

**NORTH DAKOTA GRAIN TRANSPORTATION
THE CURRENT SITUATION AND
SOME THOUGHTS ON THE FUTURE**

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UGPTI Staff Paper No. 6

December 1979

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North Dakota producers, as you are well aware of, continue to experience a shortage of transportation to move their production to the terminal markets of Duluth/Superior, Minneapolis/St. Paul, and the Pacific Northwest. This shortage which began in October of 1977 and has lasted for more than two years is by far not the only transportation problem that faces North Dakota producers. I would like to take time to address some of the other transportation problems which impact North Dakota farmers, what the underlying reasons for the transportation shortage are and finally a peek at the crystal ball to see what the future holds.

Recent shipments of North Dakota grain and oilseeds to terminal markets can best be described as erratic from year to year. North Dakota grain shipments have ranged from 300 to 450 million bushels per year, a difference of 150 million bushels between the lowest movement and the highest movement in the last ten years. This erratic movement is visually represented in Figure 1. The peak movements during the 1972 through 1974 and the 1977 through 1979 crop years resulted in a transportation shortage which was typified by a shortage of rail cars and a period when trucks increased their percentage of the market share as well as a tremendous increase in the total volume handled by truck. Deviations below the average have also occurred during the past ten years which has resulted in declining truck market share and idled railroad rolling stock.

