

**TRUCK AND RAIL SHIPMENTS  
OF GRAIN FROM NORTH DAKOTA  
COUNTRY ELEVATORS 1972-1973**

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**UGPTI Publication No. 25**

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**in cooperation with**

**North Dakota State Wheat Commission  
Bismarck, North Dakota  
and  
North Dakota Public Service Commission  
Bismarck, North Dakota**

## PREFACE

This report represents a continuation of analyses concerned with the patterns and methods of distributing grain from North Dakota. This series began with the analysis of 1956-57 data and was published in Agricultural Economics Report 14, Department of Agricultural Economics, North Dakota State University. Subsequent years' data were analyzed in Agricultural Economics Reports 15, 17, 44 and 57, and Agricultural Experiment Station Bulletin 462. The compilation and analysis of the data for the year 1967-68 in this series were assumed by the Upper Great Plains Transportation Institute. Also, the data representing the 1967-68 period were the first results of the requirements of the North Dakota Public Service Commission that all North Dakota elevators report monthly movements of grain by truck and rail. Prior to 1967-68, the data had been estimated from questionnaires completed by a small portion or sample of country elevators.

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TRUCK AND RAIL SHIPMENTS OF GRAIN FROM NORTH DAKOTA  
COUNTRY ELEVATORS, 1972-1973

ABSTRACT

This report represents a continuation of analyses concerned with the patterns and methods of distributing grain from North Dakota.<sup>1</sup> The collection and compilation of this type of data began in 1956-57. The contents of this report, like its predecessors, is designed to provide the necessary data base for identifying trends in the distribution of grains from North Dakota.

Inspection of the compiled data indicates that crop year 1972-73, in comparison to previous years, continued the significant change in the methods of marketing grain from North Dakota which first appeared in 1971-72. For example, the proportion of Hard Red Spring and Durum Wheat shipped from North Dakota by truck steadily grew from 15.0 percent in 1958-59 to 39.3 percent in 1970-71. The data for 1971-72 indicated a dramatic drop in truck market share for this grain by over 10 percent. In other words, a traditional and obvious 13 year trend appeared to have been reversed. It is likely that the primary cause of this down-turn was the introduction by the railroads of the 25 percent rate reduction on wheat moving to eastern markets from North Dakota, which came into effect in December, 1971. For the second year in a row, truck market share of Hard Red Spring Wheat to Duluth-Superior has fallen: from 55.3 percent in 1970-71 to 28.1 percent in 1971-72, to 13.6 percent in 1972-73. The wheat east-bound rate reduction by the railroads appears to have been extremely effective in regaining a significant portion of the grain traffic from North Dakota, previously lost to the truck. The distributional pattern of all grains exported from North Dakota, however, followed the traditional trend with over 90 percent moving east-bound to the terminal markets in Minneapolis-St. Paul and Duluth-Superior. Therefore, while the distribution patterns have not changed significantly since the previous year, the distribution methods have.

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<sup>1</sup>See Agricultural Economics Reports 14, 15, 17, 44, and 57 and Agricultural Experiment Station Bulletin 462, and Upper Great Plains Transportation Institute Reports 14, 16, 17, 22, 23, and 24, North Dakota State University, Fargo, North Dakota.

## TRUCK AND RAIL SHIPMENTS OF GRAIN FROM NORTH DAKOTA COUNTRY ELEVATORS, 1972-1973

This report represents a continuation of analyses concerned with the patterns and methods of distributing grain from North Dakota. The collection and compilation of this type of data began in 1956-57. The contents of this report, like its predecessors, is designed to provide the necessary data base for identifying trends in the distribution of grains from North Dakota.

### Objective of Report

The major emphasis in this report is to illustrate the distribution methods and patterns of grain from North Dakota origins. In addition, to demonstrate the seasonality of grain shipments from North Dakota, trends in shipments by months are identified. The patterns of distribution and monthly shipments for 1972-73 are compared to previous years' data.

### Scope of Report

The data was tabulated according to the major characteristics which describe commodity flows. The major characteristics considered were: origin of shipment, destination of shipment, type of commodity shipped, mode of shipment, and time of shipment. These characteristics are defined as follows:

Origin of Shipments: The nine crop reporting districts in North Dakota (See Figure 1).

Destination of Shipments: Duluth-Superior, Minneapolis-St. Paul, Other Minnesota, Sioux City-Omaha-Kansas City, Other East and South, Midland States, North Pacific Ports, Northwest States, West, In-State, and Unknown Destinations.<sup>2</sup>

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<sup>2</sup>The market of Minneapolis-St. Paul includes Savage and Shakopee; Other Minnesota relates to Red Wing, Hastings, New Ulm, and Mankato; Other East and South is composed of Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania, New York, Rhode Island, Vermont, Maine, New Hampshire, Massachusetts, Delaware, New Jersey, Connecticut, Maryland, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, and Virginia; Midland States includes the states of Nebraska, Kansas, Iowa, Missouri and South Dakota; Southwest States includes the states of Wyoming, Utah, Texas, Colorado, Arizona, New Mexico, Oklahoma, and Nevada; North Pacific Ports includes the ports of Portland, Seattle, Astoria, Vancouver, Longview, Tacoma, and Kalama; and Northwest States includes Montana, Idaho, Washington, and Oregon.

Types of Commodities (grain): Hard Red Spring Wheat, Durum Wheat, Barley, Oats, Rye and Flax.

Mode of Shipment: Rail or truck. In addition the movement of noncompetitive Commodity Credit Corporation (CCC) grain by rail is specified.

Time of Shipment: In terms of both specified months and years.

#### Source of Data

The data used to analyze the distribution pattern for July, 1971 through June, 1972 were obtained from all country elevators in North Dakota. The source of the data is the North Dakota Public Service Commission's "Grain Movement Reports." As in previous UGPTI reports, the data were obtained and analyzed by crop reporting district (Figure 1). Every country elevator in North Dakota is required to assemble and submit to the Public Service Commission such information desired by the Commission on a monthly basis.

#### Organization of the Remainder of the Report

While the same commodity flow characteristics are considered in this report as in previous reports of this nature, there is a difference in the organization and presentation of the material. The commodity flow characteristic "type of grain" is used to delineate major sections of the report. That is, each type of grain; wheat, barley, oats, rye and flax, has its own major section. The sections are presented in the order just indicated. In addition, the major section relating to all wheat is broken into two subsections, one concerned with Hard Red Spring wheat, the other subsection with Durum wheat.

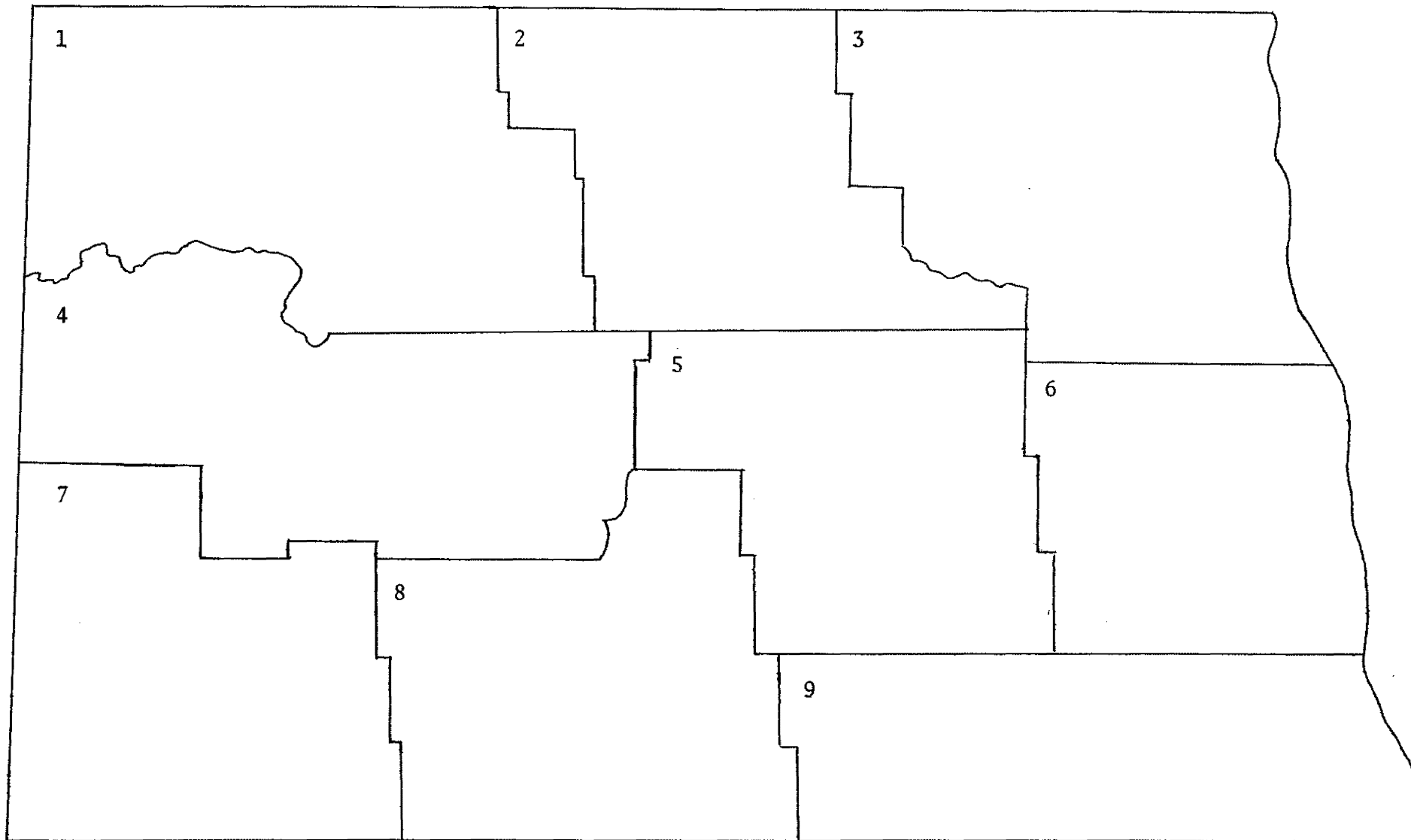


Figure 1. North Dakota Crop Reporting Districts.

## Wheat

This section of the report is divided into three parts. The first part addresses itself toward all wheat (aggregation of Durum and Hard Red Spring wheats). Durum and Hard Red Spring wheats are then dealt with separately in the remaining two parts of this section.

### All Wheat

During the 1972-73 crop year, 43,552,000 bushels of wheat were exported out of the state of North Dakota by truck, representing 15.8 percent of all wheat exported from the state (Table 1 and Figures 2 and 3). In the previous crop year, 1971-72, in contrast, almost 52,000,000 bushels were transported by truck representing 27.7 percent of the wheat transported out of the state of North Dakota during that crop year. In other words, the railroads increased their share of the wheat transportation market from 72.3 percent in 1971-72 to 84.2 percent in 1972-73, an increase of 11.9 percent. In comparison, from 1967-68 to 1970-71, railroad's market share fell from 73.8 percent to 60.7 percent, for a net loss in four years of 13.1 percent. The railroads have more than regained in the last two years what they had lost in the previous three years.

The southwestern and northeastern areas of the state (Crop Reporting Districts 7 and 3) reflected the highest use of trucks in 1972-73. That is, out of every 100 bushels transported out of Crop Reporting District 7, 22.1 bushels were transported by truck. The figure for Crop Reporting District 3 is 22.4 bushels per 100. At the other extreme, only 9.3 bushels out of every 100 bushels were transported by truck from crop reporting district 9 (southeast) in 1972-73.

Crop Reporting District 3 had been the primary source of trucked wheat in North Dakota for the last four crop years, where over 1 out of 4 bushels of wheat trucked out of the state of North Dakota originated in this Crop Reporting District (Table 2). In contrast, Crop Reporting Districts 4 and 9 in North Dakota originated less than 5 percent of all wheat shipped out of the state of North Dakota by truck in 1972-73. The northern third of North Dakota (Districts 1, 2, and 3) originated 50 out of every 100 bushels trucked from the state in 1972-73, while the southern portion originated only 24. In 1972-73 the eastern portion (Districts 3, 6 and 9) of the state was the dominant source of wheat shipped by truck from North Dakota, originating 45 percent of all trucked wheat. The eastern dominance was much less obvious in 1971-72 when 38 percent of all wheat transported by truck from North Dakota originated in Districts 3, 6 and 9. The western districts declined in prominence showing a decrease from 36.8 percent in 1971-72 to 23.8 percent in 1972-73. The central districts remained relatively stable as sources of trucked wheat.

The 1972-73 crop year saw the rise in importance of Other Minnesota markets and West Ports and States, primarily at the expense of North Dakota's traditional market of Duluth-Superior. During the four previous crop years, roughly 60 to 70 percent of all wheat trucked from the state of North Dakota was destined for Duluth-Superior (Table 3). However, in 1972-73 only 53.4 percent was destined for this market. While in 1968-69 less than 1 out of 4 bushels trucked from North Dakota was transported to the primary market of Minneapolis-St. Paul, in 1972-73 almost 4 out of 10 bushels went by this mode in this direction. After eight years of declining importance, the wheat market in Minneapolis-St. Paul regained and surpassed the prominence it held in 1963-64. The two primary markets of Minneapolis-St. Paul and Duluth-Superior received 88.9 percent of all wheat shipped by truck from the state of North Dakota in 1972-73 compared to 97.2 percent in 1971-72.

