MERGER POTENTIAL OF THE PORTLAND AND PORTLAND JUNCTION ELEVATORS

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INTRODUCTION

The Portland Farmers Elevator Company and the Portland Junction Grain Company are located in Traill county of east central North Dakota (Figure 1). The Portland Farmers Elevator Company is located in Portland, a town of 627 people on Highway 200 three miles west of Mayville. Portland Junction Grain Company is four and one-half miles north of Portland at the junction of the Portland and Mayville legs of a Burlington Northern branch line. The branch line on which they are located connects with the BN mainline at Larimore, approximately 30 miles north of Portland Junction.

Portland Farmers Elevator has a stated storage capacity of 1.2 million bushels while Portland Junction Grain Company has a capacity of 457,000 bushels.[1] Portland shipped a total of 1,779,656 bushels of grain in 1986-87; during the same time Portland Junction shipped 1,199,986 bushels.[2] The gross

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[1]North Dakota Grain Dealers Association. 1988 Directory of Licensed and Bonded Country Elevators in North Dakota. Fargo.

[2]North Dakota Public Service Commission, unpublished grain movement data.

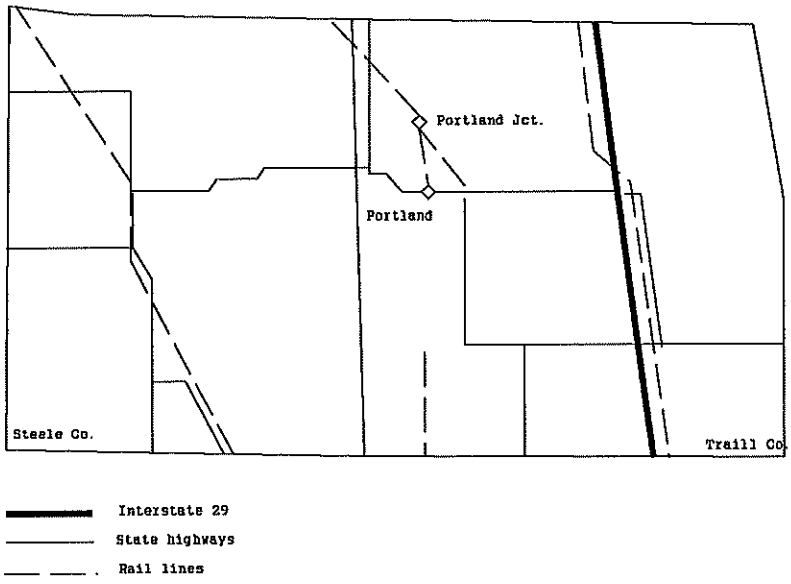


Figure 1. Location of Portland and Portland Junction in Steele and Traill Counties of North Dakota.

proceeds from trading for Portland in 1986-87 were $183,424, and for Portland Junction they were $140,767.[3]

GRAIN PRODUCTION

Barley and hard red spring wheat (HRS) are the principal crops grown in Steele and Traill counties (Table 1). In 1986, Traill county ranked 3rd of the 53 North Dakota counties in soybean production, 6th in barley production, 10th in corn grain, and 13th in spring wheat production. During the same year, Steele county ranked 11th in barley

[3]Respective elevators' annual reports.

production, 14th in corn grain production, 17th in spring wheat production, and 20th in sunflower production.

Barley production for the two counties has recently totaled between 12 million and 14 million bushels and usually exceeds HRS production by two to three million bushels (Table 1). HRS production in the two counties usually surpasses ten million bushels. Traill county continually outproduces Steele county in these two commodities.

Corn production in Traill county has varied from 423,200 bushels in 1981 to 1,135,800 bushels in 1984. Production in Steele county has not increased as dramatically and has remained at about 600,000 bushels annually. Soybeans are also a major crop in the area. Soybean production in Traill county over the last four years has ranged between 1.5 million and 2.4 million bushels. Steele county's production over the same period has ranged from approximately 300,000 to 600,000 bushels.

Oats and durum production are less significant in the area. Oats production has averaged about 250,000 bushels in each county, while durum has averaged about 350,000 bushels per year in each. Production of both commodities, however, appears to be diminishing over time.

TABLE 1. PRODUCTION OF SELECTED CROPS, STEELE AND TRAILL COUNTIES OF NORTH DAKOTA

	1986	1985	1984	1983	1982	1981	5 yr. avg. (1981-85)
				(000 bushels)			
BARLEY							
Steele	4,977	6,240	5,460	4,264	4,370	4,987	5,064
Traill	6,813	8,362	7,576	5,995	8,024	9,107	7,813
HRS							
Steele	4,140	5,355	4,950	2,850	5,440	5,000	4,719
Traill	5,180	7,560	5,635	4,025	6,644	6,012	5,975
SOYBEANS							
Steele	405	283	605	490	275	124	355
Traill	1,641	1,550	2,400	1,959	1,139	769	1,563
CORN							
Steele	632	566	608	410	635	616	567
Traill	974	996	1,136	481	647	423	764
OATS							
Steele	168	250	156	113	374	274	233
Traill	170	181	121	188	408	468	273
DURUM							
Steele	153	364	259	120	555	746	409
Traill	141	285	300	102	560	972	444
FLAX							
Steele	301	146	61	47	68	52	75
Traill	18	24	15	17	20	30	21
SUNFLOWER[1]							
Steele	40	35	44	43	83	76	56
Traill	18	16	9	10	44	55	27

[1]Hundredweight.

SOURCE: North Dakota Crop and Livestock Reporting Service, North Dakota Agricultural Statistics, 1985, 1986, and 1987, Ag. Statistics Nos. 54, 55, and 56, June 1985, June 1986, and June 1987.

Flax is also a minor commodity, but is becoming an increasingly important crop in the area. Flax production in Steele county has increased from 67,500 bushels in 1982 to 301,000 bushels in 1986. In Traill county, recent flax production has remained between 15,000 and 25,000 bushels annually. Some sunflowers are also produced in the area. Production in Traill county has ranged from 8,580 to 18,430 cwt. in the last three years, while sunflower production in Steele county has varied in the 35,000 to 45,000 cwt. range.

GRAIN MOVEMENTS

Elevator viability is determined to a greater extent by movements of grain than by local grain production. Grain movements and grain production are not perfectly correlated with each other. It is important to look at each of these factors separately to determine the potential for increased volumes and, therefore, market share. In this section historical grain movements for the counties will be described. Individual elevator's movements will also be reviewed.