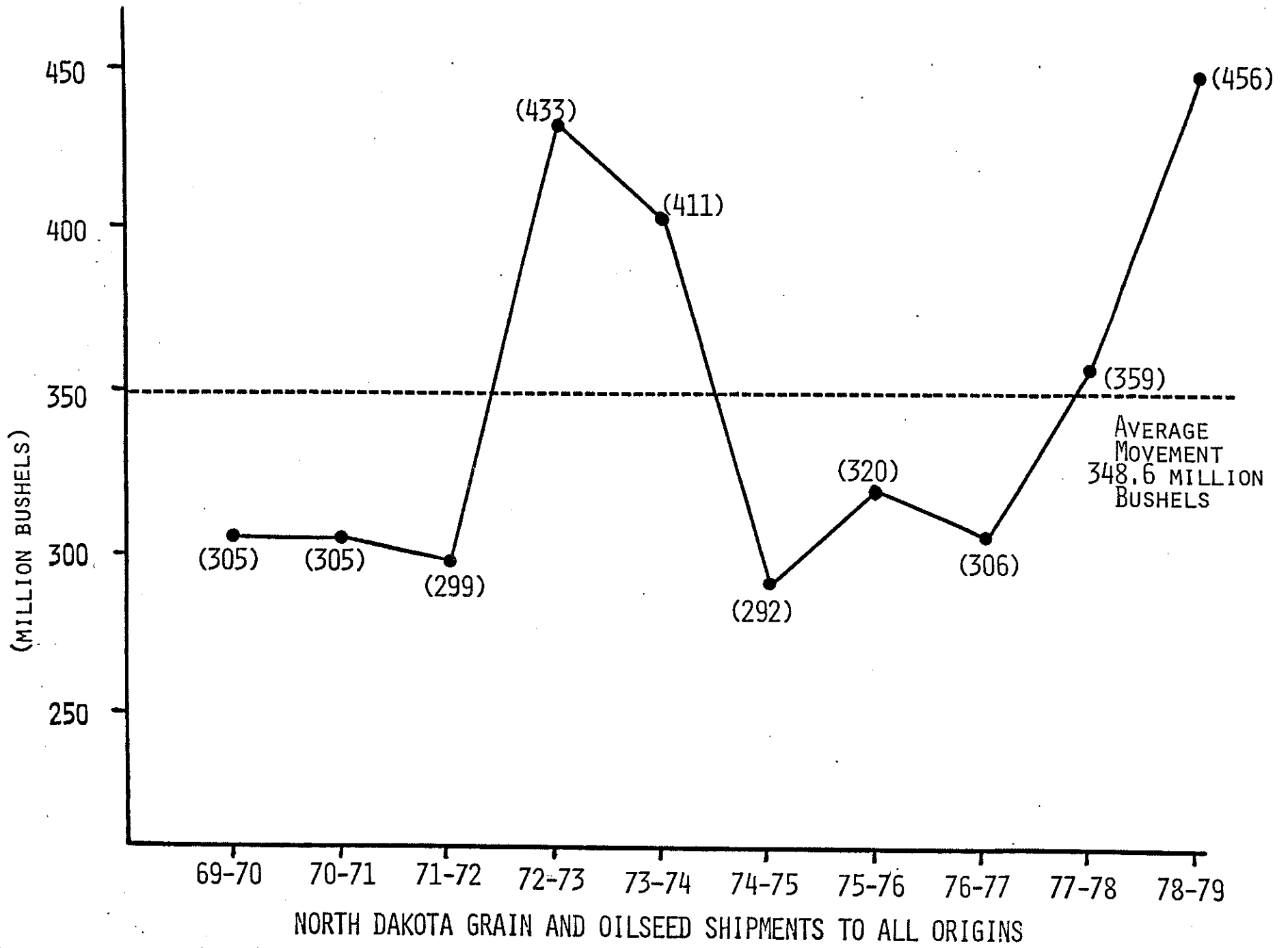


FIGURE 1

The primary reason for this volatility in movement of North Dakota grain and oilseeds is the fluctuations in export demand for those commodities. The domestic demand for the commodities produced in North Dakota is relatively constant from year to year. The peak movement periods identified earlier coincide with periods of heavy export demand with Russia being the most visible component, not necessarily the largest component, of that demand during the 1972 through 1974 and 1977 through 1979 crop years. This is not a mere coincidence and it exemplifies the fact that the demand for transportation is a derived demand. The demand for transporting North Dakota commodities to the terminal markets is derived from the domestic and export demand at those terminal markets. The shortage of transportation during periods creates a problem for both the producers, the transportation agent regardless whether it be a railroad or a truck firm. The producer finds himself unable to ship his commodity when prices are favorable or at much higher rates and a feast or famine situation exists for truckers and railroads. A conflict arises between shipper and transportation agent as a result of this problem.

Solutions to this problem are not readily apparent and it appears, at least in the near future, it is a problem that will have to be dealt with on a continuing basis. To affect the situation would require a corresponding change in the underlying reason for the volatile movement which is export demand. However, if the movement which we have experienced in the past twenty-four months becomes a consistent volume in the future it is reasonable to expect that the transportation industry will continue to expand capacity and meet the demand for their services. This is highly probable and is evidenced by the number of rail cars on order which is the highest since the post-Korean-war period.

Another note of optimism is the sunflower movement which will at some time even out if for no other reason than lack of physical inputs and slowing technological change. Sunflower movements have increased with the increase in production and thus have added to the peaking problems experienced in the most two recent crop years. As this movement levels out over time and is distributed more evenly throughout the year the transportation industry should be able to catch up with demand.

A statement from USDA's office of transportation sums it up quite well:

"Supply of equipment to move grain is still short of demand. However, record amounts of grain are moving through the marketing chain. October appears to be a record export month and November is starting off in fine fashion. Barge loadings are high, the unshipped balance of export sales is high and car loadings are respectable.

The St. Lawrence Seaway has extended its season until December 18th. The whole Milwaukee system is operating and the Rock Island is operating under directed service. Although we cannot be satisfied until supply of equipment meets demand—things could be a lot worse."