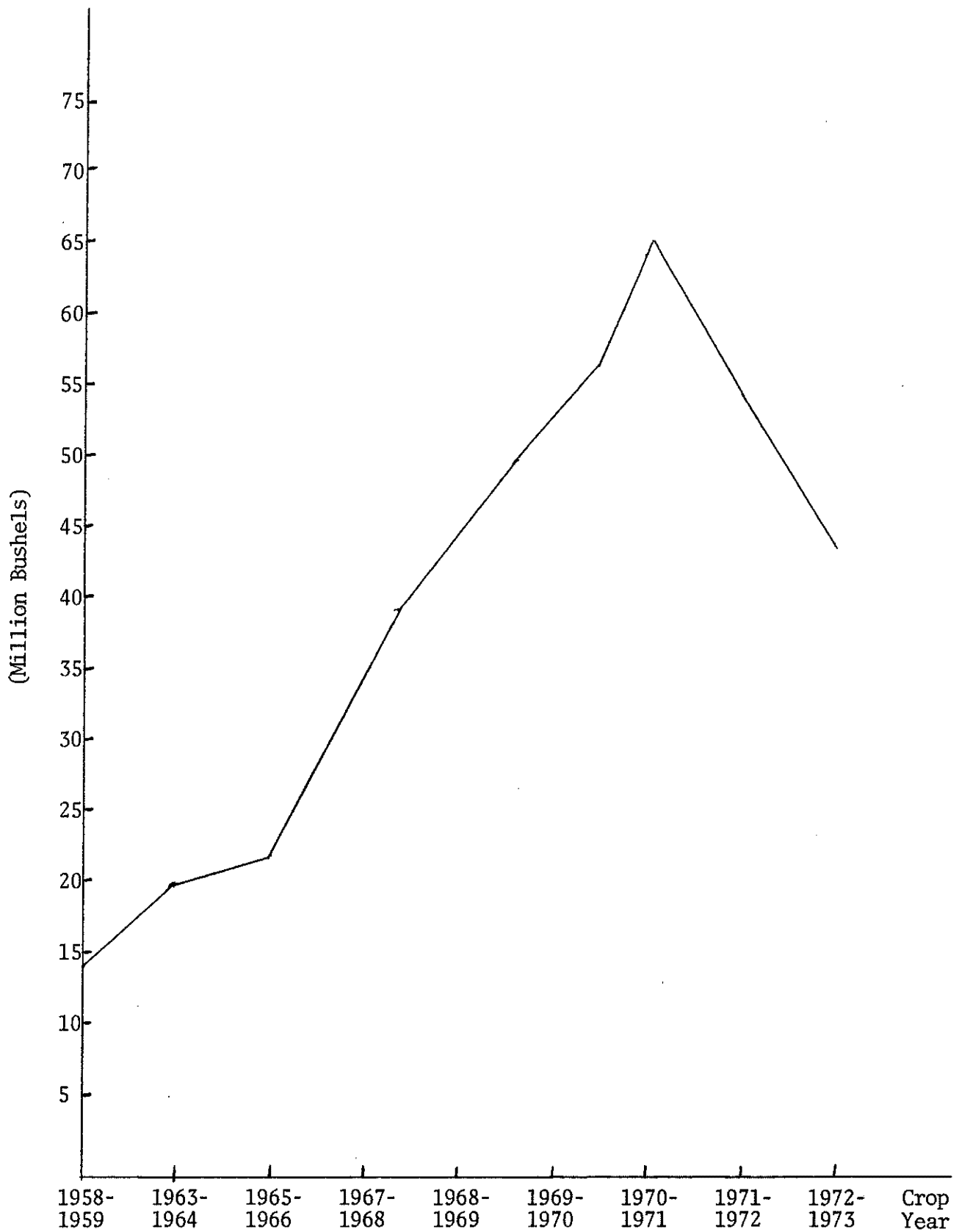


Figure 2. Total Volume of All Wheat Shipped by Truck to All Destinations from North Dakota Country Elevators, 1958-1959 through 1972-1973.

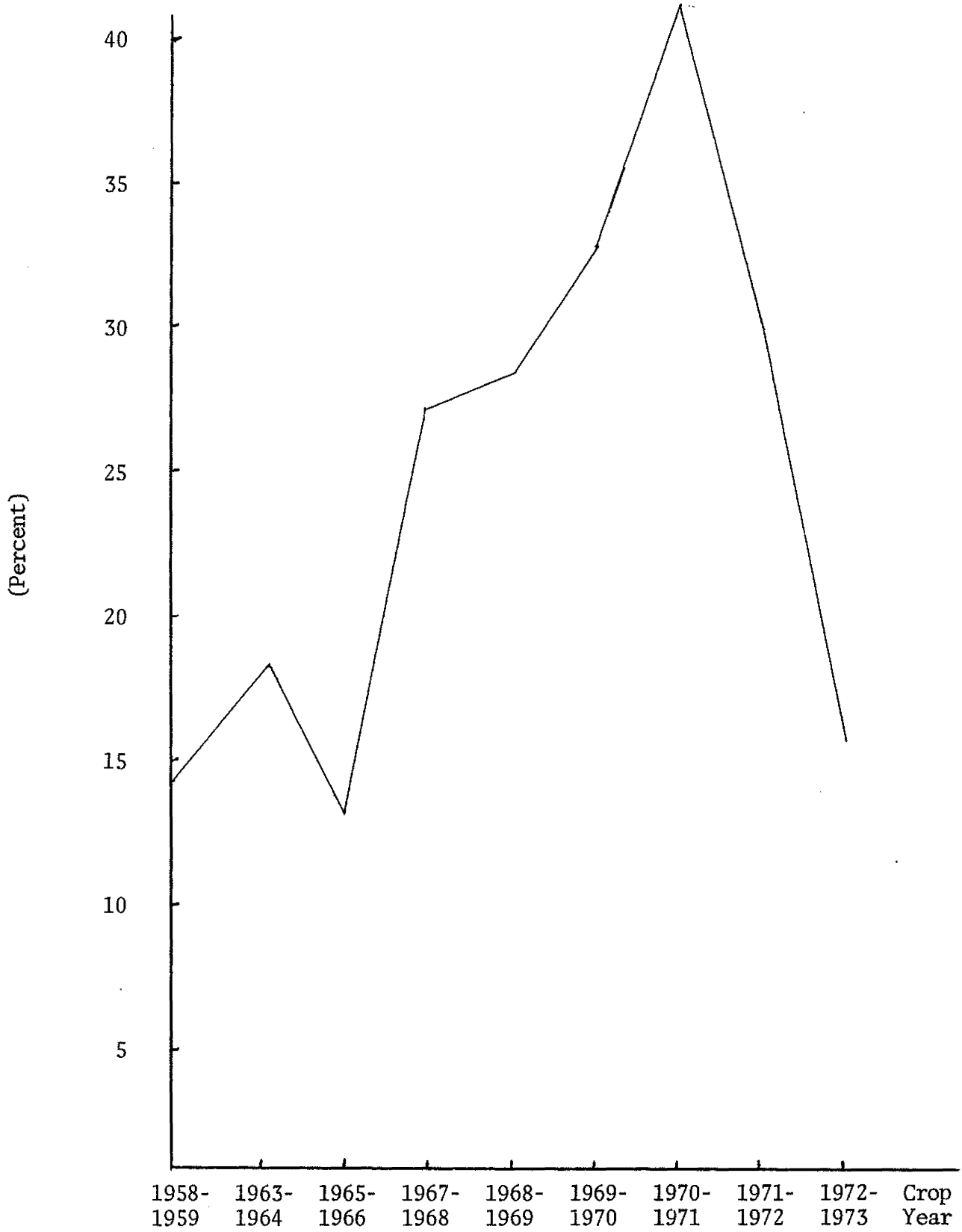


Figure 3. Percent of All Wheat Shipped by Truck from North Dakota Country Elevators, 1958-1959 through 1972-1973



TABLE 1. TOTAL VOLUME AND PROPORTION OF ALL WHEAT SHIPPED BY TRUCK ORIGINATING FROM EACH CROP REPORTING DISTRICT, 1963-1964 THROUGH 1972-1973 (bushels in thousands).

Crop Reporting District	Wheat Shipped by Truck													
	1963-1964		1965-1966		1967-1968		1969-1970		1970-1971		1971-1972		1972-1973	
	BU	%	BU	%	BU	%	BU	%	BU	%	BU	%	BU	%
1	5,328	22.1 <sup>a</sup>	2,446	7.4	7,392	32.2	8,836	24.5	9,450	30.9	8,857	29.4	6,708	12.0
2	2,848	25.0	3,404	19.4	6,633	39.5	6,555	38.9	8,734	52.3	6,178	27.7	3,445	13.1
3	1,817	8.0	2,088	6.8	7,324	20.0	15,295	40.4	18,236	55.4	13,301	28.0	11,797	22.4
4	301	4.2	1,130	10.7	1,943	20.4	2,912	23.7	3,670	35.7	3,719	33.8	1,966	9.8
5	1,079	12.0	825	7.9	2,602	19.4	3,117	19.2	4,268	19.9	3,441	18.3	3,399	12.8
6	1,083	11.1	1,256	7.9	3,953	21.3	7,084	37.1	7,522	45.6	3,924	26.0	5,816	19.0
7	4,230	30.9	4,083	24.7	4,993	32.3	5,716	32.9	5,538	39.1	5,715	37.6	6,053	22.1
8	1,466	34.0	3,036	34.1	3,240	36.6	3,605	34.0	3,494	41.6	3,474	27.0	2,426	16.3
9	668	10.1	752	7.9	2,160	18.1	2,484	23.8	3,236	29.0	2,679	18.4	1,942	9.3
State Total	18,820	17.3	19,020	12.4	40,240	26.1	55,866	31.3	64,149	39.3	51,829	27.7	43,552	15.8

<sup>a</sup>For example, 22.1 percent (5,328,000) of all wheat shipped out of Crop Reporting District 1 in 1963-1964 was shipped by truck.

TABLE 2. PROPORTION OF ALL WHEAT SHIPPED FROM NORTH DAKOTA BY TRUCK ORIGINATING FROM EACH CROP REPORTING DISTRICT, 1963-1964 THROUGH 1972-1973.

Crop Reporting District	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
	(percent)							
1	28.3 <sup>a</sup>	12.9	18.4	14.7	15.8	14.7	18.8	15.4
2	15.1	17.9	16.5	13.3	11.7	13.6	11.8	7.9
3	9.7	11.0	18.2	24.8	27.4	28.4	25.4	27.1
4	1.6	5.9	4.8	5.1	5.2	5.7	7.1	4.5
5	5.7	4.3	6.5	6.5	5.6	6.7	6.6	7.8
6	5.8	6.6	9.8	13.0	12.7	11.7	7.5	13.4
7	22.5	21.5	12.4	11.0	10.2	8.6	10.9	13.9
8	7.8	15.9	8.1	6.8	6.5	5.4	6.6	5.6
9	3.5	4.0	5.4	4.8	4.4	5.0	5.1	4.5
State Total <sup>b</sup>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>a</sup>For example, of all wheat shipped out of North Dakota by truck in 1963-1964, 28.3 percent originated in Crop Reporting District 1.

<sup>b</sup>May not add to 100 percent due to rounding.

TABLE 3. MAJOR DESTINATIONS OF ALL WHEAT SHIPPED BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS, 1963-1964 THROUGH 1972-1973.

Destination	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
	(percent)							
Minneapolis-St. Paul	36.9	27.2	31.4	24.1	30.5	28.6	38.8	35.5
Duluth-Superior	59.3	53.4	63.5	72.3	66.0	67.7	58.4	53.4
Other Minnesota	----	8.3	2.0	2.2	1.8	2.2	1.5	6.9
East and South	----	----	1.4	0.5	0.1	0.4	0.6	1.4 <sup>d</sup>
Midland and Southwest States	----	----	0.9	0.4	0.6	0.6	0.4	0.5
West Ports and States	----	4.9 <sup>a</sup>	0.1	0.1	0.5	0.2	----	1.0
In-State	3.8	6.2	0.4	0.3	0.3	0.1	--- <sup>b</sup>	
Unknown	----	----	0.2	0.1	0.1	0.2	0.2	1.5 <sup>e</sup>
Total <sup>c</sup>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>a</sup>Midland and Southwest States and West Ports and States aggregated in 1965-1966 analysis.

<sup>b</sup>Less than 0.1 percent.

<sup>c</sup>May not total to 100.0 percent due to rounding.

<sup>d</sup>Includes Sioux City-Omaha-Kansas City miscellaneous destinations.

<sup>e</sup>For definitions of destinations see footnote 2 in text. This applies to all other tables in describing destination information.

## Hard Red Spring Wheat

Over 190 million bushels of Hard Red Spring wheat were shipped out of North Dakota between July, 1972, and June, 1973, of which 81 percent (156,922,000 bushels) was shipped to the primary markets of Duluth-Superior and Minneapolis-St. Paul (Table 4). Crop Reporting District 3 was the primary source of Hard Red Spring wheat for the markets of Duluth-Superior, Minneapolis-St. Paul, Other East and South, and Miscellaneous. Crop Reporting District 1 was the primary source for Hard Red Spring destined westward. Crop Reporting District 7 was the primary source of Hard Red Spring wheat shipped to Other Minnesota markets, Sioux City-Omaha-Kansas City, and the Midland and South-west States (Table 5).

During 1972-73 trucks transported 16.0 percent of all the Hard Red Spring wheat destined from the state of North Dakota to Duluth-Superior, compared to 35.0 percent in the previous crop reporting year, 1971-72. Similarly, trucks showed a significant drop from 32.1 percent in 1971-72 to 23.8 percent in 1972-73 in the Minneapolis-St. Paul market. Trucks, however, gained in Other Minnesota markets showing an increase from 16.7 percent in 1971-72 to 25.1 percent in 1972-73 (Table 6).

During the 1972-73 crop year, 41,458 truck loads and 67,405 rail car loads of Hard Red Spring wheat were transported from the state (Table 7). The average volume per truck was 809 bushels and for rail car, 2,320 bushels. Rail car loadings more than doubled over the previous crop year while truck loadings were down by almost 9,000. Commodity Credit Corporation loadouts totaled 768 in 1972-73 compared to 2,614 in 1971-72.

Average monthly marketings of Hard Red Spring wheat during crop year 1972-73 was 16.0 million bushels, with a low in July, 1972, of 11.1 million bushels and a high of 22.8 million bushels in August, 1972 (Table 8 and Figure 4). Average monthly shipments by rail were approximately 13.0 million bushels, achieving a low in July, 1972, of 7.4 million bushels and a high during August, 1972, of 18.4 million bushels. Shipment by trucks averaged approximately 2.8 million bushels per month.