Grain Movements in Steele and Traill Counties

In 1986-87 grain movements out of Traill county were almost double those out of Steele county (Table 2). This

area shipped more bushels of several commodities in 1986-87 than was produced that year (compare Tables 1 and 2). This occurred for durum, flax, sunflower, oats (Steele county), and corn (Traill county alone shipped three times more corn than was produced in both counties). This could be the result of the selling of stored commodities from previous years or from out-of-county grain being marketed through these two counties.

Barley movements increased from about 11 million bushels during 1984-85 and 1985-86 to 13.4 million bushels in 1986-87. This does not follow production patterns; production dropped from 14.6 million bushels in 1985 to 11.8 million bushels in 1986. Barley is shipped to two major destinations, Minneapolis/St. Paul and Other. The "Other" category includes shipments to all destinations west of the Mississippi other than Duluth, Minneapolis, or the Pacific Northwest. The volume shipped to Minneapolis/St. Paul, as well as to the Pacific Northwest, increased in the most recent year. Shipments to "Other" destinations dropped off slightly.

TABLE 2. GRAIN MOVEMENTS FROM STEEL AND TRAILL COUNTIES, 1984-85 TO 1986-87

	1986-87		1985-86		1984-85	
	Steele	Traill	Steele	Traill	Steele	Traill
	bushels					
BARLEY						
DSP	640,483	380,917	158,930	567,872	1,753,326	766,547
MSP	1,905,908	2,630,976	719,064	1,297,017	485,573	1,982,847
PNW	571,274	718,147	359,078	0	0	1,036
Other	1,446,835	5,136,130	2,309,620	5,746,207	1,798,483	4,694,962
TOTAL	4,564,500	8,866,170	3,546,692	7,611,096	4,037,382	7,445,392
HRS						
DSP	1,574,718	2,041,187	1,350,656	2,179,056	2,294,427	2,779,707
MSP	1,376,219	2,554,073	864,510	1,887,372	1,324,787	2,746,054
PNW	0	15,867	0	34,148	171,082	431,149
Other	1,314,067	1,488,543	1,199,717	554,857	651,925	450,190
TOTAL	4,265,004	6,099,670	3,414,883	4,655,433	4,442,221	6,407,100
SOYBEANS						
DSP	0	8,719	0	4,183	0	39,804
MSP	37,832	584,833	53,446	684,394	31,999	549,332
PNW	11,598	1,528	4,932	305,826	151,171	1,083,971
Other	94,445	71,798	44,336	247,088	22,456	296,938
TOTAL	143,875	666,878	102,714	1,241,491	205,626	1,970,045
CORN						
DSP	0	0	0	893	0	0
MSP	0	3,705	0	33,335	0	6,065
PNW	15,966	2,994,697	0	425,810	28,000	1,176,874
Other	36,314	175,923	219,000	246,816	12,332	198,736
TOTAL	52,280	3,174,325	219,000	706,854	40,332	1,381,675
OATS						
DSP	0	0	0	0	0	0
MSP	77,577	8,311	115,527	0	98,441	0
PNW	0	0	0	0	0	0
Other	114,875	0	334,858	5,386	364,665	0
TOTAL	192,452	8,311	450,385	5,386	463,106	0

TABLE 2. (CONT.)

	1986-87		1985-86		1984-85	
	Steele	Traill	Steele	Traill	Steele	Traill
	bushels					
DURUM						
DSP	276,582	367,342	257,317	130,910	453,153	342,167
MSP	62,720	88,962	60,445	75,842	51,728	54,447
PNW	0	30,000	0	0	0	0
Other	46,017	353,789	233,349	310,907	117,324	238,854
TOTAL	385,319	840,093	551,111	517,659	622,205	635,468
FLAX						
DSP	2,877	0	0	0	150	0
MSP	1,756	5,261	10,352	12,254	9,999	2,926
PNW	0	0	0	0	0	0
Other	309,835	18,879	156,952	29,382	33,711	1,121
TOTAL	314,468	24,140	167,304	41,636	43,860	4,047
SUNFLOWER[1]						
DSP	10,560	12,660	61,401	4,362	239,268	76,401
MSP	488	0	0	6,675	944	23,265
PNW	0	0	0	0	0	1,852
Other	203,433	363,039	151,717	199,318	215,615	152,280
TOTAL	214,481	375,699	213,118	210,355	455,827	253,798

[1]Hundredweight.

Spring wheat shipments to Minneapolis/St. Paul rebounded in 1986-87 from a drop in 1985-86. Total shipments in 1986-87 also recovered from a decrease in 1985-86. The PNW continues to decline as a destination for HRS shipments. On the other hand, shipments to "Other" destinations show a steady increase over the past three years.

While soybean production was up in 1986, shipments were off substantially in 1986-87. Minneapolis/St. Paul was the

most popular destination that year, however the Pacfic Northwest has been an important destination for soybeans in previous years.

Corn shipments were higher in 1986-87 then in the previous two years. The Pacific Northwest is the predominant destination for these shipments. Traill county ships the vast majority of the corn out of these two counties.

Durum shipments in 1986-87 shifted from a nearly equal split between the counties to almost twice as much being moved from Traill county as from Steele. Duluth/Superior and "Other" are the most prevalent destinations. Traill county in 1986-87 showed the first movement of durum to the Pacific Northwest from either county for the years shown.

Flax movements have increased dramatically in the past three years. In 1984-85 flax movements totaled 47,907 bushels. In 1986-87, 338,608 bushels of flax moved through Steele and Traill counties, a 707 percent increase.

Sunflowers are shipped mainly to North Dakota destinations, which are included in the "Other" classification. Duluth/Superior was an important destination three years ago, but has since declined in market share. Sunflower shipments substantially exceed county production for the three years presented.

Grain Shipments from Portland

Barley traffic from Portland is dominated by rail shipment (Table 3). Rail share has ranged from 97 to 100 percent in the past three years. The two most popular destinations are Minneapolis/St. Paul and "Other" which includes Minnesota and North Dakota destinations.

Hard red spring wheat is an important commodity to the Portland elevator, second only to barley in the number of bushels shipped. HRS shipments have undergone some changes in the past three years. The volume shipped has gone from 540 thousand bushels in 1984-85, down to 360 thousand bushels in 1985-86, and back up to 597 bushels in 1986-87. The major proportion of shipments has shifted from Duluth/Superior markets to Minneapolis/St. Paul markets. Rail continues to be the favored mode, but truck traffic is substantial. While no shipments are made to the Pacific Northwest, the "Other" destination is just as important as the traditional markets.

Soybean shipments from Portland have been declining in the last three years. In the 1984-85 crop year 107,913 bushels were moved from the elevator, while in 1986-87 only 32,428 bushels were shipped. The majority of shipments have been by truck to Minneapolis/St. Paul.

