
- ◆ Availability of Order Information, and
- ◆ Condition of Equipment.

In the initial question in the customer service section of the survey, elevators were asked to rank these components in order of importance. Timely delivery of equipment was identified as the most important service activity by 81% of the respondents. The convenience of ordering, condition of equipment, and availability of order information were all considered important, ranging from 2.8 to 3.0 in importance on a scale of 1 to 5, with 1 being most important. Service of sales and marketing personnel received the lowest rating, 3.4.

When elevators are grouped by primary carrier, timely delivery of equipment is the most important service activity for each group. Elevators served by CP and DMVW rank availability of order information second out of five, while BN and RRVW shippers list convenience of ordering second. The emphasis placed on the availability of order information by the CP and DMVW shippers may be associated with the strike the railroad experienced during the marketing year referenced in this survey. Services of marketing and sales personnel was ranked least important by elevators served by Class I railroads. Regional railroads ranked services of marketing and sales personnel third in their ranking of service activities. This difference may reflect regional railroads' commitment and ability to provide personalized marketing and sales services to the shippers they serve.

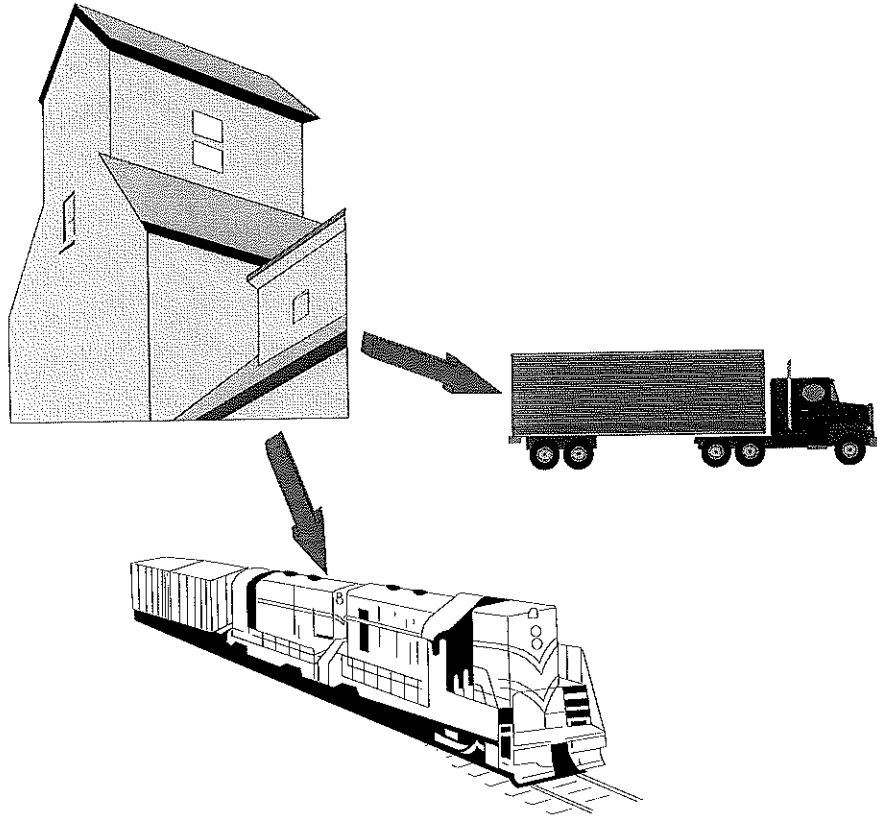
In addition to establishing a ranking of the importance of customer service activities, shippers rated their primary carrier's success in providing customer service. Overall, railroads performed better than average only for the services provided by marketing and sales personnel. Condition of equipment was ranked as average by elevators responding to the survey. Availability of order information failed to meet the expectations of 36% of elevator managers, while timely delivery of equipment was viewed below average by 42% of the shippers.

BN led the two Class I carriers, receiving an overall rating of 3.0. CP received a rating of 2.8, slightly below average. The Class I railroads exceeded expectations for the condition of the equipment they delivered and met expectations for their car ordering systems. CP was given negative marks for services of marketing and sales personnel, likely impacted by the strike.

RRVW led the four rail carriers in the comparison of overall customer service, receiving a rating of 3.8 on a scale of 1 to 5, with 5 being excellent. RRVW was given above-average ratings for each of the customer service activities. Next in line was the other regional rail carrier, the DMVW, with its rating of 3.4. Poor delivery and marketing and service personnel support ratings were offset by high ratings given for car ordering and availability of order information. Operations of the DMVW were affected by the strike on its affiliated Class I carrier.