TABLE 4. SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972 THROUGH JUNE, 1973.

Origin and Mode	D E S T I N A T I O N S								Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland and Southwest	West	Misc.	
(000 bushels)									
CRD 1									
Rail	12,085	6,251	710	128	315	339	4,617	451	24,897
Truck	1,833	1,923	94	57	66	61	127	12	4,174
CCC	6	15	0	0	0	0	202	81	304
Total	13,924	8,189	804	185	381	400	4,946	544	29,357
CRD 2									
Rail	6,187	1,870	346	7	80	124	1,099	111	9,825
Truck	804	402	41	1	3	3	1	6	1,260
CCC	0	0	0	0	0	0	53	4	57
Total	6,991	2,272	387	8	83	127	1,153	121	11,142
CRD 3									
Rail	13,120	6,224	1,465	20	462	417	256	1,003	22,967
Truck	6,784	1,361	118	0	28	32	2	24	8,349
CCC	32	11	0	0	0	0	29	172	244
Total	19,936	7,596	1,583	20	490	449	287	1,199	31,560
CRD 4									
Rail	6,291	4,996	466	0	109	84	2,349	61	14,356
Truck	470	820	153	13	52	5	14	9	1,537
CCC	74	29	0	0	0	0	207	20	330
Total	6,835	5,845	619	13	161	89	2,670	90	16,223
CRD 5									
Rail	9,733	3,939	600	23	184	185	1,270	83	16,018
Truck	1,224	1,167	107	7	163	5	7	4	2,685
CCC	12	3	6	0	0	0	0	13	36
Total	10,969	5,109	713	30	347	190	1,277	100	18,802

TABLE 4 (Continued)

Origin and Mode	D E S T I N A T I O N S								Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland and Southwest	West	Misc.	
(000 bushels)									
CRD 6									
Rail	15,771	4,464	1,241	42	337	332	35	78	22,300
Truck	2,725	2,600	205	12	51	18	0	20	5,631
CCC	10	29	0	0	0	0	124	165	329
Total	18,506	7,093	1,446	54	388	350	159	263	28,260
CRD 7									
Rail	4,643	7,778	984	309	356	424	4,577	195	19,266
Truck	596	3,728	1,132	13	38	51	170	39	5,766
CCC	24	3	3	0	7	0	40	0	77
Total	5,263	11,509	2,119	322	401	475	4,787	234	25,109
CRD 8									
Rail	4,989	4,208	480	17	223	189	1,236	21	11,364
Truck	494	1,368	352	70	1	7	0	106	2,398
CCC	63	26	1	0	0	0	99	10	200
Total	5,546	5,602	833	87	224	196	1,335	137	13,962
CRD 9									
Rail	7,592	6,501	765	8	209	149	138	53	15,415
Truck	393	1,134	161	10	3	16	0	2	1,719
CCC	2	111	0	0	0	17	10	51	192
Total	7,987	7,746	926	18	212	182	148	106	17,326
STATE									
Rail	80,411	46,232	7,058	553	2,275	2,244	15,579	2,057	156,409
Truck	15,323	14,504	2,363	183	406	198	322	222	33,519
CCC	225	227	12	0	7	17	765	516	1,768
Total	95,959	60,963	9,433	736	2,688	2,459	16,666	2,795	191,696

TABLE 5. PERCENT OF TOTAL HARD RED SPRING WHEAT SHIPPED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT; 1968-1969 THROUGH 1972-1973.

Crop Reporting District and Selected Years	D E S T I N A T I O N S												Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland States	South-west States	North Pacific Ports	North-west States	West	In-State	Unknown	
	(percent)												
CRD 1													
1968-1969	10.4	14.6	13.6	49.5	29.7	8.6	100.0	16.2	19.7	10.0	23.4	--	13.7
1969-1970	13.2	18.3	8.5	54.9	17.7	2.8	25.1	18.8	27.8	38.6	11.1	11.6	17.5
1970-1971	9.1	19.6	1.0	0.2	13.7	28.7	8.9	25.5	27.5	19.7	3.5	1.3	14.9
1971-1972	13.4	16.9	5.7	22.4	16.4	9.9	8.2	6.5	7.9	21.0	7.5	26.2	14.9
1972-1973	14.5	13.4	8.5	25.1	14.7	16.3 <sup>a</sup>				29.7 <sup>b</sup>	19.5 <sup>c</sup>		15.3
CRD 2													
1968-1969	5.8	3.1	2.2	1.0	--	--	--	17.7	13.2	0.5	1.1	15.9	6.1
1969-1970	6.9	4.5	5.7	1.1	6.5	1.3	33.1	14.3	12.3	0.7	4.8	2.2	6.1
1970-1971	7.2	3.9	2.3	--	3.2	1.7	37.8	19.8	15.1	0.3	1.0	1.3	6.1
1971-1972	10.2	5.3	2.7	8.0	7.2	2.4	2.8	--	1.5	0.7	3.1	0.6	7.3
1972-1973	7.3	3.7	4.1	1.1	3.1	5.2				6.9	4.3		5.8
CRD 3													
1968-1969	22.3	14.2	5.5	4.1	--	1.4	--	3.1	11.2	21.8	41.2	27.3	16.4
1969-1970	27.9	13.5	4.6	5.4	0.9	0.6	37.9	0.7	3.0	2.1	34.5	--	16.7
1970-1971	20.7	13.8	3.2	0.2	7.5	5.8	2.2	9.0	7.2	2.1	18.6	6.6	15.8
1971-1972	24.2	19.5	21.3	--	13.8	20.3	9.2	--	3.4	5.1	14.3	1.9	20.9
1972-1973	20.8	12.5	16.8	2.7	18.3	18.3				1.7	42.9		16.5
CRD 4													
1968-1969	7.7	8.9	3.8	0.7	--	--	--	13.0	7.4	1.7	4.6	--	8.3
1969-1970	7.2	7.9	8.3	0.3	3.6	1.5	--	21.8	9.4	5.8	9.6	5.9	8.1
1970-1971	6.2	6.2	15.4	0.5	1.0	3.2	--	12.8	5.9	8.1	10.1	18.6	6.5
1971-1972	6.2	7.0	7.2	5.4	3.6	4.4	13.6	44.6	17.1	5.8	6.5	3.0	6.7
1972-1973	7.1	9.6	6.6	1.7	6.0	3.6				16.0	3.2		8.5

TABLE 5 (continued)

Crop Reporting District and Selected Years	D E S T I N A T I O N S												Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux-City-Omaha-Kansas City	Other East and South	Midland States	South-west States	North Pacific Ports	North-west States	West	In-State	Unknown	
	(percent)												
CRD 5													
1968-1969	11.2	8.5	6.3	8.7	10.8	0.5	--	12.3	14.9	23.3	12.0	15.9	10.5
1969-1970	9.1	9.1	9.4	--	31.6	0.2	--	7.0	7.6	7.4	9.2	17.7	8.8
1970-1971	14.1	10.2	9.2	--	10.0	2.8	34.4	9.2	12.5	41.8	5.4	15.2	13.3
1971-1972	12.2	11.5	11.6	2.3	9.4	12.3	5.9	--	1.0	0.6	8.0	15.2	11.2
1972-1973	11.4	8.4	7.6	4.1	12.9	7.7				7.7	3.6		9.8
CRD 6													
1968-1969	21.4	14.7	12.3	--	27.0	1.3	--	2.4	1.3	23.0	12.5	--	15.0
1969-1970	17.4	13.0	14.1	1.1	8.9	1.6	--	0.3	1.1	2.7	20.3	22.1	12.8
1970-1971	13.1	13.4	14.1	7.2	3.7	8.5	--	0.3	1.6	2.4	29.0	2.7	11.9
1971-1972	16.7	3.9	25.5	4.0	19.5	16.2	7.7	1.0	0.3	6.3	52.8	8.8	11.3
1972-1973	19.3	11.6	15.3	7.3	14.4	14.2				1.0	9.4		14.7
CRD 7													
1968-1969	10.2	12.5	38.5	17.0	32.5	83.4	--	26.0	14.6	5.9	1.2	18.2	13.3
1969-1970	9.7	12.2	29.0	22.6	16.3	71.4	3.9	23.1	24.4	21.3	2.0	25.0	13.7
1970-1971	7.1	12.5	42.1	73.8	49.5	38.0	7.8	14.8	19.3	14.5	2.6	31.8	11.4
1971-1972	5.9	12.8	8.6	30.3	17.4	24.3	46.8	46.9	66.5	47.7	4.0	25.4	11.6
1972-1973	5.4	18.9	22.5	43.8	14.9	19.3				28.7	8.4		13.1
CRD 8													
1968-1969	6.6	7.6	5.0	19.0	--	3.4	--	6.4	14.9	2.7	2.8	4.5	7.7
1969-1970	5.2	9.2	9.8	12.8	5.3	20.0	--	12.5	13.4	14.6	0.9	0.7	8.5
1970-1971	18.7	8.1	2.4	17.3	5.7	6.8	8.9	6.8	8.5	7.9	16.1	4.0	12.9
1971-1972	4.4	8.6	5.9	23.3	6.9	6.6	1.8	--	2.3	9.7	--	6.3	6.4
1972-1973	5.8	9.2	8.8	11.8	8.3	8.0				8.0	4.9		7.3



TABLE 5 (continued)

Crop Reporting District and Selected Years	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux-City-Omaha-Kansas City	Other East and South	Midland States	South-west States	North Pacific Ports	North-west States	West	In-State	Unknown	Total
(percent)													
CRD 9													
1968-1969	4.4	15.9	12.8	--	--	1.4	--	2.9	2.7	11.2	1.2	18.2	9.0
1969-1970	3.4	12.3	10.6	1.8	9.2	0.6	--	1.5	1.0	6.8	7.6	14.8	7.8
1970-1971	3.8	12.3	10.3	0.8	5.7	4.5	--	1.8	2.4	3.2	13.7	18.5	7.2
1971-1972	6.8	14.5	11.5	4.3	5.8	3.6	4.0	1.0	--	3.1	3.8	12.6	9.7
1972-1973	8.3	12.7	9.8	2.4	7.9	7.4				0.9		3.8	9.0
TOTAL													
1968-1969	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1969-1970	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1970-1971	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1971-1972	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972-1973	100.0	100.0	100.0	100.0	100.0	100.0				100.0		100.0	100.0

<sup>a</sup>For year 1972-1973 Midland States and Southwest States were combined.

<sup>b</sup>For year 1972-1973 North Pacific Ports, Northwest States and West were combined.

<sup>c</sup>For year 1972-1973 Instate and Unknown were combined.

TABLE 6. PROPORTION OF HARD RED SPRING WHEAT SHIPPED BY RAIL, TRUCK AND CCC (RAIL) TO EACH DESTINATION; 1967-1968, 1968-1969, 1969-1970, 1970-1971, 1971-1972 and 1972-1973.

Year and Mode	D E S T I N A T I O N S											
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland States	South-west States	North Pacific Ports	North-west States	West	Instate	Unknown
(percent)												
<b>Rail</b>												
1967-1968	63.1	76.3	19.8	46.1	2.9	38.3	50.0	99.7	99.8	--	93.1	--
1968-1969	51.7	76.1	26.5	16.3	89.2	69.2	100.0	99.8	99.7	--	94.8	--
1969-1970	45.6	68.6	29.3	4.8	68.3	91.4	52.5	98.0	98.8	--	93.1	--
1970-1971	44.2	60.9	28.9	75.7	57.4	52.9	90.4	98.7	98.6	--	93.0	--
1971-1972	64.7	65.4	83.3	42.7	66.8	86.8	86.4	89.7	90.2	--	91.6	20.7
1972-1973	83.8	75.8	74.8	75.1	84.6	91.3 <sup>a</sup>				93.5 <sup>b</sup>	73.6 <sup>c</sup>	
<b>Truck</b>												
1967-1968	36.4	22.9	80.2	53.9	97.1	61.7	50.0	0.3	0.2	--	6.9	100.0
1968-1969	47.7	22.9	73.5	83.7	10.8	30.8	--	0.2	0.3	--	5.2	100.0
1969-1970	53.9	27.2	70.7	95.2	31.7	8.6	47.5	2.0	1.2	--	6.9	100.0
1970-1971	55.3	35.8	71.1	24.3	42.6	47.1	9.6	1.3	1.4	--	7.0	100.0
1971-1972	35.0	32.1	16.7	57.3	33.2	13.2	13.6	10.3	9.8	--	8.4	79.3
1972-1973	16.0	23.8	25.1	24.9	15.1	8.1				1.9	7.9	
<b>CCC</b>												
1967-1968	0.5	0.8	--	--	--	--	--	--	--	100.0	--	--
1968-1969	0.6	1.0	--	--	--	--	--	--	--	100.0	--	--
1969-1970	0.5	4.2	--	--	--	--	--	--	--	100.0	--	--
1970-1971	0.5	3.3	--	--	--	--	--	--	--	100.0	--	10.9
1971-1972	0.3	2.5	--	--	--	--	--	--	--	100.0	--	--
1972-1973	0.2	0.4	0.1	--	0.3	0.7				4.6	18.5	

a,b,c See footnotes, Table 5.

TABLE 7. AVERAGE VOLUME OF HARD RED SPRING WHEAT SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT; 1969-1970, 1970-1971, 1971-1972 AND 1972-1973.