TABLE 3. GRAIN MOVEMENTS FROM PORTLAND, ND TO VARIOUS DESTINATIONS, BY YEAR

	1986-87		1985-86		1984-85	
	Rail	Truck	Rail	Truck	Rail	Truck
BARLEY						
DSP	10,249	3,304	0	0	83,956	15,576
MSP	238,914	8,803	137,233	0	471,044	0
PNW	0	0	0	0	0	0
Other	444,201	0	380,568	0	114,168	3,745
TOTAL	693,364	12,107	517,801	0	669,168	19,321
HRS						
DSP	98,611	86,541	32,964	23,805	149,062	73,527
MSP	137,938	51,306	76,455	130,073	39,765	91,298
PNW	0	0	0	0	0	0
Other	196,501	25,975	65,568	31,135	175,301	11,477
TOTAL	433,050	163,822	174,987	185,013	364,128	176,302
SOYBEANS						
DSP	0	1,810	0	0	0	0
MSP	9,900	20,052	12,419	64,503	19,609	88,304
PNW	0	0	0	0	0	0
Other	0	666	0	0	0	0
TOTAL	9,900	22,528	12,419	64,503	19,609	88,304
CORN						
DSP	0	0	0	0	0	0
MSP	0	0	0	0	0	0
PNW	0	0	0	0	0	0
Other	0	3,639	0	1,869	0	0
TOTAL	0	3,639	0	1,869	0	0
DURUM						
DSP	0	4,413	0	0	0	0
MSP	2,985	0	5,160	0	0	1,771
PNW	0	0	0	0	0	0
Other	0	0	0	7,458	0	0
TOTAL	2,985	4,413	5,160	7,458	0	1,771
DRY EDIBLE BEANS						
DSP	5,000	0	16,200	2,400	14,900	0
MSP	5,300	4,800	0	2,800	2,400	2,765
PNW	0	0	0	0	0	0
Other	151,139	94,070	81,723	54,352	8,829	11,255
TOTAL	161,439	98,870	97,923	59,552	26,129	14,020

Corn is not a major commodity at the Portland elevator. In the past three years a total of 5,508 bushels have been trucked to "Other" destinations. This is surprising since the county produces large quantities of this commodity.

Durum also is not an extremely large volume commodity at the Portland elevator. Shipments appear to be sporadic in relation to destination and carrier mode. No trends or preferences prevail.

Dry edible bean shipments from Portland have increased dramatically in the past three years. Mostly shipped to "Other" destinations, the split between rail and truck traffic has fluctuated but continues to be mostly rail. Occasional shipments to Minneapolis/St. Paul are split nearly evenly between truck and rail, while Duluth/Superior is slightly favored by rail shipment.

Grain Shipments from Portland Junction

The largest volume commodity shipped from Portland Junction is barley (Table 4). Barley shipments are dominated by rail carriage. The "Other" destination, including Minnesota and North Dakota, has been popular. However, in 1986-87 the Minneapolis/St. Paul market share increased significantly. Duluth/Superior also gets an occasional shipment.

HRS is mainly shipped by truck from Portland Junction. The most common destination is Minneapolis/St. Paul, but Duluth/ Superior also gets a reasonable share of the shipments. HRS shipments declined in 1985-86 but rebounded in 1986-87.

The Minneapolis/St. Paul market dominates the soybean shipments from Portland Junction. Shipments in 1986-87 were off by almost two-thirds from 1985-86. This loss in shipments cannot be attributed to a poor production year (Table 1). Truck traffic has increased its market share from 58 percent in 1984-85 to 72 percent in 1986-87.

Durum shipments have changed from a truck commodity to a rail commodity in the past three years. In 1986-87 the vast majority of shipments went by rail, a switch from 1984-85 when absolutely no bushels were shipped by rail. The Duluth/Superior market has always been strong, but in 1986-87 shipments to "Other" destinations comprised more than one-third of the total. Minneapolis/St. Paul also gets a small percentage of shipments each year.

TABLE 4. GRAIN MOVEMENTS FROM PORTLAND JUNCTION, ND TO VARIOUS DESTINATIONS, BY YEAR

	1986-87		1985-86		1984-85	
	Rail	Truck	Rail	Truck	Rail	Truck
	bushels					
BARLEY						
DSP	55,916	3,291	0	0	0	34,790
MSP	318,242	0	101,827	3,894	49,033	5,478
PNW	0	0	0	0	0	0
OTHER	171,419	34,292	304,389	0	526,736	0
TOTAL	545,577	37,583	406,216	18,031	575,769	40,268
HRS WHEAT						
DSP	0	119,831	22,434	112,636	0	165,796
MSP	62,941	316,888	25,657	123,562	45,308	290,899
PNW	0	0	0	0	0	0
OTHER	37,684	0	38,450	0	0	0
TOTAL	100,625	436,719	86,541	236,198	45,308	456,695
SOYBEANS						
DSP	0	0	0	0	0	0
MSP	9,883	25,291	12,825	37,408	35,746	50,072
PNW	0	0	0	0	0	0
OTHER	0	0	0	44,282	0	0
TOTAL	9,883	25,291	12,825	81,690	35,746	50,072
DURUM						
DSP	12,688	5,293	3,095	41,174	0	30,087
MSP	9,494	0	6,400	6,870	0	1,770
PNW	0	0	0	0	0	0
OTHER	12,704	0	0	0	0	0
TOTAL	34,886	5,293	9,495	48,044	0	31,857
FLAX						
DSP	0	0	0	0	0	0
MSP	0	2,709	0	0	0	0
PNW	0	0	0	0	0	0
OTHER	0	877	0	3,818	0	756
TOTAL	0	3,586	0	3,818	0	756
SUNFLOWERS						
DSP	0	0	0	0	0	0
MSP	0	0	0	0	0	0
PNW	0	0	0	0	0	0
OTHER	0	152	0	2,211	0	4,461
TOTAL	0	152	0	2,211	0	4,461

Flax and sunflowers are minor commodities at the Portland Junction elevator. Combined shipments of these commodities barely totals five thousand bushels. Both of these commodities are exclusively shipped by trucks to mainly "Other" destinations. In the most recent year, however, a major share of the flax shipments went to Minneapolis/St. Paul. The amount of sunflower shipped is declining substantially, while the amount of flax shipped has increased and is holding relatively constant.

RAIL RATE STRUCTURE

The rail rates available to a particular station are of primary importance when considering expanding to unit train shipments. The spreads between the rates will determine how much additional costs can be undertaken in an effort to take advantage of unit train service. Alternatively, the rate spreads determine the incentive to ship by this method.