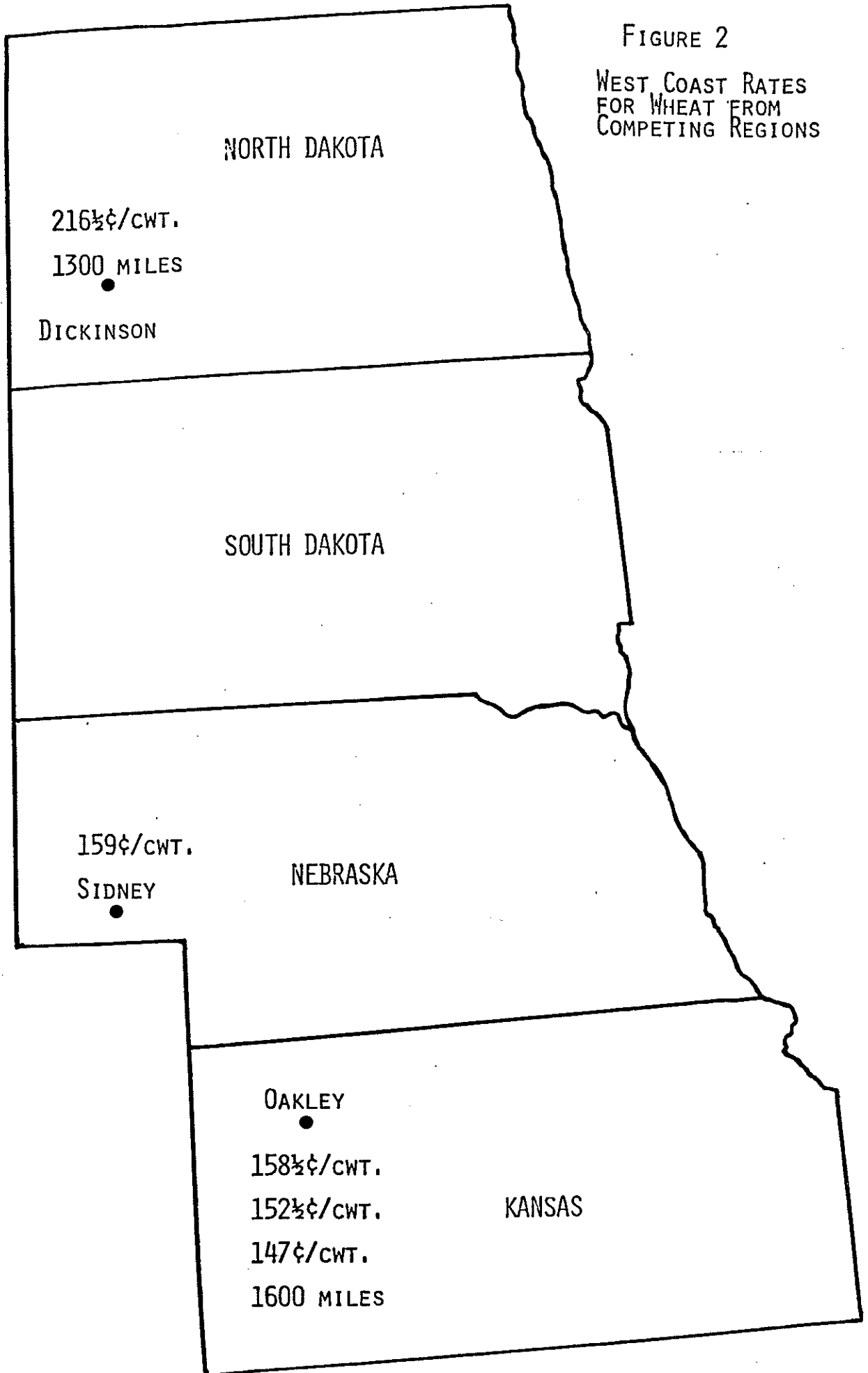
I would also have to say that the system will always have some constraints regardless of what happens. Another area of concern for North Dakota producers is competition from competing geographical areas. Competition from other producing areas will occur when a like commodity is produced or a commodity with a high degree of substitutability is produced in another region. An example of such a commodity and region is the hard red winter wheat production in Kansas and Nebraska and the hard red spring wheat production in Canada. Competition from such areas does not generally adversely affect the nation's economy as a whole although there can be regional and area

affects; nor, is such competition offensive from a parochial point of view in the long run unless one competing producing region has obtained an unfair transportation advantage as compared to another region.

A case of such competition currently exists and is likely to worsen in the very near future. The case that I refer to is that of rail rates for hard red winter wheat from Nebraska to the Pacific Northwest on the Union Pacific and the Burlington Northern Railroads. Western Nebraska currently has a single car rate of 159 cents per cwt for wheat moving to the Pacific Northwest for export on the Union Pacific and a similar rate exists for the Burlington Northern. Bearing in mind that there is a great deal of substitutability between hard red winter and hard red spring, North Dakota's rate to the same ports, which involves a shorter distance, is 216½ cents per cwt as is shown in Figure Two. The difference between the two rates is currently 57½ cents per cwt or 34.5 cents per bushel. Such a rate differential will make it more difficult to sell North Dakota wheat for export on the Pacific Northwest particularly in light of changing baking technology, high protein hard red winter crops, growing markets in the far east, percentage rate increases and ocean rate differentials preferring the PNW by \$7.00/ton over the gulf. It should be noted that the Pacific Northwest export market is important to North Dakota wheat producers accounting for twenty percent of our hard red spring shipments which amounted to thirty-five million bushels in 1978 through 1979.

The situation may deteriorate even farther with the filing of additional decreases and multiple car rates by the Union Pacific for Nebraska and Kansas for wheat to the West Coast ports. The Union Pacific currently plans to offer twenty-five car multiple origin rates of 158½ cents per cwt, twenty-five car single origin rates of 152½ cents and fifty car rates of 147 cents from western Kansas to West Coast ports served by the

FIGURE 2
WEST COAST RATES
FOR WHEAT FROM
COMPETING REGIONS



Union Pacific. Rates from Denver and extreme western Nebraska will be even lower. The difference between the Kansas rate and North Dakota rate will then be seventy cents per cwt or nearly forty-two cents per bushel. The effect of such a rate differential is and will be hotly debated. The largest issue may well be the effect that such a differential will have on North Dakota's participation in a growing Far East market, particularly if the Peoples' Republic of China makes a decision to buy large amounts of U.S. wheat off the West Coast ports. The question also arises whether the Burlington Northern will meet such rate competition in Nebraska, Kansas, and North Dakota. Historically, the BN has met the U.P. competition in Nebraska, Kansas, and North Dakota. Historically, the BN has met the U.P. competition in Nebraska, however they have not, up to now, adjusted North Dakota rates in response to such interregional competition. A matter of time will certainly reveal the Burlington Northern's intentions.