Origin and Mode	Number of Cars				Number of Trucks				Average Volume			
	1969-1970	1970-1971	1971-1972	1972-1973	1969-1970	1970-1971	1971-1972	1972-1973	1969-1970	1970-1971	1971-1972	1972-1973
CRD 1												
Rail	5,543	4,326	4,428	11,088	--	--	--	--	2,494	2,414	2,343	2,245
Truck	--	--	--	--	7,498	6,866	7,996	4,464	804	763	751	935
CCC	673	587	652	140	--	--	--	--	2,360	2,285	2,219	2,171
CRD 2												
Rail	1,905	1,458	2,587	4,263	--	--	--	--	2,359	2,316	2,238	2,305
Truck	--	--	--	--	3,171	4,222	3,492	1,605	797	788	831	785
CCC	121	89	48	26	--	--	--	--	1,969	2,422	2,273	2,192
CRD 3												
Rail	4,540	3,497	6,816	10,310	--	--	--	--	2,383	2,181	2,333	2,228
Truck	--	--	--	--	10,890	12,220	10,382	10,230	817	812	830	816
CCC	234	166	198	104	--	--	--	--	2,308	2,229	2,724	2,346
CRD 4												
Rail	2,878	1,630	1,946	5,727	--	--	--	--	2,410	2,390	2,400	2,507
Truck	--	--	--	--	3,245	3,894	3,763	1,997	778	764	788	770
CCC	160	231	198	139	--	--	--	--	2,279	2,299	2,217	2,374
CRD 5												
Rail	3,278	2,957	4,609	7,099	--	--	--	--	2,300	3,009	2,305	2,256
Truck	--	--	--	--	3,025	4,267	3,406	3,379	788	787	783	795
CCC	311	910	58	15	--	--	--	--	2,243	2,569	2,232	2,400
CRD 6												
Rail	3,974	3,096	5,192	9,624	--	--	--	--	2,229	2,158	1,795	2,317
Truck	--	--	--	--	7,906	8,498	7,905	7,122	788	784	798	791
CCC	98	107	234	140	--	--	--	--	2,510	2,312	2,218	2,350

TABLE 7 (continued)

Origin and Mode	Number of Cars				Number of Trucks				Average Volume			
	1969- 1970	1970- 1971	1971- 1972	1972- 1973	1969- 1970	1970- 1971	1971- 1972	1972- 1973	1969- 1970	1970- 1971	1971- 1972	1972- 1973
CRD 7												
Rail	4,487	2,823	2,372	7,934	--	--	--	--	2,211	2,479	2,438	2,428
Truck	--	--	--	--	7,011	6,750	7,026	7,509	790	774	769	768
CCC	458	335	815	35	--	--	--	--	2,170	2,328	3,377	2,200
CRD 8												
Rail	2,764	1,537	1,696	4,933	--	--	--	--	2,182	2,222	2,389	2,304
Truck	--	--	--	--	4,592	4,079	3,816	3,012	770	771	778	796
CCC	278	185	309	80	--	--	--	--	2,172	2,550	2,164	2,500
CRD 9												
Rail	2,854	2,411	3,775	6,427	--	--	--	--	2,294	2,221	2,420	2,398
Truck	--	--	--	--	2,957	3,106	2,992	2,140	789	831	763	803
CCC	212	115	102	89	--	--	--	--	2,160	2,230	2,185	2,157
STATE												
Rail	32,223	23,735	33,421	67,405	--	--	--	--	2,326	2,389	2,282	2,320
Truck	--	--	--	--	50,295	53,902	50,778	41,458	795	787	790	809
CCC	2,542	2,085	2,614	768	--	--	--	--	2,254	3,143	2,611	2,302

TABLE 8. MONTHLY SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972 - JUNE, 1973

Origin and Mode	MONTHS ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
(000 bushels)													
CRD 1													
Rail	1,509	2,951	2,765	2,521	2,273	1,870	1,727	1,505	1,285	1,697	2,525	2,268	24,896
Truck	436	406	285	297	249	189	208	262	1,085	257	207	293	4,174
CCC	100	89	104	6	--	--	--	--	--	3	2	--	304
Total	2,045	3,446	3,154	2,824	2,522	2,059	1,935	1,767	2,370	1,957	2,734	2,561	29,374
CRD 2													
Rail	661	1,009	870	838	800	1,335	161	602	503	1,006	1,131	910	9,826
Truck	164	150	102	39	48	60	107	44	103	156	139	149	1,261
CCC	--	--	--	--	--	--	--	53	--	--	--	--	53
Total	825	1,159	972	877	848	1,395	268	699	606	1,162	1,270	1,059	11,140
CRD 3													
Rail	1,593	2,941	2,199	2,575	1,684	2,108	1,403	1,031	1,100	1,496	2,379	2,459	22,968
Truck	619	972	573	330	261	383	560	735	980	889	1,134	874	8,310
CCC	109	101	20	4	10	--	--	--	--	--	--	--	244
Total	2,321	4,014	2,792	2,909	1,955	2,491	1,963	1,766	2,080	2,385	3,513	3,333	31,522
CRD 4													
Rail	445	1,179	1,369	1,426	1,030	1,142	2,012	794	959	1,224	1,362	1,413	14,355
Truck	229	266	133	85	99	110	125	107	98	109	88	86	1,535
CCC	89	62	23	4	10	44	36	9	6	8	--	38	329
Total	763	1,507	1,525	1,515	1,139	1,296	2,173	910	1,063	1,341	1,450	1,537	16,219
CRD 5													
Rail	714	1,623	1,253	1,415	1,698	1,707	1,128	965	912	1,104	1,769	1,731	16,019
Truck	184	325	175	120	66	67	54	161	310	444	380	399	2,685
CCC	--	--	--	12	--	--	--	001	--	--	--	--	13
Total	898	1,948	1,428	1,547	1,764	1,774	1,182	1,127	1,222	1,548	2,149	2,130	18,717

TABLE 8 (CONT.)

Origin and Mode	MONTHS ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
(000 bushels)													
CRD 6													
Rail	917	1,982	1,888	2,481	2,166	1,132	2,702	1,257	1,146	1,368	2,149	3,112	22,300
Truck	562	613	471	219	166	224	370	458	648	832	601	441	5,605
CCC	158	146	17	8	--	--	--	--	--	--	--	--	329
Total	1,637	2,741	2,376	2,708	2,332	1,356	3,072	1,715	1,794	2,200	2,750	3,553	28,234
CRD 7													
Rail	351	1,790	2,190	1,641	1,340	1,839	1,904	1,158	1,294	1,680	2,037	2,123	19,266
Truck	490	508	444	388	331	380	517	581	516	491	593	526	5,765
CCC	21	40	--	--	--	--	--	--	--	17	--	--	78
Total	862	2,338	2,553	2,029	1,671	2,219	2,421	1,739	1,810	2,188	2,630	2,649	25,109
CRD 8													
Rail	253	1,842	425	952	1,123	1,098	1,112	682	747	872	1,142	1,124	11,372
Truck	185	296	244	169	182	167	146	138	174	175	160	362	2,398
CCC	56	137	2	--	--	--	--	--	--	--	--	2	197
Total	494	2,275	671	1,121	1,305	1,265	1,258	820	921	1,047	1,302	1,488	13,967
CRD 9													
Rail	946	2,037	1,497	883	1,332	1,514	1,277	1,887	340	981	1,302	1,420	15,416
Truck	218	288	174	86	65	66	94	117	221	106	149	133	1,717
CCC	83	6	34	35	28	3	2	2	--	--	--	--	193
Total	1,247	2,331	1,705	1,004	1,425	1,583	1,373	2,006	561	1,087	1,451	1,553	17,326
STATE													
Rail	7,390	18,354	13,376	14,732	13,445	13,743	13,427	9,881	8,296	11,419	15,795	16,550	156,408
Truck	3,087	3,824	2,602	1,733	1,466	1,646	1,454	3,370	4,139	3,458	5,868	847	33,494
CCC	598	624	200	72	47	47	38	65	6	28	2	40	1,767
Total	11,075	22,802	16,178	16,537	14,958	15,436	14,919	13,316	12,441	14,905	21,665	17,437	191,669

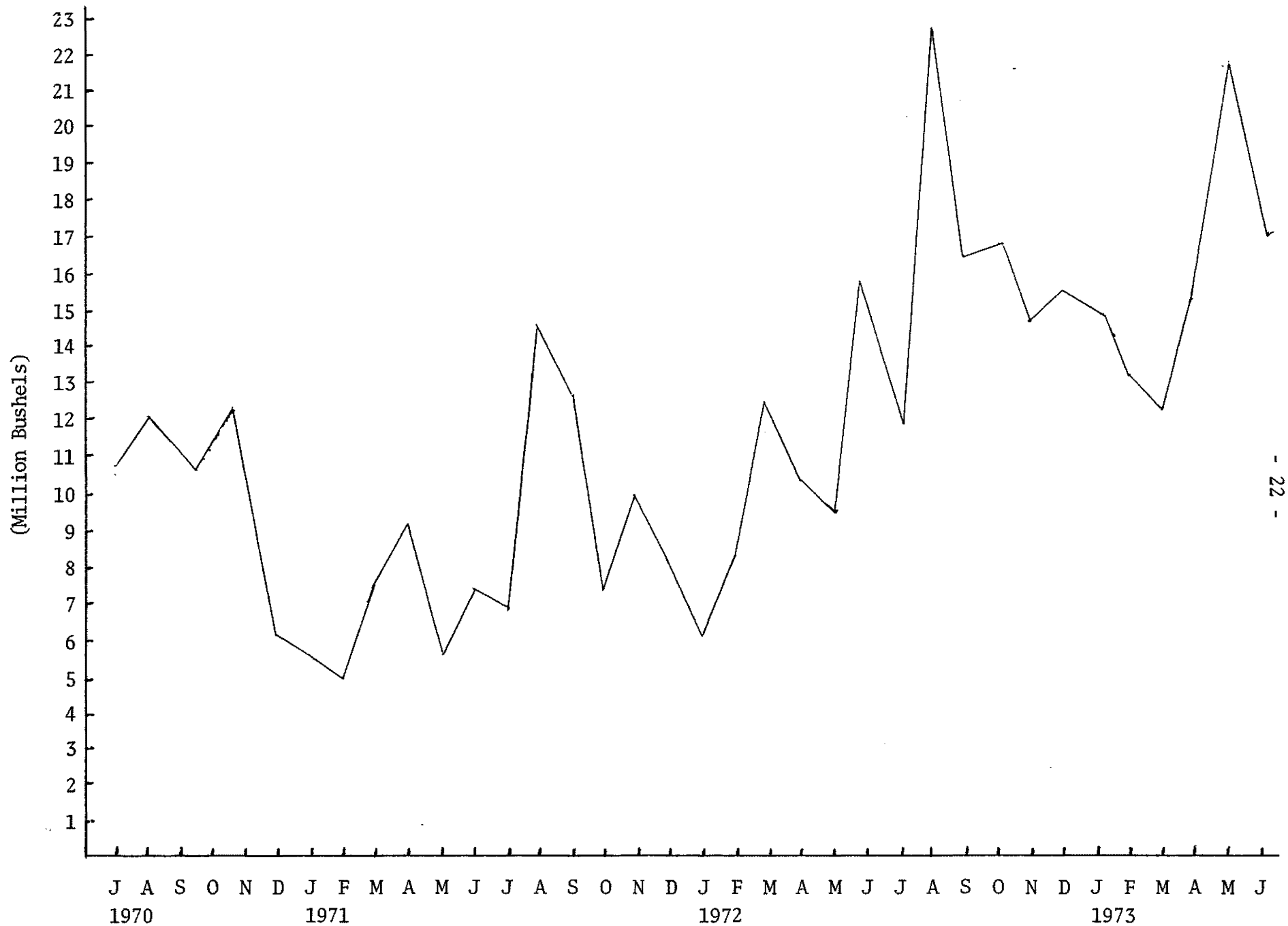


Figure 4. Shipments of Hard Red Spring Wheat from North Dakota Country Elevators by Months, July, 1970 through June, 1973.

## Durum

During the period July, 1972, through June, 1973, over 83 million bushels of Durum were shipped from the state of North Dakota by rail, truck, and CCC (Table 9). This compares to a little over 66 million bushels in the previous crop reporting year, 1971-72. Crop Reporting District 1 was by far the leading source of Durum shipments in 1972-73, originating over 30 percent of all marketings. Almost 70 percent of all Durum marketings from North Dakota during 1972-73 went to the terminal market of Duluth-Superior. Of all the Durum shipped to Duluth-Superior during 1972-73 almost 80 percent came from the northern portion of the state of North Dakota (Crop Reporting Districts 1, 2 and 3) (Table 10).

Of all Durum shipped from the state during the 1972-73 crop year 87 percent went by rail, 12 percent by truck, and the remainder by CCC. Of the Durum shipments to Duluth-Superior, 85.9 percent arrived by rail and 13.6 percent by truck (Table 11). The Minneapolis-St. Paul rail-truck split was 93.2 percent and 5.5 percent, respectively. The rails gained significantly in Minnesota markets other than Minneapolis-St. Paul and Duluth-Superior by increasing their percentage of this market from 57.9 percent in 1971-72 to 81.6 percent in 1972-73.

The average volume per rail car for Durum in 1972-73 was 2,314 bushels, while the average volume per truck was 806 bushels (Table 12). The total number of rail cars loaded with Durum increased from 23,348 in 1971-72 to 31,455 in 1972-73. On the other hand, the number of trucks loaded with Durum declined by more than 6,000 from 18,979 in 1971-72 to 12,453 in 1972-73.

Average monthly shipments of Durum during 1972-73 were 6,946,000 bushels. Average monthly shipments by rail were 6,066,000 bushels and by truck, 836,000 bushels (Table 13 and Figure 5). The low month for rail shipments of Durum was July, 1972, with the high occurring in March, 1973. Truck shipments reached a minimum during the crop year in November, and a maximum in March.



TABLE 9. SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972, THROUGH JUNE, 1973.