Each commodity has its own rate structure, however three similar shipment levels are found throughout. The single car rate is offered for all commodities with the exception of some westbound traffic. The 25-27 car level is the next tier of rates, followed by the 50-54 car level. These two tiers are often referred to as unit train rates. Several commodities also offer a three car rate. Rates decrease as

the number of cars shipped increases. The spreads between rates vary from 2 cents to 28 cents (Table 5). The total spread between single car rates and 52-car rates varies from 7 cents to 42 cents. Depending on the quantity shipped of the commodities with the larger rate spreads, the compensation for shipping a unit train can be substantial.

Rail Abandonment

The line serving Portland and Portland Junction is in good condition and has not been considered for abandonment. It is, however, conceivable that this line would be considered for potential short line purchase. If this were to happen the rate spreads analyzed here may or may not remain in effect. The rates themselves could change, the spreads between rates could change, or various levels of service could be discontinued.

TRUCK TRAFFIC

Rates to Minneapolis/St. Paul are 65-70 cents/cwt. and have been as low as 55-60 cents/cwt. Rates to Duluth/Superior are also 65-70 cents/cwt. These truck rates are very competitive with rail rates from the area. For some commodities, they represent substantial savings over rail rates.

TABLE 5. RAIL RATES TO THE PACIFIC NORTHWEST, MINNEAPOLIS, AND DULUTH FROM PORTLAND AND PORTLAND JUNCTION, ND

	PNW		MSP		DSP	
	Rate	Spread[5]	Rate	Spread[5]	Rate	Spread[5]
	- - - - - - - - cents per cwt. - - - - - - -					
BARLEY[1]						
1 car	197		91		86	
3 car	-		85	(6)	79	(7)
26 car	185	(12)	79	(6)	74	(5)
52 car	175	(10)	-		62	(12)
CORN[2]						
1 car	159		71		57	(eff. 8/16)
3 cars	-		69	(2)	-	
27 cars	131	(28)	66	(3)	50	(7)
54 car, MO	123	(8)	-		-	
54 car, SO	117	(6)	64	(2)	45	(5)
SOYBEANS[3]						
1 car	159		71		75	
3 car	-		69	(2)	71	(4)
27 car	131	(28)	66	(3)	61	(10)
54 car, MO	123	(8)	-		-	
54 car, SO	117	(6)	64	(2)	55	(6)
WHEAT[4]						
1 car	206		85		85	
26 car	191	(15)	74	(11)	74	(11)
52 car	175	(16)	65	(9)	65	(9)

[1]Per car rates for barley are based on 175,000 lbs./car.
[2]Per car rates for corn are based on 194,000 lbs./car.
[3]Per car rates for soybeans are based on 194,000 lbs./car.
[4]Per car rates for wheat are based on 198,000 lbs./car.
[5]Numbers in parentheses are the spreads between the rates.

SOURCE: Burlington Northern Tariff 4022-F, August 1, 1988.

INDUSTRY COMPETITION

The surrounding area has a large number of unit train shippers and therfore substantial competition for grain exists. Judging from the production and shipping patterns of corn in the counties, competition for this commodity prevents these two elevators from capturing a larger portion of this market.

The two county area has approximately 7 unit train shippers. These are located at Hatton, Finley, Hunter, Blanchard, Hillsboro, Mayville, and Clifford.

ELEVATOR FINANCIAL CONDITION

The annual financial statements from both elevators are analyzed here.

Portland

Portland Farmers Elevator Company is split into two divisions, the grain division and the dry edible bean division. This split occurred in 1982-83. The two divisions are reported separately in the annual reports. Emphasis will be placed on the grain division. The proceeds from grain over the past six years have averaged $179,472 and been within the approximate range of $104,000-220,000 with 1982-83 being the high and 1985-86 representing the low value (Table 6). The

average combined proceeds is $178,189 which is slightly below the average grain proceeds. Combined proceeds ranged from $(69,873) to $595,718, in 1983-84 and 1986-87 respectively. In the past two years the bean division has begun contributing to combined proceeds.

TABLE 6. FINANCIAL INFORMATION FOR PORTLAND FARMERS ELEVATOR COMPANY, 1981-82 TO 1986-87.

Year	Grain Proceeds	Combined Proceeds	Working Capital	Net Savings
	---------- dollars ----------			
1981-82	212,599.25	212,599.25	427,842.52	135,540.88
1982-83	220,478.60	137,552.38	451,773.45	110,407.00
1983-84	208,116.66	(69,872.76)	332,413.13	125,289.79
1984-85	147,675.32	57,773.34	358,231.33	29,919.67
1985-86	104,539.80	135,365.00	278,196.14	28,959.17
1986-87	183,424.19	595,718.18	727,068.72	93,358.70
Average	179,472.30	178,189.23	429,254.22	87,245.86

Working capital for the elevator has averaged $429,254 with a range of $278,196 to $727,068 (1985-86 and 1986-87 respectively). Net savings has varied from $28,959 to $135,540 (1985-86 and 1981-82 respectively) with an average of $87,245. Net savings has been decreasing in the past, but increased from $28,959 in 1985-86 to $93,358 in 1986-87.

The most recent year, 1986-87, was a good year financially for the Portland Farmers Elevator Company. All items shown were above the six year average, with combined

proceeds and working capital measuring the highest of the six years presented.

Portland Junction

Portland Junction Grain Company has averaged $145,227 in proceeds from grain over the past six years (Table 7). Proceeds have ranged from $96,518 to $196,313 (in 1985-86 and 1982-83 respectively).

TABLE 7. FINANCIAL INFORMATION FOR PORTLAND JUNCTION GRAIN COMPANY, 1981-82 TO 1986-87.

Year	Grain Proceeds	Working Capital	Net Savings
	dollars		
1981-82	124,400.04	106,642.95	29,306.49
1982-83	196,313,96	241,838.51	54,633.88
1983-84	168,159.87	240,898.73	674.82
1984-85	145,206.88	250,803.79	18,244.05
1985-86	96,518.07	53,061.54	24,063.44
1986-87	140,767.17	148,403.22	65,324.47
Average	145,227.67	173,608.12	32,041.19

Working capital has ranged from $53,061 to $250,803 (1985-86 and 1984-85 respectively) with an average of $173,608 over the past six years. Net savings has averaged $32,041 with a range of $674 to $65,324 (1983-84 and 1986-87 respectively).

The most recent year, 1986-87, was a good year finanically. Proceeds were slightly below the average, working capital was slightly above, and net savings were double the six year average.

MERGER ANALYSIS

TRANSPORTATION SAVINGS

In this section the potential for unit train shipments by merging Portland and Portland Junction will be analyzed. This analysis will only identify whether rate savings are great enough to compensate for the costs of trucking grain from Portland Junction to Portland. There is no facility upgrading needed and therefore no additional investment costs to analyze or justify.