Another rate matter of concern to North Dakota producers are the barley rates into the terminal markets and the barley and wheat proportional rates beyond the Minneapolis/St Paul terminal markets. The intermarket proportional rates are relatively low commodity rates on grain between markets which can only be obtained if the grain moves into the originating market by rail. For example, the rate on barley and wheat from Minneapolis to Chicago is 74 cents/cwt if the grain moves into Minneapolis by rail (proportional rate). However, if the same grain moves into Minneapolis by truck the rate between Minneapolis and Chicago is 106 cents/cwt (the flat rate) which is 43 cents/cwt higher. The differential between the rates ties the traffic to the railroads. However, barley movements to the Duluth/Superior market are subject to intermodal (truck vs. rail) competition because of the export nature of the movement which results in varying market shares for the two modes.

The result of intermarket proportionals is a monopoly priced rail rate for barley to the Minneapolis/St. Paul markets, a durum movement which is tied heavily to the railroads (85 percent rail in 1978-1979), and truck discounts for trucked durum. A court decision in the Chicago Board of Trade case forced the railroads to charge the same rate for grain outbound from Chicago by rail regardless of the mode by which it came inbound. Such a case may be brought by the North Dakota Public Service Commission and the North Dakota State Wheat Commission. If such a case were successful the results are not certain at this time. It is thought by some that the railroads would still enjoy the monopoly movement of barley because of the nature of trading barley and the desire of the malting trade to buy and sell barley in the accustomed manner. The opposite proposition is that it would certainly do no harm for the producer and could well enhance his marketing and transportation capabilities. The durum movement would be expected to be more competitive with the trucks increasing their share of the modal split and a potential reduction in truck discounts.

The future of grain and oilseed transportation is certainly anything but clear for North Dakota producers. Although I am not certain what changes will take place I am certain that change will take place in the future and those changes may have a definite impact on agriculture in North Dakota.

One area of which is already changing in the railroad industry is the ownership of rolling stock. The size of the private fleet of cars is increasing on a daily basis both in absolute numbers and in proportions to the railroad fleet of cars. As of October 15 of this year ownership of the covered hopper grain car fleet consisted of 58 percent railroad owned and 42 percent privately owned cars (104,900 versus 748,000 cars respectively). Comparatively, one year ago from October 15 the figures were 63 percent and 37 percent

respectively. This trend will more than likely continue until the entire car fleet is in equilibrium with the demand for cars in spite of the fact that it is generally a more expensive means of shipping grain as compared to shipping grain in railroad owned equipment. The ability to move grain, even at additional cost, has resulted in a competitive advantage for those shippers with equipment in the past two years. This trend is encouraged by the matching system used by some railroad companies. However, if excess capacity arises at some point in the future, due to reduced shipments or tremendous increases in capacity, a reassessment of ownership will take place. Inflation may offset any losses that might be incurred in such a situation though.

Along similar lines transportation will probably be used increasingly as a marketing tool for grain merchandisers. Previous to the current car shortage grain sales on a to-arrive basis were made with little risk involved. However, that is not the case today and adding to the problem is the high carrying cost as a result of high interest rates.

Also looming ahead of us is the prospect of inland subterminals or large country elevator operations if you will and correspondingly larger grain shipments, and a very real potential reduction in the existing rail network now in place in North Dakota. A chicken and egg question arises at this juncture, which comes first, reduction in rail network, multiple car rates if at all, capital investment in high throughput grain handling facilities or large shipments from existing facilities. I suspect that it will not be clearly evident in the future if any one change occurred first but rather continuous change will take place in very complex economic system.

As the capital in our existing country grain handling system becomes physically depreciated out decisions regarding reinvestment will be made. This will not take place over night but will happen gradually over a number of years. Similarly a rationalization

of our branch line network will take place simultaneously and will affect the decisions regarding reinvestment. At some point for several reasons multiple car rates may enter the transportation arena of North Dakota. Rather than rate concessions for multiple car movements however, they may take the form of penalties for single car movements.

Finally ever increasing energy costs will have dramatic effects to the extent that truck costs will increase correspondingly giving railroads an ever increasing economic advantage.