Origin and Mode	D E S T I N A T I O N S									Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha Kansas City	Other East and South	Midland and Southwest	West	Misc.		
(000 bushels)										
CRD 1										
Rail	15,908	5,904	845	2	12	12	323	842		23,848
Truck	1,802	226	380	--	1	2	88	35		2,534
CCC	107	169	--	--	--	--	--	--		276
Total	17,817	6,299	1,225	2	13	14	411	877		26,658
CRD 2										
Rail	9,936	2,018	324	3	2	2	105	517		12,907
Truck	1,941	34	37	--	1	--	3	169		2,185
CCC	12	--	--	--	--	--	--	--		12
Total	11,889	2,052	361	3	3	2	108	686		15,104
CRD 3										
Rail	13,196	2,604	352	--	25	6	8	1,412		17,604
Truck	3,086	165	17	--	--	--	--	180		3,448
CCC	53	36	--	--	--	--	--	--		90
Total	16,335	2,805	369	--	25	6	8	1,592		21,142
CRD 4										
Rail	1,870	975	387	--	2	6	41	22		3,302
Truck	55	315	58	--	--	--	--	1		429
CCC	25	3	--	--	--	--	10	--		39
Total	1,950	1,293	445	--	2	6	51	23		3,770
CRD 5										
Rail	4,858	1,678	272	--	7	--	77	64		6,957
Truck	639	46	--	--	--	--	--	30		714
CCC	27	--	--	--	--	--	--	--		27
Total	5,524	1,724	272	--	7	--	77	94		7,698
CRD 6										
Rail	1,557	480	21	7	2	2	--	43		2,111
Truck	149	26	4	--	--	--	1	5		185
CCC	6	2	--	--	--	--	--	--		8
Total	1,712	508	25	7	2	2	1	48		2,304

TABLE 9 (continued)

Origin and Mode	D E S T I N A T I O N S								Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha Kansas City	Other East and South	Midland and Southwest	West	Misc.	
CRD 7									
Rail	539	1,157	195	--	1	6	27	2	1,928
Truck	144	86	50	--	1	--	5	1	287
CCC	17	5	--	--	--	--	--	--	22
Total	700	1,248	245	--	2	6	32	3	2,237
CRD 8									
Rail	461	316	117	--	--	--	17	--	912
Truck	13	12	3	--	--	--	--	--	28
CCC	5	6	--	--	--	--	--	--	11
Total	479	334	120	--	--	--	17	--	951
CRD 9									
Rail	1,810	1,147	247	--	4	--	--	10	3,218
Truck	88	59	74	--	--	--	--	3	223
CCC	40	2	--	--	4	--	--	--	46
Total	1,938	1,208	321	--	8	--	--	13	3,487
STATE									
Rail	50,133	16,280	2,762	13	55	33	598	2,913	72,787
Truck	7,917	968	623	--	3	2	97	423	10,033
CCC	293	224	--	--	4	--	10	--	530
Total	58,343	17,472	3,385	13	62	35	705	3,336	83,350

TABLE 10. PERCENT OF DURUM WHEAT SHIPPED TO EACH DESTINATION FROM EACH CROP REPORTING DISTRICT; 1968-69, 1969-1970, 1970-1971, 1971-1972 and 1972-1973.

Crop Reporting District and Selected Years	DESTINATIONS												Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South States	Midland States	Southwest States	North Pacific Ports	Northwest States	West	In-State	Un-known	
(percent)													
CRD 1													
1968-1969	20.7	22.9	10.7	--	--	--	--	24.7	20.3	--	21.6	--	21.7
1969-1970	24.1	27.3	26.7	--	--	--	--	31.1	32.3	75.5	16.1	2.8	25.8
1970-1971	20.7	27.8	30.5	100.0	73.3	--	15.0	59.3	23.9	--	18.8	7.4	24.1
1971-1972	24.6	21.4	32.0	--	4.3	48.1	--	78.1	20.5	11.9	2.5	42.1	23.6
1972-1973	30.5	36.1	36.2	15.4	21.0	40.0 <sup>a</sup>				58.3 <sup>b</sup>		26.3 <sup>c</sup>	32.0
CRD 2													
1968-1969	17.8	15.3	2.2	--	--	--	--	23.4	39.9	--	4.1	8.3	16.3
1969-1970	17.7	14.1	2.0	--	26.1	58.9	--	44.2	47.7	--	13.8	3.3	16.3
1970-1971	20.5	12.7	2.9	--	--	--	32.5	22.7	37.4	--	7.8	18.5	17.0
1971-1972	23.7	14.8	7.1	--	81.7	--	--	3.7	32.8	--	8.6	5.4	20.5
1972-1973	20.4	11.7	10.7	23.1	4.8	5.7				15.3		20.6	18.1
CRD 3													
1968-1969	33.4	31.3	0.8	--	--	--	--	7.8	5.8	96.7	54.5	36.1	32.6
1969-1970	35.2	26.4	12.3	--	--	--	--	--	7.3	6.1	51.2	29.0	30.4
1970-1971	34.6	20.4	27.6	--	--	25.0	--	2.7	27.8	--	29.5	14.8	27.9
1971-1972	36.2	29.3	22.1	14.3	4.8	13.4	--	--	33.9	--	67.1	13.4	33.8
1972-1973	28.0	16.1	10.9	--	40.3	17.1				1.1		47.7	25.4
CRD 4													
1968-1969	3.0	3.5	--	--	--	--	--	38.9	--	--	6.7	--	3.3
1969-1970	2.3	5.7	1.3	--	--	--	--	22.7	8.8	--	14.1	48.4	4.3
1970-1971	3.4	7.3	0.5	--	--	--	--	--	--	--	0.7	--	5.0
1971-1972	3.2	7.0	4.8	--	--	--	--	3.7	--	12.9	4.2	23.7	4.5
1972-1973	3.3	7.4	13.1	--	3.2	17.1				7.2		0.7	4.5

TABLE 10 (Continued)

Crop Reporting District and Selected Years	D E S T I N A T I O N S												Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland States	South-west States	North Pacific Ports	North-west States	West	In-State	Un-known	
	(percent)												
CRD 5													
1968-1969	12.5	11.8	11.5	--	--	--	--	2.6	16.7	--	0.3	--	11.9
1969-1970	8.6	11.1	3.0	--	73.9	--	--	2.0	1.8	18.4	0.3	--	9.6
1970-1971	10.0	14.4	23.3	--	--	--	52.5	--	9.2	--	1.3	14.8	11.9
1971-1972	6.1	12.1	16.5	--	9.2	--	--	--	5.6	--	--	--	8.1
1972-1973	9.5	9.9	8.0	--	11.3	--	--	--	--	10.9	2.8	--	9.2
CRD 6													
1968-1969	7.1	5.5	37.0	--	100.0	--	--	--	--	3.3	12.7	55.6	6.4
1969-1970	6.7	6.0	14.1	--	--	--	--	--	1.4	--	4.5	--	6.2
1970-1971	4.5	5.7	7.5	--	26.7	--	--	6.7	--	--	36.9	--	5.4
1971-1972	1.4	4.2	9.4	--	--	--	--	--	--	--	10.0	2.6	2.4
1972-1973	2.9	2.9	0.7	53.8	3.2	5.7	--	--	--	0.1	1.4	--	2.8
CRD 7													
1968-1969	1.0	1.7	--	--	--	--	100.0	2.6	17.3	--	--	--	1.4
1969-1970	1.4	1.5	14.6	--	--	--	--	--	0.7	--	--	--	1.5
1970-1971	2.2	1.9	1.2	--	--	75.0	--	3.3	0.8	--	--	3.7	2.1
1971-1972	1.4	2.5	3.0	54.4	--	38.5	100.0	14.5	6.2	72.5	--	12.8	1.9
1972-1973	1.2	7.1	7.2	--	3.2	17.1	--	--	--	4.5	0.1	--	2.7
CRD 8													
1968-1969	0.7	0.7	0.8	--	--	--	--	--	--	--	0.1	--	0.7
1969-1970	0.6	0.9	1.8	--	--	41.1	--	--	--	--	--	16.5	0.7
1970-1971	1.4	1.7	--	--	--	--	--	5.3	0.3	--	--	--	1.5
1971-1972	0.6	1.0	1.8	31.3	--	--	--	--	--	--	--	--	0.8
1972-1973	0.8	1.9	3.5	--	--	--	--	--	--	2.4	--	--	1.1

TABLE 10 (Continued)

Crop Reporting District and Selected Years	D E S T I N A T I O N S											Total	
	Duluth-Superior	Minneapolis St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland States	South-west States	North Pacific Ports	North-west States	West	In-State		Un-known
	(percent)												
CRD 9													
1968-1969	3.8	7.3	37.0	--	--	--	--	--	--	--	--	--	5.6
1969-1970	3.4	7.0	24.2	--	--	--	--	--	--	--	--	--	5.2
1970-1971	2.7	8.1	6.5	--	--	--	--	--	0.6	--	5.0	40.8	5.1
1971-1972	2.8	7.7	3.3	--	--	--	--	--	1.0	2.7	7.6	--	4.4
1972-1973	3.3	6.9	9.5	--	12.9	--	--	--	--	--	0.4	--	4.2
TOTAL													
1968-1969	100.0	100.0	100.0	--	100.0	--	--	100.0	100.0	100.0	100.0	100.0	100.0
1969-1970	100.0	100.0	100.0	--	100.0	100.0	--	100.0	100.0	100.0	100.0	100.0	100.0
1970-1971	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	--	100.0	100.0	100.0
1971-1972	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972-1973	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a,b,c See footnotes, Table 5.

TABLE 11. PROPORTION OF DURUM WHEAT SHIPPED BY RAIL, TRUCK AND CCC (RAIL) TO EACH DESTINATION; 1967-1968, 1968-1969, 1969-1970, 1970-1971, 1971-1972 AND 1972-1973.

Year and Mode	D E S T I N A T I O N S											
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland States	Southwest States	North Pacific Ports	Northwest States	West	Instate	Unknown
<b>Rail</b>												
1967-1968	44.7	90.7	81.0	--	4.2	--	100.0	94.2	98.5	--	93.5	--
1968-1969	56.1	97.1	81.3	--	100.0	100.0	--	97.4	87.7	--	92.5	--
1969-1970	45.1	92.2	81.7	--	100.0	100.0	--	98.0	85.1	--	86.3	--
1970-1971	35.3	85.1	44.7	--	100.0	100.0	100.0	100.0	96.5	--	92.1	--
1971-1972	70.5	87.2	57.9	68.7	100.0	61.5	--	84.2	90.5	--	92.2	--
1972-1973	85.9	93.2	81.6	100.0	88.7	94.3 <sup>a</sup>	--	--	--	84.8 <sup>b</sup>	87.3 <sup>c</sup>	--
<b>Truck</b>												
1967-1968	55.3	9.3	19.0	--	95.8	100.0	--	5.8	1.5	--	6.5	100.0
1968-1969	43.8	2.8	18.7	--	--	--	100.0	2.6	12.3	--	7.5	100.0
1969-1970	54.3	3.7	18.3	--	--	--	--	2.0	14.9	--	13.7	100.0
1970-1971	64.1	8.4	55.3	100.0	--	--	--	--	3.5	--	7.9	66.8
1971-1972	28.7	7.1	42.1	31.3	--	38.5	100.0	15.8	9.5	--	7.8	100.0
1972-1973	13.6	5.5	18.4	--	4.8	5.7	--	--	--	13.8	12.7	--
<b>CCC</b>												
1967-1968	--	--	--	--	--	--	--	--	--	--	--	--
1968-1969	0.1	0.1	--	--	--	--	--	--	--	100.0	--	--
1969-1970	0.6	4.1	--	--	--	--	--	--	--	100.0	--	--
1970-1971	0.6	6.5	--	--	--	--	--	--	--	--	--	33.2
1971-1972	0.8	5.7	--	--	--	--	--	--	--	100.0	--	--
1972-1973	0.5	1.3	--	--	6.5	--	--	--	--	1.4	--	--

a,b,cSee footnotes, Table 5.

TABLE 12. AVERAGE VOLUME OF DURUM WHEAT SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT; 1969-1970, 1970-1971, 1971-1972 AND 1972-1973.

Origin and Mode	Number of Cars				Number of Trucks				Average Volume			
	1969-1970	1970-1971	1971-1972	1972-1973	1969-1970	1970-1971	1971-1972	1972-1973	1969-1970	1970-1971	1971-1972	1972-1973
CRD 1												
Rail	4,749	3,830	5,351	10,092	--	--	--	--	2,391	2,330	2,055	2,363
Truck	--	--	--	--	3,981	5,318	5,671	3,126	791	792	785	811
CCC	294	319	260	115	--	--	--	--	1,665	2,305	2,249	2,400
CRD 2												
Rail	2,233	1,766	4,398	5,620	--	--	--	--	2,286	2,308	2,290	2,297
Truck	--	--	--	--	5,019	6,830	4,409	2,774	806	792	742	788
CCC	101	141	95	13	--	--	--	--	2,177	2,178	2,138	923
CRD 3												
Rail	4,682	3,311	7,836	7,802	--	--	--	--	2,387	3,206	2,213	2,256
Truck	--	--	--	--	8,147	10,286	5,590	4,251	806	809	837	811
CCC	153	160	161	42	--	--	--	--	2,289	1,744	2,320	2,143
CRD 4												
Rail	780	895	830	1,304	--	--	--	--	2,630	2,373	2,564	2,532
Truck	--	--	--	--	538	894	1,000	588	730	776	751	730
CCC	29	21	29	16	--	--	--	--	2,373	2,745	2,253	2,438
CRD 5												
Rail	2,062	2,177	2,461	3,039	--	--	--	--	2,281	2,659	2,315	2,289
Truck	--	--	--	--	912	1,101	971	796	803	827	798	897
CCC	85	73	28	12	--	--	--	--	2,395	2,458	2,254	2,250
CRD 6												
Rail	1,219	839	901	1,013	--	--	--	--	2,258	2,277	2,292	2,084
Truck	--	--	--	--	1,005	1,012	336	241	807	847	802	768
CCC	29	58	9	4	--	--	--	--	2,105	2,044	2,466	2,000

TABLE 12 (continued)

Origin and Mode	Number of Cars				Number of Trucks				Average Volume			
	1969- 1970	1970- 1971	1971- 1972	1972- 1973	1969- 1970	1970- 1971	1971- 1972	1972- 1973	1969- 1970	1970- 1971	1971- 1972	1972- 1973
CRD 7												
Rail	336	358	360	766	--	--	--	--	2,125	2,329	2,443	2,517
Truck	--	--	--	--	174	400	462	371	797	792	685	774
CCC	2	21	33	12	--	--	--	--	1,830	1,992	2,035	1,833
CRD 8												
Rail	160	237	184	411	--	--	--	--	2,225	2,156	2,364	2,219
Truck	--	--	--	--	86	443	72	36	782	793	682	778
CCC	3	9	11	6	--	--	--	--	2,477	1,951	1,783	1,833
CRD 9												
Rail	1,123	994	1,027	1,408	--	--	--	--	2,287	2,224	2,377	2,286
Truck	--	--	--	--	527	741	468	270	798	886	847	826
CCC	18	59	28	22	--	--	--	--	2,330	1,940	2,221	2,091
STATE												
Rail	17,344	14,407	23,348	31,455	--	--	--	--	2,351	2,345	2,230	2,314
Truck	--	--	--	--	20,389	33,690	18,979	12,453	801	645	788	806
CCC	714	861	654	242	--	--	--	--	2,025	2,150	2,234	2,190