The costs of trucking grain are $30/hour with 2 trips between the elevators possible per hour. This translates to a 3 cents per hundredweight trucking cost for wheat and barley. If the rail rate savings are greater than 3 cents per hundredweight then the savings justify the costs of trucking.

Close atttention should be given to this level of truck rate. At 3 round trips per hour, this $30 per hour rate is equivalent to approximately $1.11 per truck running mile. If only 2 trips per hour are made, this rate is equivalent to about $1.66 per running mile. For short distance trips, it may not be possible for a commercial motor carrier to sustain this rate level. Long distance grain truckers generally operate at a cost of about $0.90 to $1.10 per running mile.

Short distance or local truckers operate at a much higher per mile cost due to the higher proportion of loading/unloading time, slower speeds, and other factors. Local truck rates from other cooperatives who have significant movements among stations have been between $1.60 and $3.50 per running mile for distances similar to the Portland-Portland Junction situation. If may be wise to further investigate prevailing local truck rates and negotiate long-term agreements for local hauls.

The current rail rate spreads vary from 2 to 28 cents per cwt., enough savings to cover the costs of trucking. Therefore it is economically feasible for moving grain from Portland Junction to Portland by truck to fill unit trains. This conclusion would not change for wheat shipments until trucking costs increased to about $100 per hour for wheat shipments, assuming the rail rate savings remain the same.

Another factor that should be considered are the additional storage costs incurred in accumulating grain to be shipped by train. The additional costs of storage may be minimal or significant, depending on the policy developed for collecting grain for unit train shipment. For the smallest rate savings available (2 cents per cwt. for corn and soybeans) no storage charge could economically be incurred (2 cents rail rate savings minus 2 cent trucking costs).

However, for the largest rate savings (28 cents per cwt. for a 27-car shipment of corn to the PNW) a much higher storage cost could be incurred.

Table 8 depicts the monthly rail movements of hard red spring wheat from Portland and Portland Junction to Duluth and Minneapolis. The movements marked with an asterisk (*) are those large enough to have been shipped by train. From Portland there have been four such shipments in the past 43 months. There have been no such shipments from Portland Junction. When the shipments from both elevators to both destinations are combined, the number increases to six shipments in 44 months, three of which have occurred in the past seven months.

If rail and truck shipments of wheat are combined (Table 9) the number of possible train shipments increases to eleven. This is depicted in Figure 2. The bars that pass above the 80,000 bushels level are considered potential train shipments. A policy of preferring train shipments to other alternatives would be necessary to achieve this concentration of train shipments. This total also combines the Minneapolis and Duluth markets as if they are completely interchangeable. If they are not, the number of train shipments possible by elimination of trucking would total eight of 44 months.

TABLE 8. COMBINED PORTLAND AND PORTLAND JUNCTION MONTHLY RAIL SHIPMENTS OF HARD RED SPRING WHEAT

	Duluth/Superior	Minneapolis/St. Paul	Total
	bushels		
Crop Year 1984-85			
Jul 84	10,044	0	10,044
Aug 84	92,821*	29,117	121,938*
Sep 84	9,840	0	9,840
Oct 84	16,567	9,900	26,467
Nov 84	9,980	0	9,980
Dec 84	9,810	19,849	29,659
Jan 85	0	0	0
Feb 85	0	9,975	9,975
Mar 85	0	0	0
Apr 85	0	0	0
May 85	0	0	0
Jun 85	0	16,232	16,232
TOTAL 84-85	149,062	85,073	234,135
Crop Year 1985-86			
Jul 85	32,470	55,043	87,513*
Aug 85	0	9,567	9,567
Sep 85	9,684	0	9,684
Oct 85	13,064	0	13,064
Nov 85	0	0	0
Dec 85	0	0	0
Jan 86	0	12,932	12,932
Feb 86	0	0	0
Mar 86	0	8,280	8,280
Apr 86	0	16,290	16,290
May 86	0	0	0
Jun 86	0	0	0
TOTAL 85-86	55,218	102,112	157,330
Crop Year 1986-87			
Jul 86	39,583	122,174*	161,757*
Aug 86	59,028	0	59,028
Sep 86	0	22,920	22,920
Oct 86	0	0	0
Nov 86	0	0	0
Dec 86	0	33,000	33,000
Jan 87	0	0	0
Feb 87	0	0	0
Mar 87	0	12,984	12,984
Apr 87	0	9,801	9,801
May 87	0	0	0
Jun 87	0	0	0
TOTAL 86-87	98,611	200,879	299,490
Crop Year 1987-88			
Jul 87	85,800*	0	85,800*
Aug 87	0	85,800*	85,800*
Sep 87	0	0	0
Oct 87	0	0	0
Nov 87	0	0	0
Dec 87	83,889*	0	83,889*
Jan 88	0	0	0
Feb 88	0	0	0
YEAR TO DATE 87-88	169,689	85,800	255,489

* Indicates a possible 26-car unit train shipment (80,000 bu.)

TABLE 9. COMBINED PORTLAND AND PORTLAND JUNCTION MONTHLY RAIL AND TRUCK SHIPMENTS OF HARD RED SPRING WHEAT

	Duluth/Superior	Minneapolis/St. Paul	Total
	bushels		
Crop Year 1984-85			
Jul 84	38,450	18,294	56,744
Aug 84	142,750*	71,385	214,135*
Sep 84	38,468	21,884	60,352
Oct 84	41,567	19,530	61,097
Nov 84	40,679	25,132	65,811
Dec 84	35,927	24,244	60,171
Jan 85	1,803	6,241	8,044
Feb 85	14,964	42,719	57,683
Mar 85	6,107	55,647	61,754
Apr 85	10,343	39,850	50,193
May 85	16,416	55,852	72,268
Jun 85	911	86,492*	87,403*
TOTAL 84-85	388,385	467,270	855,655
Crop Year 1985-86			
Jul 85	41,888	126,253*	168,141*
Aug 85	3,552	16,552	20,104
Sep 85	27,923	28,988	56,911
Oct 85	18,338	2,567	20,905
Nov 85	8,603	7,738	16,341
Dec 85	12,087	11,464	23,551
Jan 86	20,199	23,069	43,268
Feb 86	2,893	11,297	14,190
Mar 86	6,326	26,755	33,081
Apr 86	17,880	55,643	73,523
May 86	10,266	25,312	35,578
Jun 86	21,704	20,109	41,813
TOTAL 85-86	191,659	355,747	547,406
Crop Year 1986-87			
Jul 86	92,060*	151,445*	243,505*
Aug 86	76,713	50,491	127,204*
Sep 86	32,724	52,444	85,168*
Oct 86	14,811	33,297	48,108
Nov 86	11,196	2,588	13,784
Dec 86	12,710	57,293	70,003
Jan 87	6,017	26,612	32,629
Feb 87	20,276	31,538	51,814
Mar 87	8,095	27,227	35,322
Apr 87	17,908	37,586	55,494
May 87	12,473	85,916*	98,389*
Jun 87	0	12,636	12,636
TOTAL 86-87	304,983	569,073	874,056
Crop Year 1987-88			
Jul 87	86,695*	54,077	140,772*
Aug 87	7,791	167,032*	174,823*
Sep 87	9,547	4,255	13,802
Oct 87	10,391	19,284	29,675
Nov 87	3,432	4,240	7,672
Dec 87	98,351*	30,486	128,837*
Jan 88	9,790	74,011	83,801*
Feb 88	5,739	66,910	72,649
YEAR TO DATE 87-88	231,736	420,295	652,031

* Indicates a possible 26-car unit train shipment (80,000 bu.)