RRVW and DMVW exceeded overall customer service expectations. The railroads were successful in meeting the expectations of shippers regarding the car ordering system and the condition of equipment. Class I railroads may improve overall customer service ratings by improving delivery times, supplying more/better order information, and reassessing the services provided by their marketing and sales personnel. Improvement in one of these areas may contribute to the satisfaction of shippers in other areas of customer service, creating a higher overall value for resources committed to customer service.

Appendix A: *N.D. Elevator Evaluation of Truck and Rail Service Survey*



**NORTH DAKOTA ELEVATOR EVALUATION OF
RAILROAD & TRUCK SERVICE**

February 1995

General Information About Your Elevator

Q-1 Name of Elevator, Town _____

Q-2 Total Capacity Available for Main-House Loadout: _____ bushels

Q-3 Are you Affiliated with another elevator(s)? YES NO

Q-4 Percent of Gross Annual Income from:

Grain Sales _____ %

Grain Storage _____ %

Other Supplies & Services _____ %

Total 100 %

**ALL RESPONSES ARE
CONFIDENTIAL!**

Q-5 Hourly Load-Out Capacity

1. Rail: _____ Bushels per Hour

2. Truck _____ Bushels per Hour

Q-6 Hourly Unload-Out Capacity for the Main-House location: _____ Bushels per Hour

Q-7 What percent of the grain you sell do you purchase from:

Farmers _____ %

Elevators Outside your Organization _____ %

Total 100 %

Q-8 For Grain Purchased from Farmers, what percent of the grain is received from farmers hauling the following one-way distances to your elevator:

0 to 9 miles _____ %

10 to 19 miles _____ %

20 to 30 miles _____ %

more than 30 miles _____ %

Total 100 %

Q-9 If you Purchased from Elevators outside your Organization, what percent of the grain is received from elevators hauling the following one-way distances to your elevator:

0 to 9 miles	_____	%
10 to 19 miles	_____	%
20 to 30 miles	_____	%
more than 30 miles	_____	%
Total	100	%

Q-10 Estimated Percent of Grain Received By :

Single-Axle Truck	_____	%
Tandem-Axle Truck	_____	%
Semi-Truck	_____	%
Total	100	%

Q-11 Does your Elevator own/lease any Semi-Trucks? **YES** **NO**

If Yes, Number of Semi-Trucks your Elevator: Owns _____ Leases _____, &

an average haul with elevator owned/leased truck(s) is _____ miles.

Q-12 How do you Rate the Adequacy of Trucking Services?

How do you Rate the Adequacy of Trucking Services?		not adequate			very adequate	
		1	2	3	4	5
1.	Availability of Trucking Service During Harvest					
2.	Availability of Trucking Service During Non-Harvest					
3.	Rate Competition Among Truckers					

Q-13 Average custom truck rate for wheat from your elevator these destinations during 1994 (if known):

	Minneapolis	Duluth	Pacific Northwest
1. harvest season	per cwt	per cwt	per cwt
2. non-harvest season	per cwt	per cwt	per cwt
3. backhaul rate	per cwt	per cwt	per cwt

Q-14 How important are these Factors to Farmers who Sell Grain at Your Elevator? (Elevator responses will be compared to responses of a survey of farmer marketing decisions & elevator choices.)

	not important				very important
1. Elevator Board Price	1	2	3	4	5
2. Distance to the Elevator	1	2	3	4	5
3. Condition of Roads to Elevator	1	2	3	4	5
4. It is a Farmers Co-op	1	2	3	4	5
5. Quality of Service you Provide	1	2	3	4	5
6. Elevator is Located in Local Community	1	2	3	4	5
7. Additional Services Offered at the Elevator	1	2	3	4	5
8. The Elevator is Located near other Businesses	1	2	3	4	5
10. Management	1	2	3	4	5
11. Testing & Grading Equipment	1	2	3	4	5
12. Grading Practices	1	2	3	4	5
13. Pricing Options (ie. Basis, Delayed..)	1	2	3	4	5
14. Time Required for Unloading	1	2	3	4	5
15. Storage Availability	1	2	3	4	5
16. Hours Open for Grain Delivery	1	2	3	4	5

IF YOU DO NOT HAVE ACCESS TO A RAILROAD, PLEASE GO TO Q-25 ON PAGE 6

General Rail Background Information

Q-15 How many Rail Cars can you Load without a Switch? _____ Cars

Q-16 Railroad(s) you Have Access to:

1. BN
2. CP
3. RRVW
4. DMVW

Q-17 Primary Rail Carrier:

1. BN
2. CP
3. RRVW
4. DMVW

Service Rating for Primary Rail Carrier

Q-18 Please Rank the Following Service Characteristics 1 to 5 in Order of Importance (1 being the most important and 5 the least important):