TABLE 13. MONTHLY SHIPMENTS OF DURUM FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972 - JUNE, 1973

Origin and Mode	MONTHS ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
(000 bushels)													
CRD 1													
Rail	1,354	1,373	2,649	2,560	1,963	2,023	2,182	2,602	849	1,831	2,071	2,392	23,849
Truck	244	341	231	237	123	168	202	214	248	167	176	182	2,533
CCC	52	12	109	54	--	21	--	19	10	--	--	--	277
Total	1,650	1,726	2,989	2,851	2,086	2,212	2,384	2,835	1,107	1,998	2,247	2,574	26,659
CRD 2													
Rail	611	1,060	1,115	1,471	1,124	1,141	1,322	1,017	762	917	1,169	1,200	12,909
Truck	163	216	109	68	40	72	114	236	339	353	270	206	2,186
CCC	3	--	--	--	--	--	--	--	--	8	1	--	12
Total	777	1,276	1,224	1,539	1,164	1,213	1,436	1,253	1,101	1,278	1,440	1,406	15,107
CRD 3													
Rail	1,081	1,607	1,509	1,826	1,268	1,385	1,130	1,269	1,646	1,421	1,641	1,638	17,421
Truck	225	257	131	129	89	144	293	408	654	458	454	206	3,448
CCC	18	2	5	33	16	2	1	4	2	--	2	4	89
Total	1,324	1,866	1,645	1,988	1,373	1,531	1,424	1,681	2,302	1,879	2,097	1,848	20,958
CRD 4													
Rail	92	202	341	475	248	272	335	360	314	187	477	--	3,303
Truck	66	33	50	31	19	12	36	35	61	25	38	24	430
CCC	35	3	--	--	--	--	--	--	--	--	--	--	38
Total	193	238	391	506	267	284	371	395	375	212	515	24	3,771
CRD 5													
Rail	280	541	674	640	423	674	724	576	1,122	50	664	589	6,957
Truck	39	56	32	13	4	6	29	31	185	107	173	40	715
CCC	6	2	--	19	--	--	--	--	--	--	--	--	27
Total	325	599	706	672	427	680	753	607	1,307	157	837	629	7,699

TABLE 13 (CONT.)

Origin and Mode	M O N T H S ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
	(000 bushels)												
CRD 6													
Rail	182	224	72	257	83	150	168	137	180	127	174	357	2,111
Truck	21	24	7	2	2	6	15	8	30	38	21	11	185
CCC	2	6	--	--	--	--	--	--	--	--	--	--	8
Total	205	254	79	259	85	156	183	145	210	165	195	368	2,304
CRD 7													
Rail	55	85	162	247	133	173	27	380	169	209	179	111	1,930
Truck	44	46	20	2	6	6	5	19	27	33	28	50	286
CCC	3	4	--	15	--	--	--	--	--	--	--	--	22
Total	102	135	182	264	139	179	32	399	196	242	207	161	2,238
CRD 8													
Rail	33	54	49	47	46	82	171	71	103	81	102	73	912
Truck	7	2	1	--	2	3	2	--	--	--	3	9	29
CCC	--	--	--	11	--	--	--	--	--	--	--	--	11
Total	40	56	50	58	48	85	173	71	103	81	105	82	952
CRD 9													
Rail	262	287	233	181	272	241	350	295	269	265	296	267	3,218
Truck	37	27	9	6	--	1	16	28	26	19	32	23	224
CCC	12	10	--	24	--	--	--	--	--	--	--	--	46
Total	311	324	242	211	272	242	366	323	295	284	328	290	3,488
STATE													
Rail	3,951	5,433	6,803	7,703	5,559	6,340	6,408	6,707	8,137	5,088	6,773	6,580	72,787
Truck	846	998	594	485	284	418	717	972	2,157	1,200	1,196	752	10,034
CCC	131	39	125	143	16	23	5	20	12	8	3	4	529
Total	4,928	6,470	7,522	8,331	5,859	6,781	7,130	7,699	10,306	6,296	7,971	7,336	83,350

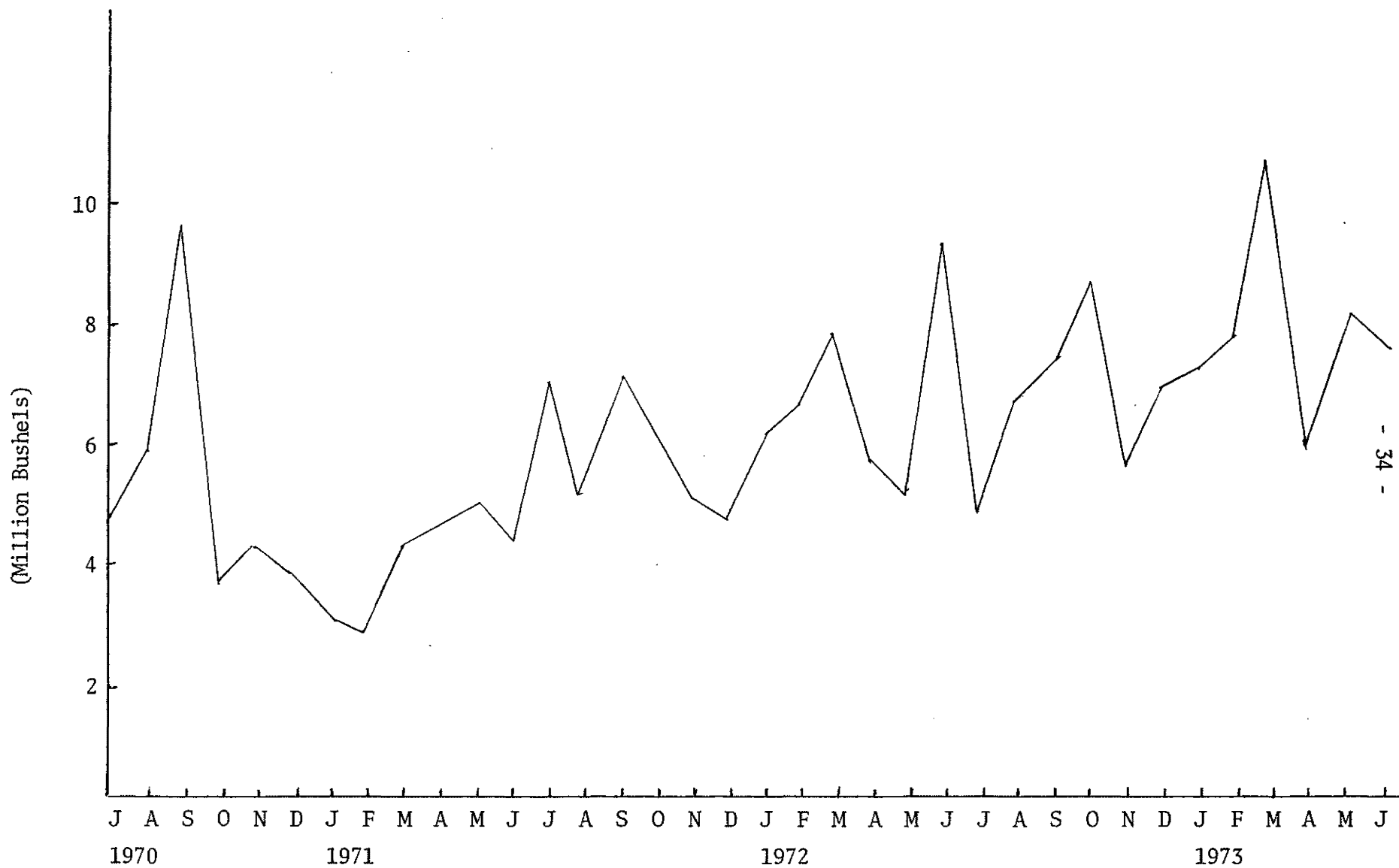


Figure 5. Shipments of Durum Wheat from North Dakota County Elevators by Months, July, 1970 through June, 1973.

## Barley

Shipments of barley from North Dakota country elevators during the period July, 1972, through June, 1973, totaled 78,384,000 bushels (Table 14). The eastern third of the state (Crop Reporting Districts 3, 6 and 9) originated 80.6 percent of the barley destined to Duluth-Superior and 70.9 percent destined to Minneapolis-St. Paul (Table 15). These two primary markets of Duluth-Superior and Minneapolis-St. Paul received almost 80 percent of all barley shipments from the state of North Dakota in 1972-73 (Table 16). The market designated as West Ports and States increased its share of barley from 4.2 percent in 1971-72 to 13.6 percent in 1972-73.

Of all barley shipped from the state of North Dakota during 1972-73 and destined to Duluth-Superior, 80.0 percent went by truck and 19.3 percent by rail (Table 17). Just the reverse situation was true for the market of Minneapolis-St. Paul, where 93.9 percent of the barley arrived by rail and only 5.2 percent by truck. The truck made a significant increase in its share of barley shipments to Minnesota markets other than Duluth-Superior and Minneapolis-St. Paul showing an increase from 35.4 percent in 1971-72 to 74.9 percent in 1972-73.

Barley truck shipments in 1972-73 were up over 100 percent in comparison to truck shipments in 1971-72 (Table 18). While all Crop Reporting Districts in North Dakota increased their barley truck shipments considerably, Crop Reporting District 3 alone increased its barley truck shipments by almost 5 million bushels. As in the previous two years, Crop Reporting District 3 remained the primary source of trucked barley (Table 19).

The Crop Reporting District which reflects the highest use of trucks in shipping barley is Crop Reporting District 7 (Table 20). A little over 75 bushels per 100 were shipped by truck from this Crop Reporting District in 1972-73. For the state as a whole, 34.4 percent of all barley shipped to market from the state of North Dakota was shipped in truck in 1972-73 compared to 19.0 percent in 1971-72.

The movement of barley from the state of North Dakota in 1972-73 involved 20,030 rail cars and 26,905 trucks (Table 21). The average volume loaded per rail car was 2,536 bushels, and for trucks 1,003 bushels. Compared to the previous crop year, 1971-72, the number of rail cars loaded with barley increased approximately 1,500, while the number of trucks increased by more than 14,000. CCC shipments were down drastically from 2,875 in 1971-72 to 244 in 1972-73.

The average monthly shipment of barley from North Dakota country elevators during the period July, 1972, through June, 1973, was 6.5 million bushels (Table 22 and Figure 6). During this crop year the highest monthly shipment of barley occurred in June, and attained a low in April. Average monthly shipments by rail were 4.2 million bushels and by truck 2.2 million bushels. The biggest movement of barley by rail occurred in May and by truck in June.

TABLE 14. SHIPMENTS OF BARLEY FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972 THROUGH JUNE, 1973.

Origin & Mode	D E S T I N A T I O N S								Total	
	Duluth-Superior	Mpls.-St. Paul	Other Minn.	Sioux City Omaha Kansas City	Other East and South	Midland and Southwest States	West	Misc.		
(000 bushels)										
CRD 1										
Rail	226	2,371	6	--	8	14	1,113	52	3,790	
Truck	286	56	10	--	3	64	1,296	215	1,930	
CCC	28	36	--	--	--	--	--	--	64	
Total	540	2,463	16	--	11	78	2,409	267	5,784	
CRD 2										
Rail	777	4,425	81	--	17	2	743	80	6,125	
Truck	1,259	175	27	4	--	21	495	48	2,028	
CCC	27	12	--	--	--	--	--	--	39	
Total	2,063	4,612	108	4	17	23	1,238	128	8,192	
CRD 3										
Rail	1,232	12,264	47	--	3	2	338	140	14,026	
Truck	9,424	819	255	--	4	2	45	50	10,599	
CCC	85	163	--	--	--	--	--	--	249	
Total	10,741	13,246	302	--	7	4	383	190	24,874	
CRD 4										
Rail	63	492	--	--	--	--	330	--	885	
Truck	66	21	2	7	6	10	368	46	525	
CCC	4	9	--	--	--	--	--	--	12	
Total	133	522	2	7	6	10	698	46	1,422	
CRD 5										
Rail	478	4,195	18	7	--	4	393	45	5,140	
Truck	1,270	306	50	--	1	4	107	24	1,762	
CCC	6	35	--	--	--	--	--	--	41	
Total	1,754	4,536	68	7	1	8	500	69	6,943	

TABLE 14 (Continued)

## D E S T I N A T I O N S

Origin & Mode	Duluth-Superior	Mpls.-St. Paul	Other Minn.	Sioux City Omaha Kansas City	Other East and South	Midland and Southwest States	West	Misc.	Total
CRD 6									
Rail	1,166	10,570	16	--	1,454	--	235	99	13,540
Truck	5,307	616	167	--	68	7	17	14	6,195
CCC	19	66	--	--	--	--	--	--	85
Total	6,492	11,252	183	--	1,522	7	252	113	19,820
CRD 7									
Rail	11	36	--	--	--	--	403	22	473
Truck	2	2	7	--	--	25	928	492	1,456
CCC	4	8	--	--	--	--	--	--	11
Total	17	46	7	--	--	25	1,331	514	1,940
CRD 8									
Rail	30	182	--	--	--	2	323	--	537
Truck	68	79	3	--	2	6	231	46	436
CCC	--	2	--	--	19	--	--	--	21
Total	98	263	3	--	21	8	554	46	994
CRD 9									
Rail	599	5,644	38	--	--	--	--	5	6,286
Truck	1,350	154	95	--	--	4	179	271	2,053
CCC	13	64	--	--	--	--	--	--	77
Total	1,962	5,862	133	--	--	4	179	276	8,416
STATE									
Rail	4,582	40,179	206	7	1,482	25	3,878	444	50,802
Truck	19,032	2,228	614	11	83	141	3,667	1,205	26,982
CCC	185	396	--	--	19	--	--	--	600
Total	23,799	42,803	820	18	1,584	166	7,545	1,649	78,384

TABLE 15. PERCENT OF BARLEY SHIPPED TO EACH DESTINATION FROM EACH CROP REPORTING DISTRICT, 1970-1971; 1971-1972; AND 1972-1973.