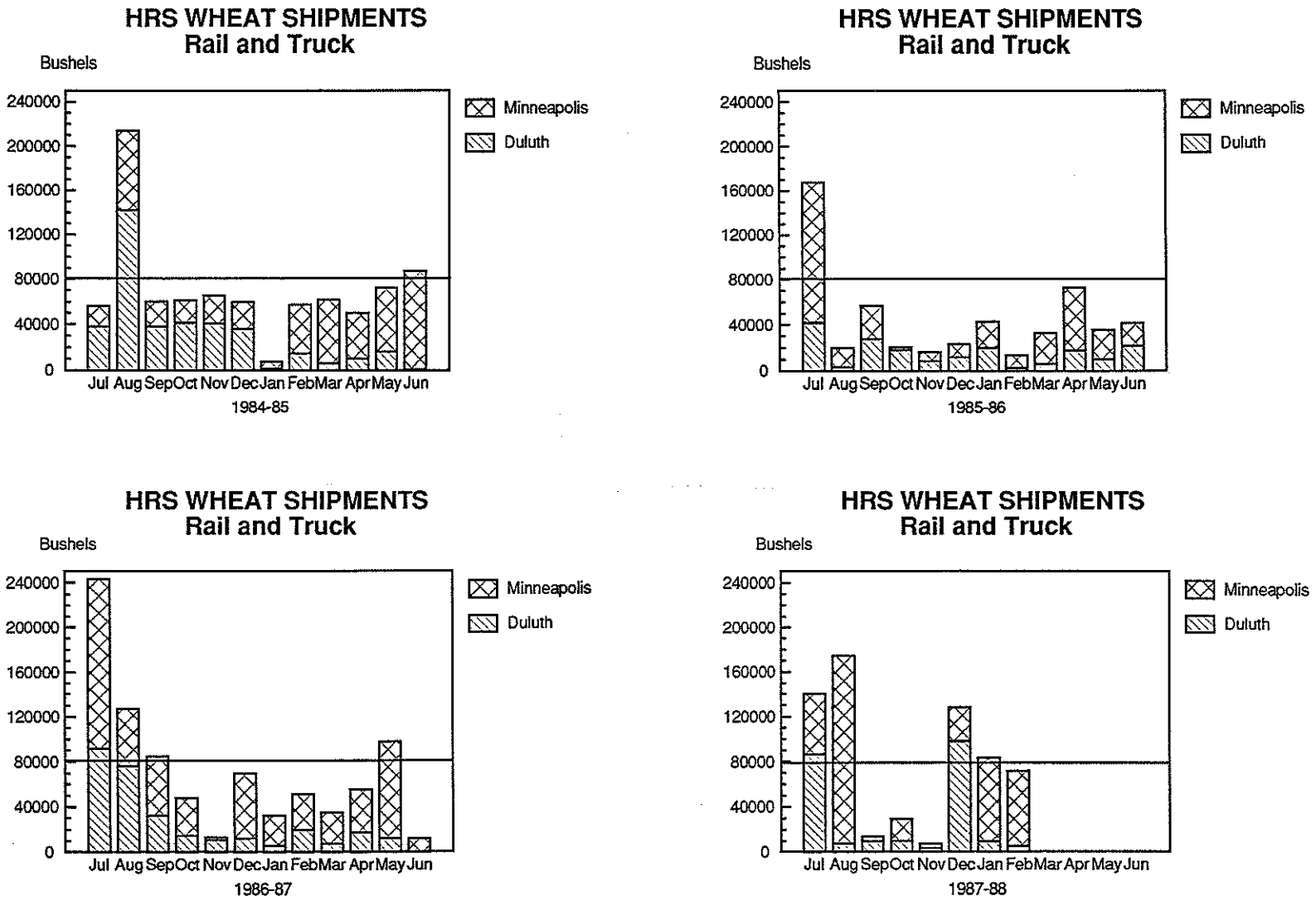


Figure 2. Monthly Shipments of HRS Wheat From Portland and Portland Junction to Minneapolis and Duluth Markets

Monthly barley shipments by rail from Portland and Portland Junction to Minneapolis and Duluth are shown in Table 10. Ninety thousand bushels of barley are required to fill a 26-car train. Each elevator had one shipment in the past 43 months that would have filled a unit train. Combining both elevators and both destinations this total increases to four possible train shipments. Table 11 shows the combined truck and rail shipments of barley from both elevators. If the elevators had combined shipments in the past 43 months there would have been three shipments possible to Minneapolis. If both destinations had been combined, six train shipments would have been feasible. This is represented graphically in Figure 3. Those months above the 90,000 bushels level represent possible train shipments.