Services of Marketing and Sales Personnel _____

Timely Delivery of Equipment _____

Convenience of Ordering _____

Availability of Order Information _____

Condition of Equipment _____

Q-19 Please Rate the Quality of Your Primary Rail Carrier's Services

	poor			excellent	
	1	2	3	4	5
1. Services of Marketing and Sales Personnel	1	2	3	4	5
2. Timely Delivery of Equipment	1	2	3	4	5
3. Car Ordering System	1	2	3	4	5
4. Car Switching Services	1	2	3	4	5
5. Snow Removal	1	2	3	4	5
6. Availability of Order Information	1	2	3	4	5
7. Condition of Equipment	1	2	3	4	5

Marketing & Sales Service Personnel**Q-20 Please Rate Marketing & Sales Personnel of your Primary Rail Carrier**

	never			always	
	1	2	3	4	5
1. Courteous	1	2	3	4	5
2. Accessibility of Service Representatives	1	2	3	4	5
3. Ability to Answer Questions	1	2	3	4	5
4. Accurate Invoicing/Billing	1	2	3	4	5

Car Ordering**Q-21 What percent of your car ordering is done through each of the following options:**

1. BN COT _____ %
2. BN Guaranteed Freight _____ %
3. BN or RRVW Tariff _____ %
4. CP or DMVW Tariff _____ %
5. CP Long-Term Tariff _____ %
6. CP PERX _____ %

TOTAL 100 %

Q-22 Please Rate Car Ordering of Your Primary Rail Carrier

	poor			excellent	
	1	2	3	4	5
1. Fairness of Ordering Procedure	1	2	3	4	5
2. Timely Delivery of Equipment	1	2	3	4	5
3. Timely Notification of Order Delays	1	2	3	4	5
4. Convenience of Ordering	1	2	3	4	5

NOTE: A SUMMARY OF THE TABLES IN Q-23 & Q-24 WILL BE PUBLISHED IN THE *GRAINMANS' MIRROR*.

Q-23 If you had an order delay(s) for tariff rail cars during 1994, please list the average length of the delay in days in the space(s) the corresponding to the type of tariff and number of cars in the order:

# of Cars in the Order	Car Order(s) for	BN or RRVW Tariff	CP Tariff	CP Long-term Tariff
		- average days of delay for car orders -		
1. 1-24 cars	Mar 94-July 94:	days	days	days
	Aug 94-Dec 94:	days	days	days
2. 25-49 cars	Mar 94-July 94:	days	days	days
	Aug 94-Dec 94:	days	days	days
3. Unit Train	Mar 94-July 94:	days	days	days
	Aug 94-Dec 94:	days	days	days

Q-24 If you used forward car ordering systems offered by your railroad, please list the average per-car premium you paid for cars shipped during 1994:

Car Shipped During:	COT	PERX	Guaranteed Freight
	- average per car premium paid for cars you shipped -		
1 st Quarter (Jan-Mar)	\$	\$	\$
2 nd Quarter (Apr-Jun)	\$	\$	\$
3 rd Quarter (Jul-Sept)	\$	\$	\$
4 th Quarter (Oct-Dec)	\$	\$	\$

Q-25 Would like to receive a copy of the Survey Results? YES NO

Please use this Space for any Comments you would like to make about the Service you Receive from Rail/Truck Carriers and about Other Transportation Interests.

If you have any questions or comments please contact:

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Appendix B: Delays & Premiums/Discounts Associated with Car Ordering Programs in 1994

Average Length of Delay for Tariff Rail Cars During 1994

# of Cars in the Order	Car Order(s) for	BN or RRVW Tariff	CP Tariff	CP Long-term Tariff
		- average days of delay for car orders -		
1-24 cars	Mar 94-July 94:	15 days	41 days	27 days
	Aug 94-Dec 94:	27 days	82 days	66 days
25-49 cars	Mar 94-July 94:	24 days	40 days	n.a.
	Aug 94-Dec 94:	23 days	91 days	64 days
Unit Train (50 Cars +)	Mar 94-July 94:	18 days	n.a.	n.a.
	Aug 94-Dec 94:	26 days	94 days	75 days

n.a. not available, sample size too small

Averages and Ranges of Per-Car Premiums Paid for Rail Cars Shipped Via Forward Car Ordering Systems During 1994

	COT	PERX	Guaranteed Freight
1 st Quarter (Jan-Mar)	\$118 (\$0..\$264)	\$118 (-\$150..\$350)	\$119 (\$30..\$264)
2 nd Quarter (Apr-Jun)	\$56 (\$0..\$180)	\$6 (-\$150..\$100)	\$52 (\$0..\$132)
3 rd Quarter (Jul-Sept)	\$131 (\$6..\$330)	\$156 (\$60..\$350)	\$127 (\$30..\$300)
4 th Quarter (Oct-Dec)	\$209 (\$0..\$400)	\$226 (\$60..\$375)	\$177 (\$30..\$396)

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