Crop Reporting District and Selected years	DESTINATIONS												Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland States	Southwest States	North-Pacific Ports	Northwest States	West	In-State	Un-known	
	(percent)												
CRD 1													
1970-1971	3.7	10.0	3.2	--	4.5	6.2	46.7	--	9.5	--	7.6	4.9	8.1
1971-1972	4.4	7.0	0.7	--	0.4	--	48.0	73.5	29.0	25.0	4.8	5.6	7.1
1972-1973	2.3	5.8	2.0	--	0.7		47.0 <sup>a</sup>			31.9 <sup>b</sup>		16.2 <sup>c</sup>	
CRD 2													
1970-1971	6.8	9.4	1.7	--	--	--	40.0	42.8	2.6	--	4.2	4.2	9.7
1971-1972	7.2	9.6	--	23.5	3.3	0.1	8.0	1.5	8.8	--	4.3	29.9	9.6
1972-1973	8.7	10.8	13.2	22.2	1.1		13.9			16.4		7.8	
CRD 3													
1970-1971	38.7	33.1	20.5	--	15.7	0.9	--	--	0.6	46.8	23.3	16.7	34.0
1971-1972	46.4	35.4	3.4	76.5	7.5	3.7	5.6	--	3.3	--	33.2	--	31.8
1972-1973	45.1	30.9	36.8	--	0.4		2.4			5.1		11.5	
CRD 4													
1970-1971	3.2	1.6	--	--	0.3	0.9	--	28.6	28.6	--	1.9	8.3	2.2
1971-1972	0.8	0.6	0.1	--	--	--	8.0	18.1	21.3	--	--	3.5	0.9
1972-1973	0.6	1.2	0.2	38.9	0.4		6.0			9.3		2.8	
CRD 5													
1970-1971	6.1	9.3	4.0	--	1.8	0.9	--	--	6.9	14.9	9.5	--	8.2
1971-1972	5.7	9.8	--	--	1.4	2.8	12.0	6.9	17.1	--	4.0	0.9	9.1
1972-1973	7.4	10.6	8.3	38.9	0.1		4.8			6.6		4.2	

TABLE 15 (Continued)

Crop Reporting District and Selected Years	DESTINATIONS												Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland States	Southwest States	North Pacific Ports	Northwest States	West	In-State	Un-known	
(percent)													
CRD 6													
1970-1971	33.1	24.2	43.2	100.0	76.7	3.5	6.7	--	18.8	--	45.5	6.2	27.6
1971-1972	31.2	27.7	91.2	--	86.0	17.4	2.4	--	--	--	48.7	--	32.2
1972-1973	27.3	26.3	22.3	--	96.1		4.2			3.3		6.9	
CRD 7													
1970-1971	1.3	0.4	--	--	0.2	83.2	--	28.6	27.0	--	1.1	39.6	1.0
1971-1972	0.5	0.6	--	--	0.1	66.1	0.1	0.5	15.6	25.0	1.3	1.7	0.8
1972-1973	0.1	0.1	0.9	--	--		15.1			17.6		31.2	
CRD 8													
1970-1971	0.8	1.4	--	--	0.5	--	6.7	--	--	--	1.2	7.6	1.2
1971-1972	0.2	0.5	--	--	--	--	6.4	--	3.9	--	0.3	2.2	0.5
1972-1973	0.4	0.6	0.4	--	1.3		4.8			7.3		2.8	
CRD 9													
1970-1971	6.2	10.6	27.4	--	0.2	4.4	--	--	5.9	38.3	5.8	12.5	9.3
1971-1972	4.2	8.8	4.3	--	1.3	10.1	8.8	--	1.1	50.0	3.7	56.3	8.3
1972-1973	8.2	13.7	16.2	--	--		2.4			2.4		16.7	
TOTAL													
1970-1971	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1971-1972	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972-1973	100.0	100.0	100.0	100.0	100.0		100.0			100.0		100.0	100.0

a,b,c See footnotes, Table 5.



TABLE 16. DESTINATIONS OF BARLEY SHIPPED BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS, 1963-1964 THROUGH 1972-1973.

Destination	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
Minneapolis-St. Paul	12.4	10.2	16.0	6.8	15.0	8.2	13.6	8.3
Duluth-Superior	59.5	74.3	72.6	77.9	74.3	87.6	75.6	70.5
Other Minnesota	0.3	3.2	0.7	0.5	3.4	0.4	2.0	2.3
East and South	--	--	1.2	0.3	--	0.1	0.8	0.3 <sup>a</sup>
Midland and Southwestern States	13.9	2.9	0.2	0.8	2.2	0.8	1.5	0.5
West Ports and States	1.1	--	0.3	1.8	3.1	1.3	4.2	13.6
In-State	12.8	9.4	2.6	3.6	1.9	0.7	0.4	4.5 <sup>b</sup>
Unknown	--	--	6.4	8.3	--	0.8	1.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>a</sup>Includes Sioux City-Omaha-Kansas City

<sup>b</sup>Miscellaneous

TABLE 17. PROPORTION OF BARLEY SHIPPED BY RAIL, TRUCK AND CCC (RAIL) TO EACH DESTINATION, 1970-1971; 1971-1972; AND 1972-1973.

Mode and Year	D E S T I N A T I O N S											
	Duluth-Superior	Minneapolis St. Paul	Other Minnesota	Sioux City Omaha-Kansas City	Other East and South	Midland States	South-west States	North Pacific Ports	North-west States	West	In-State	Un-Known
	(percent)											
<b>Rail</b>												
1970-1971	21.8	84.9	81.0	--	98.7	9.7	--	6.7	27.3	--	83.2	--
1971-1972	25.6	83.2	64.6	76.8	92.9	21.3	9.1	--	6.2	--	85.6	--
1972-1973	19.3	93.9	25.1	38.9	93.6		15.1 <sup>a</sup>			51.4 <sup>b</sup>		26.9 <sup>c</sup>
<b>Truck</b>												
1970-1971	76.6	3.0	19.0	100.0	1.3	90.3	100.0	93.3	72.7	--	16.8	93.0
1971-1972	69.1	3.5	35.4	23.2	7.1	78.7	90.9	100.0	93.8	74.6	14.4	100.0
1972-1973	80.0	5.2	74.9	61.1	5.2		84.9			48.6		73.1
<b>CCC</b>												
1970-1971	1.6	12.1	--	--	--	--	--	--	--	100.0	--	7.0
1971-1972	5.3	13.3	--	--	--	--	--	--	--	25.4	--	--
1972-1973	0.8	0.9	--	--	1.2	--	--	--	--	--	--	--

a, b, c See footnotes, Table 5

TABLE 18. VOLUME OF BARLEY SHIPPED BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1963-1964 THROUGH 1972-1973.

Crop Reporting District	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
	(000 bushels)							
1	1,295	430	403	389	199	476	482	1,930
2	1,320	2,027	573	223	276	851	735	2,028
3	4,340	5,940	1,839	1,356	1,490	7,166	5,619	10,599
4	592	269	108	93	65	464	197	525
5	370	293	489	309	79	986	559	1,762
6	2,163	5,175	3,431	3,291	3,000	5,506	4,611	6,195
7	1,473	1,462	91	62	64	415	183	1,456
8	256	298	51	58	31	144	56	436
9	437	529	177	245	162	1,034	563	2,053
<b>Total</b>	<b>12,245</b>	<b>16,423</b>	<b>7,162</b>	<b>6,026</b>	<b>5,366</b>	<b>17,042</b>	<b>13,004</b>	<b>26,982</b>

TABLE 19. PROPORTION OF TOTAL BARLEY SHIPPED FROM NORTH DAKOTA BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1963-1964 THROUGH 1972-1973.

Crop Reporting District	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
				(percent)				
1	10.6	2.6	5.6	6.5	3.7	2.8	3.4	7.2
2	10.8	12.3	8.0	3.7	5.1	5.0	5.7	7.5
3	35.4	36.2	25.7	22.5	27.8	42.0	43.4	39.3
4	4.8	1.7	1.5	1.5	1.2	2.7	1.5	1.9
5	3.0	1.8	6.8	5.1	1.5	5.8	4.3	6.5
6	17.7	31.5	47.9	54.6	55.9	32.3	35.7	23.0
7	12.0	8.9	1.3	1.0	1.2	2.4	1.4	5.4
8	2.1	1.8	0.7	1.0	0.6	0.9	0.4	1.6
9	3.6	3.2	2.5	4.1	3.0	6.1	4.3	7.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 20. PROPORTION OF TOTAL BARLEY SHIPPED BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1963-1964 THROUGH 1972-1973.

Crop Reporting District	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
1	9.7	4.0	13.5	14.9	3.4	8.5	9.7	33.4
2	15.2	21.4	10.6	5.7	3.9	14.6	12.1	24.8
3	17.0	21.5	9.1	7.2	6.0	30.5	22.6	42.6
4	29.2	15.9	18.1	22.7	6.8	30.5	34.6	36.9
5	5.9	4.5	10.4	5.2	1.1	17.4	9.6	25.4
6	10.1	25.2	18.0	14.7	14.2	28.9	22.5	31.3
7	69.0	64.7	62.3	91.2	43.0	61.4	34.4	75.1
8	23.2	24.6	20.2	21.7	6.0	17.7	17.9	43.9
9	12.4	5.6	3.4	3.8	2.4	16.2	10.7	24.4
Total	14.6	18.9	12.2	9.9	7.2	24.7	19.0	34.4

TABLE 21. AVERAGE VOLUME OF BARLEY SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1970-1971; 1971-1972 AND 1972-1973.

Origin & Mode	Number of Cars			Number of Trucks			Average Volume		
	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973
									(bushels)
CRD 1									
Rail	1,844	1,190	1,454	---	---	---	2,483	2,687	2,607
Truck	---	---	---	478	580	1,963	995	946	983
CCC	210	326	25	---	---	---	2,474	2,634	2,560
CRD 2									
Rail	1,784	1,737	2,407	---	---	---	2,456	2,585	2,545
Truck	---	---	---	818	730	2,060	1,041	1,007	984
CCC	237	335	14	---	---	---	2,416	2,589	2,786
CRD 3									
Rail	5,759	6,540	5,552	---	---	---	2,493	2,575	2,526
Truck	---	---	---	7,224	5,541	10,444	992	1,014	1,015
CCC	803	926	101	---	---	---	2,434	2,553	2,465
CRD 4									
Rail	412	86	348	---	---	---	2,383	2,821	2,543
Truck	---	---	---	468	206	522	991	976	1,006
CCC	33	48	5	---	---	---	2,350	2,745	2,400
CRD 5									
Rail	1,389	1,643	2,018	---	---	---	2,577	2,584	2,547
Truck	---	---	---	1,013	558	1,763	973	1,002	999
CCC	422	376	18	---	---	---	2,628	2,652	2,278
CRD 6									
Rail	4,984	5,650	5,318	---	---	---	2,506	2,586	2,546
Truck	---	---	---	5,518	4,436	6,153	998	1,061	1,007
CCC	435	464	36	---	---	---	2,471	2,720	2,361

TABLE 21 (Continued)

Origin & Mode	Number of Cars			Number of Trucks			Average Volume		
	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973
									(bushels)
CRD 7									
Rail	93	48	181	---	---	---	2,644	2,548	2,613
Truck	---	---	---	420	184	1,465	988	995	994
CCC	7	89	4	---	---	---	2,129	2,543	2,750
CRD 8									
Rail	204	37	209	---	---	---	2,378	2,197	2,569
Truck	---	---	---	149	58	455	968	967	958
CCC	86	77	10	---	---	---	2,344	2,282	2,100
CRD 9									
Rail	1,935	1,570	2,543	---	---	---	2,497	2,629	2,472
Truck	---	---	---	1,043	545	2,080	992	1,015	987
CCC	214	234	31	---	---	---	2,464	2,518	2,484
STATE									
Rail	18,404	18,501	20,030	---	---	---	2,496	2,592	2,536
Truck	---	---	---	17,141	12,676	26,905	994	1,025	1,003
CCC	2,447	2,875	244	---	---	---	2,473	2,599	2,459

TABLE 22. MONTHLY SHIPMENTS OF BARLEY FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972 - JUNE, 1973

Origin and Mode	MONTHS ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
	(000 bushels)												
CRD 1													
Rail	28	543	589	212	159	92	327	431	487	428	247	248	3,791
Truck	44	111	123	123	162	162	211	242	287	239	100	126	1,930
CCC	38	22	--	--	--	--	--	--	--	--	2	2	64
Total	110	676	712	335	321	254	538	673	774	667	349	376	5,785
CRD 2													
Rail	397	741	762	518	395	251	469	428	431	484	527	721	6,124
Truck	120	142	194	152	147	136	243	134	190	142	105	323	2,028
CCC	12	5	9	--	--	--	--	--	--	--	--	14	40
Total	529	888	965	670	542	387	712	562	621	626	632	1,058	8,192
CRD 3													
Rail	1,265	1,970	1,750	988	1,021	563	644	750	584	984	1,638	1,868	14,025
Truck	744	701	919	939	888	939	1,002	775	489	681	997	1,525	10,599
CCC	167	30	29	--	--	--	--	--	--	--	--	23	249
Total	2,176	2,701	2,698	1,927	1,909	1,502	1,646	1,525	1,073	1,665	2,635	3,416	24,873
CRD 4													
Rail	--	44	72	37	17	26	92	243	126	88	85	55	885
Truck	21	46	43	38	43	91	54	54	40	32	33	30	525
CCC	12	--	--	--	--	--	--	--	--	--	--	--	12
Total	33	90	115	75	60	117	146	297	166	120	118	85	1,422
CRD 5													
Rail	313	455	535	466	505	220	314	490	439	393	162	847	5,139
Truck	79	78	90	58	74	95	284	214	254	104	167	265	1,762
CCC	8	33	--	--	--	--	--	--	--	--	--	--	41
Total	400	566	625	524	579	315	598	704	693	497	329	1,112	6,942



TABLE 22 (CONT.)