TABLE 10. COMBINED PORTLAND AND PORTLAND JUNCTION MONTHLY RAIL SHIPMENTS OF BARLEY

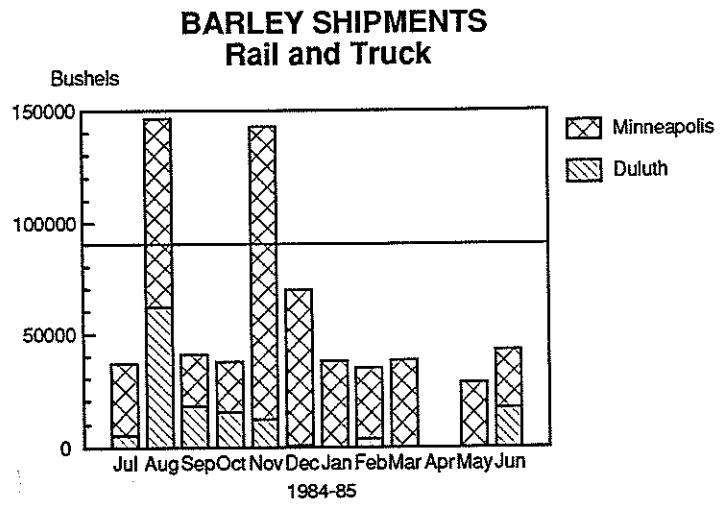
	Duluth/Superior	Minneapolis/St. Paul	Total
	bushels		
Crop Year 1984-85			
Jul 84	0	31,575	31,575
Aug 84	32,462	84,669	117,131*
Sep 84	11,430	22,972	34,402
Oct 84	15,284	22,539	37,823
Nov 84	7,825	130,698*	138,523*
Dec 84	0	68,485	68,485
Jan 85	0	38,059	38,059
Feb 85	0	31,143	31,143
Mar 85	0	38,178	38,178
Apr 85	0	0	0
May 85	0	22,812	22,812
Jun 85	16,955	25,947	42,902
TOTAL 84-85	83,956	517,077	601,033
Crop Year 1985-86			
Jul 85	0	10,895	10,895
Aug 85	0	72,726	72,726
Sep 85	0	21,721	21,721
Oct 85	0	0	0
Nov 85	0	36,919	36,919
Dec 85	0	37,580	37,580
Jan 86	0	25,966	25,966
Feb 86	0	22,147	22,147
Mar 86	0	11,250	11,250
Apr 86	0	0	0
May 86	0	0	0
Jun 86	0	3,750	3,750
TOTAL 85-86	0	242,954	242,954
Crop Year 1986-87			
Jul 86	0	51,893	51,893
Aug 86	34,948	107,598*	142,546*
Sep 86	0	28,090	28,090
Oct 86	0	0	0
Nov 86	10,249	32,215	42,464
Dec 86	20,197	62,930	83,127
Jan 87	10,771	37,946	48,717
Feb 87	0	32,506	32,506
Mar 87	0	71,309	71,309
Apr 87	0	73,528	73,528
May 87	0	22,320	22,320
Jun 87	0	36,821	36,821
TOTAL 86-87	76,165	557,156	633,321
Crop Year 1987-88			
Jul 87	0	130,181*	130,181*
Aug 87	0	3,565	3,565
Sep 87	0	14,400	14,400
Oct 87	0	36,079	36,079
Nov 87	0	58,168	58,168
Dec 87	0	54,601	54,601
Jan 88	0	25,442	25,442
Feb 88	0	0	0
YEAR TO DATE 87-88	0	322,436	322,436

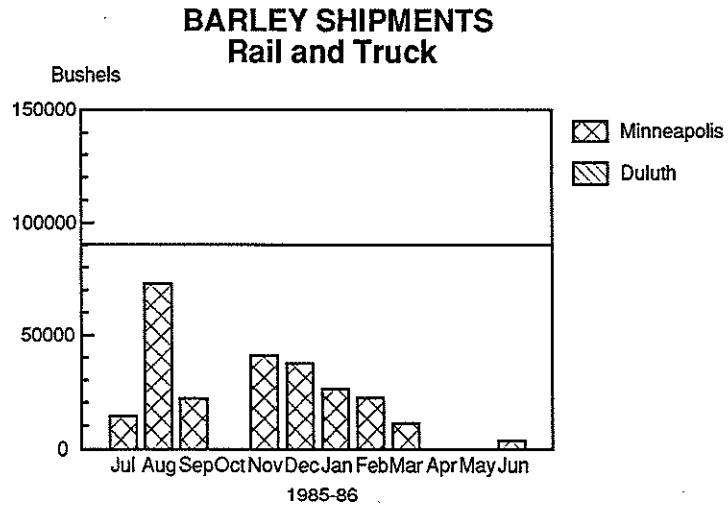
* Indicates a possible 26-car unit train shipment (90,000 bu.)

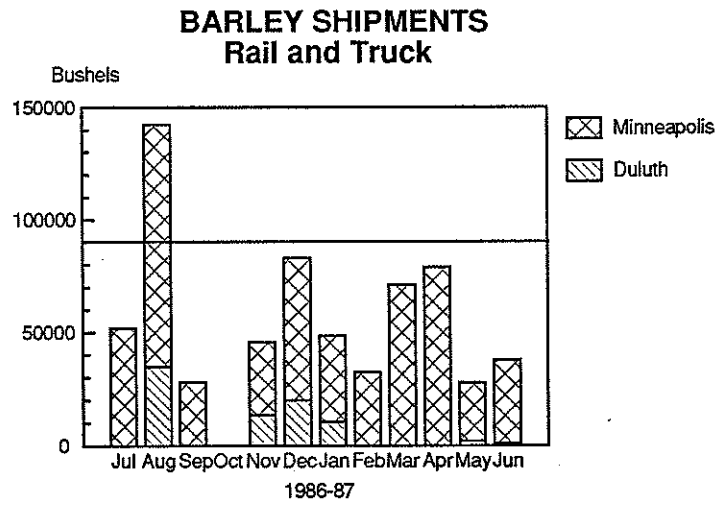
TABLE 11. COMBINED PORTLAND AND PORTLAND JUNCTION MONTHLY RAIL AND TRUCK SHIPMENTS OF BARLEY

	Duluth/Superior	Minneapolis/St. Paul	Total
	bushels		
Crop Year 1984-85			
Jul 84	5,381	31,575	36,956
Aug 84	62,051	84,669	146,720*
Sep 84	17,843	22,972	40,815
Oct 84	15,284	22,539	37,823
Nov 84	12,082	130,698*	142,780*
Dec 84	1,067	68,485	69,552
Jan 85	0	38,059	38,059
Feb 85	3,659	31,143	34,802
Mar 85	0	38,178	38,178
Apr 85	0	0	0
May 85	0	28,290	28,290
Jun 85	16,955	25,947	42,902
TOTAL 84-85	134,322	522,555	656,877
Crop Year 1985-86			
Jul 85	0	14,290	14,290
Aug 85	0	72,726	72,726
Sep 85	0	21,721	21,721
Oct 85	0	0	0
Nov 85	0	40,813	40,813
Dec 85	0	37,580	37,580
Jan 86	0	25,966	25,966
Feb 86	0	22,147	22,147
Mar 86	0	11,250	11,250
Apr 86	0	0	0
May 86	0	0	0
Jun 86	0	3,750	3,750
TOTAL 85-86	0	250,243	250,243
Crop Year 1986-87			
Jul 86	0	51,893	51,893
Aug 86	34,948	107,598*	142,546*
Sep 86	0	28,090	28,090
Oct 86	0	0	0
Nov 86	13,540	32,215	45,755
Dec 86	20,197	62,930	83,127
Jan 87	10,771	37,946	48,717
Feb 87	0	32,506	32,506
Mar 87	0	71,309	71,309
Apr 87	0	78,990	78,990
May 87	2,190	25,661	27,851
Jun 87	1,114	36,821	37,935
TOTAL 86-87	82,760	565,959	648,719
Crop Year 1987-88			
Jul 87	7,630	132,300*	139,930*
Aug 87	16,407	3,565	19,972
Sep 87	24,148	14,400	38,548
Oct 87	6,493	86,644	93,137*
Nov 87	30,346	72,792	103,138*
Dec 87	3,211	62,411	65,622
Jan 88	0	28,969	28,969
Feb 88	0	7,475	7,475
YEAR TO DATE 87-88	88,235	408,556	496,791

* Indicates a possible 26-car unit train shipment (90,000 bu.)







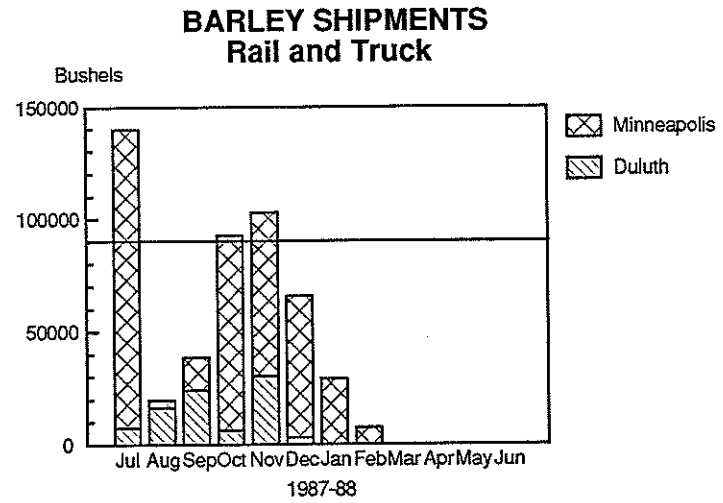


Figure 3. Monthly Barley Shipments From Portland and Portland Junction to Minneapolis and Duluth Markets

OTHER POTENTIAL SAVINGS

There may be incentives for merger other than strictly the rail rate savings through expanded unit train shipments. Other factors to consider may include:

1. Savings in general expenses. The largest component of country elevator expenses is salary and salary-related costs. The potential for cost savings from salary-related cuts appears to be limited, particularly if volume is expected to increase as a result of merger. The potential for savings in non-salary expenses appears to be even more limited. Volume related expenses may actually increase if successful unit train operations lead to increased volumes. Other expenses such as insurance, professional fees, meetings, etc. cannot be expected to decrease substantially (if at all) because of merger.
2. House specialization. Due to the variety of crops grown in the area, some benefits from merger may accrue due to dedicating each station or bin group to particular commodities. These savings may be especially obvious when crops such as malting barley, sunflowers, and high quality wheats are grown. Given that both Portland and Portland Junction are currently significant shippers of most of these crops already,

the benefits from house specialization may not be significant.

3. Blending and other merchandising opportunities. Because of potentially greater volumes, there may be more occasions to blend grains for better selling opportunities. These benefits are also difficult to quantify and may not be significant, especially since the two stations are less than five miles apart.
4. Rail shipping capacity expanded. The ability of the collective organization to ship by rail may be enhanced due to expanded unit train shipping. Railroads are arguably more prone to provide better service to unit train shippers than to single car shippers. This may include better car supply, better rate negotiations, and other volume/size related matters.
5. Management specialization. Some larger co-ops report efficiency gains due to specialization of labor and management after merger. In the case of two single station co-ops merging, however, the scale of operation may not justify such specialization.

REASONS FOR NOT CONSIDERING MERGER

There also may be reasons for not considering a merger, and these may be as important to consider as reasons favoring merger.

1. Maintain local competitive atmosphere. Remaining separate as compeitiors may actually be in the best interest of patrons, although the co-op structure would likely compensate for any loss in price competition caused by merger.
2. Eliminate reorganizational costs. Costs of merging the two cooperatives may not be as substantial as investments in facilities, but would undoubtedly include some legal, accounting, and other expenses.
3. Road damage reduced. Some local road deterioration will no doubt result from continuous semi-truck shipments between Portland and Portland Junction. Costs of local road damage from inter-elevator grain shipments are not costs that have to be internalized by the cooperative. Patrons and other residents however, may disapprove of the road damage and this may reflect poorly on the cooperative. However, if the two co-ops enter into informal grain buying transactions, and the local trucking takes place even without the merger.

4. Patron attitudes. One final consideration which may have the greatest impact on the merger decision is the attitudes of co-op patrons toward merger. The perceived loss of local control has been a problem for some merger situations. An effective educational program on the benefits of merger can help allay some of these concerns, if, in fact, benefits from merger exist.

CONCLUSIONS

The trend in the country elevator industry has been towards larger, multi-plant facilities. Often the best way to achieve this growth is through merger. The success of these organizations has been mixed. For some it has been the only way to remain in business, for others it has greatly expanded their operations and made them more efficient. Still others have not been able to make the merger work.

The current environment has generated new problems that should also be considered. The 1988 drought has cut production drastically and will reduce volumes at virtually all stations. How severe and lasting these problems will be is yet to be determined. Their effects will have an impact on the short-term profitablity and perhaps on the acceptability of a merger.

The decision to merge should be based on the ability to build additional revenue or to acheive cost savings. Cost savings are usually the result of transshipment to take advantage of rail rate savings. Other cost savings might also dictate a merger.

In North Dakota, elevators with predominatly westbound shipments are more apt to have successful mergers. This is due to larger rate spreads for westbound shipments, and the improved service given to unit train shippers over single car shippers. The density of elevators in the western part of the state is

also more conducive to the multi-plant structure.

Elevators in the eastern part of North Dakota have fewer reasons to merge. The density of elevators makes transshipment less practical. Farmers can often haul to more than one elevator less than ten miles away and are less likely to pay for double-handling in this type of environment. Eastbound shipments do not have as favorable a rate spread as those on westbound shipments. The variety of crops grown in the east generates fewer high volume commodities. This is somewhat offset by the higher production densities in this part of the state.

In the case of Portland-Portland Junction there does not appear to be many compelling reasons to merge at this time. The number of additional unit train shipments possible through merger is marginal at best. There are no significant general expense savings except for dubious cuts in personnel/salaries. The function of the second house after merger is open to question.

It is recommended that an informal buying/selling arrangement be undertaken for a period of time. If the arrangement provided for higher grain volumes and considerable savings through expanded unit train operations this analysis should be reviewed and updated. If soybean shipments, especially, begin to increase the potential for merger could

change. If there are other reasons for merging that have not been addressed here, their impacts on the organizations should also be studied.

Additional information on the merger decision may be pursued with the Federal Bank for Cooperatives and private consultants.