Origin and Mode	MONTHS (1972 - 1973)												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
	(000 bushels)												
CRD 6													
Rail	1,070	1,484	1,395	909	853	765	1,035	1,081	748	1,176	1,678	1,347	13,541
Truck	412	460	512	482	335	461	550	375	485	414	776	933	6,195
CCC	62	21	--	--	--	--	--	--	--	--	--	3	86
Total	1,544	1,965	1,907	1,391	1,188	1,226	1,585	1,456	1,233	1,590	2,454	2,283	19,822
CRD 7													
Rail	4	--	--	4	--	--	77	54	220	93	16	5	473
Truck	15	48	80	110	162	230	287	161	220	62	46	34	1,455
CCC	--	8	--	--	--	--	--	--	--	--	--	4	12
Total	19	56	80	114	162	230	364	215	440	155	62	43	1,940
CRD 8													
Rail	2	8	9	9	7	4	49	107	187	85	48	22	537
Truck	2	18	34	40	49	36	29	36	71	36	56	30	437
CCC	2	--	--	--	--	--	--	--	--	--	19	--	21
Total	6	26	43	49	56	40	78	143	258	121	123	52	995
CRD 9													
Rail	645	1,011	335	214	343	294	604	576	424	560	699	582	6,287
Truck	128	129	54	61	134	127	189	97	158	184	272	520	2,053
CCC	42	28	--	--	--	--	--	--	--	--	--	8	78
Total	815	1,168	389	275	477	421	793	673	582	744	971	1,110	8,418
STATE													
Rail	3,724	6,257	5,448	3,357	3,300	2,214	4,013	3,757	4,444	2,494	6,493	5,302	50,803
Truck	1,564	1,734	2,049	2,003	1,993	2,278	2,851	2,087	2,192	1,893	2,552	3,786	26,982
CCC	343	146	37	--	--	--	--	--	--	--	21	52	599
Total	5,631	8,137	7,534	5,360	5,293	4,492	6,864	5,844	6,636	4,387	9,066	9,140	78,384

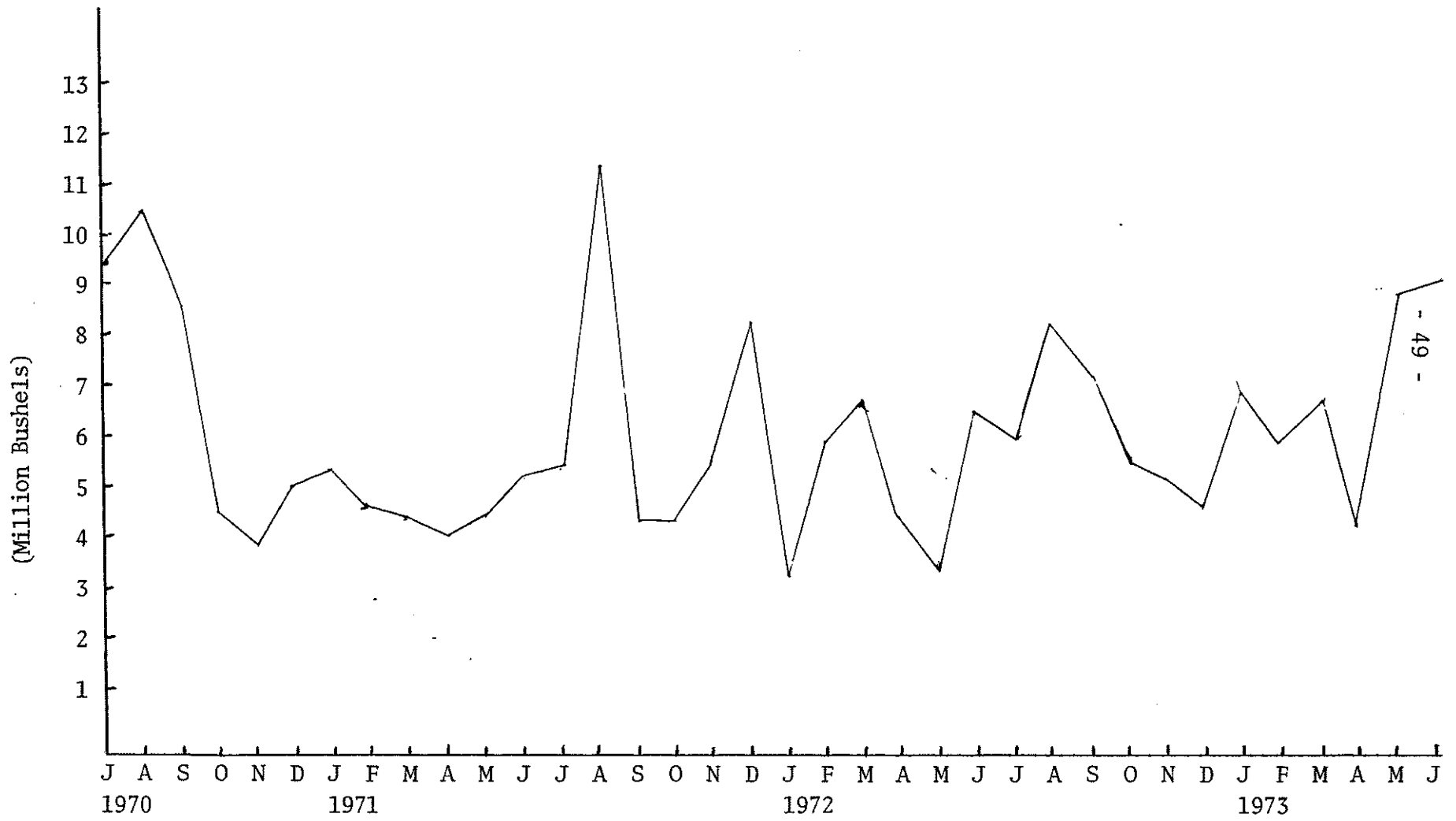


Figure 6. Shipments of Barley from North Dakota Country Elevators by Months, July, 1970 through June, 1973

### Oats

Over 44 million bushels of oats were transported from the state during crop year 1972-73 (Table 23). Over 50 percent of all the oats destined to Duluth-Superior in 1972-73 originated in the eastern third of North Dakota (Crop Reporting Districts 3, 6 and 9) (Table 24). This section of the state also originated over 70 percent of all the oats shipped to North Dakota's other primary oats market, Minneapolis-St. Paul.

The truck is the dominant mode in the shipment of oats to Duluth-Superior, accounting for 57.2 percent of all shipments (Table 25). On the other hand, rail is the dominant mode in the oats to Minneapolis-St. Paul market, originating 56.6 percent of all shipments in 1972-73. In comparison to the previous crop year, trucks gained in their market share to Duluth-Superior and rails gained in their market share to Minneapolis-St. Paul. Trucks remained the dominant mode in the shipment of oats to other Minnesota markets.

The truck more than doubled its shipment of oats from 1971-72 to 1972-73 (Table 26). In 1971-72 trucks originated approximately 10.4 million bushels while in 1972-73 they originated approximately 21.4 million bushels. The primary source of trucked oats in 1972-73 as in 1971-72 is Crop Reporting District 6 (Table 27). Crop Reporting District 9 increased its contribution of oats shipment by truck substantially from 4.3 percent in 1971-72 to 17.7 percent in 1972-73. The Crop Reporting District which showed the highest use of trucks in oats marketings in 1972-73 was Crop Reporting District 7 (Table 28). Approximately 9 out of every 10 bushels of oats shipped from Crop Reporting District 7 to market in 1972-73 were shipped by truck. With the exceptions of Crop Reporting Districts 8 and 9 all districts shipped more than 50 percent of their oats marketings by truck in 1972-73. As in previous crop years, the market of Minneapolis-St. Paul was the primary destination for North Dakota oats in 1972-73 receiving a little more than 50 percent of all North Dakota marketings (Table 29). However, this prominence is down substantially from the 69.8 percent share experienced by this market in 1971-72. In 1972-73 the market of Duluth-Superior received 20.0 percent of all North Dakota oats marketings representing a substantial increase over the 10.2 percent experienced in 1971-72.

During the 1972-73 crop year 6,149 rail cars were loaded with oats and shipped from the state of North Dakota, up approximately 1,000 units from the previous crop year (Table 30). Trucks, on the other hand, increased their loadouts of oats from 8,780 in 1971-72 to 14,821 in 1972-73. Average volumes per rail car in 1972-73 were 3,371 bushels and for trucks 1,443 bushels. CCC shipments of oats were down substantially from 2,282 carloads in 1971-72 to 627 in 1972-73.

The average volume of oats shipped out of the state of North Dakota per month during 1972-73 was approximately 6.7 million bushels (Table 31 and Figure 7). The largest monthly shipment occurred in June and the lowest in March. Average per month shipment of oats by rail was 1.7 million bushels attaining a peak in September and a low in October. Trucks shipped out an average of 1.8 million bushels of oats per month during crop year 1972-73. The highest movement of oats by truck occurred in May, and the lowest in July.

TABLE 23. SHIPMENTS OF OATS FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972, THROUGH JUNE, 1973.

Origin and Mode	D E S T I N A T I O N S								Total
	Duluth-Superior	Mimeapolis-St. Paul	Other Minnesota	Sioux City-Omaha Kansas City	Other East and South	Midland and Southwest	West	Misc.	
CRD 1									
Rail	280	1,030	--	--	57	177	307	229	2,081
Truck	316	978	43	15	33	284	1,036	453	3,156
CCC	132	383	--	--	--	--	--	25	541
Total	728	2,391	43	15	90	461	1,343	707	5,778
CRD 2									
Rail	396	1,430	12	--	3	12	87	142	2,083
Truck	1,256	852	21	1	83	84	195	14	2,504
CCC	30	93	--	--	--	--	--	--	123
Total	1,682	2,375	33	1	86	96	282	156	4,710
CRD 3									
Rail	381	1,704	29	--	--	3	5	--	2,122
Truck	1,298	1,296	35	3	12	28	3	8	2,682
CCC	25	299	--	--	--	--	--	--	324
Total	1,704	3,299	64	3	12	31	8	8	5,128
CRD 4									
Rail	41	518	--	--	--	--	28	--	587
Truck	88	192	11	--	26	149	208	41	715
CCC	--	68	--	--	--	--	18	--	86
Total	129	778	11	--	26	149	254	41	1,388
CRD 5									
Rail	529	1,170	11	--	14	4	3	6	1,737
Truck	545	922	20	7	87	97	46	233	1,956
CCC	--	140	--	--	--	--	--	--	140
Total	1,074	2,232	31	7	101	101	49	239	3,833

TABLE 23 (Continued)

Origin and Mode	D E S T I N A T I O N S								Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha Kansas City	Other East and South	Midland and Southwest	West	Misc.	
CRD 6									
Rail	492	3,144	--	--	31	--	5	--	3,672
Truck	622	3,927	68	42	195	76	8	53	4,992
CCC	92	424	--	--	--	--	--	--	576
Total	1,206	7,495	68	42	226	76	13	53	9,780
CRD 7									
Rail	3	55	--	36	--	--	1	--	96
Truck	11	87	3	10	56	161	258	611	1,195
CCC	--	32	--	--	--	--	--	--	32
Total	14	174	3	46	56	161	259	611	1,323
CRD 8									
Rail	84	306	32	3	--	--	--	16	441
Truck	11	105	13	3	25	40	127	72	395
CCC	9	61	--	--	--	--	2	--	72
Total	104	472	45	6	25	40	129	88	908
CRD 9									
Rail	650	6,946	28	90	117	28	52	--	7,911
Truck	132	2,399	50	1	61	131	2	1,007	3,783
CCC	54	224	--	--	--	--	--	--	279
Total	836	9,569	78	91	178	159	54	1,007	11,973
STATE									
Rail	2,857	16,302	112	129	223	224	488	394	20,730
Truck	4,276	10,758	264	83	576	1,050	1,882	2,491	21,381
CCC	342	1,724	--	--	--	--	20	25	2,111
Total	7,475	28,784	376	212	799	1,274	2,390	2,910	44,222

TABLE 24. PERCENT OF OATS SHIPPED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT, 1970-1971, 1971-1972 AND 1972-1973.

Crop Reporting District and Selected Year	DESTINATIONS												Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha Kansas City	Other East and South	Midland States	Southwest States	North Pacific Ports	Northwest States	West	In-State	Unknown	
(percent)													
CRD 1													
1970-1971	7.7	10.4	3.0	33.3	14.9	6.0	21.2	87.1	17.4	--	10.4	2.9	10.1
1971-1972	8.4	8.2	8.7	8.6	66.1	3.8	37.9	55.1	19.7	--	42.8	6.8	10.4
1972-1973	9.7	8.3	11.4	7.1	11.3	36.2 <sup>a</sup>				56.2 <sup>b</sup>	24.3 <sup>c</sup>		
CRD 2													
1970-1971	14.4	7.4	3.0	--	12.8	2.8	23.4	--	22.6	--	0.6	2.0	8.5
1971-1972	21.9	7.8	--	8.7	3.2	14.1	31.5	12.8	6.7	--	11.2	13.2	9.8
1972-1973	22.5	8.3	8.8	0.5	10.8	7.5				11.8	5.4		
CRD 3													
1970-1971	28.1	20.9	15.6	--	7.4	1.2	8.4	--	--	100.0	6.3	5.3	21.1
1971-1972	31.7	23.1	16.4	--	0.8	9.0	3.0	--	3.4	--	10.6	1.3	22.0
1972-1973	22.8	11.5	17.0	1.4	1.5	2.4				0.3	0.3		
CRD 4													
1970-1971	4.1	1.5	0.8	--	--	2.2	20.6	11.3	4.3	--	2.2	1.5	2.1
1971-1972	0.2	0.6	--	--	2.6	2.5	4.8	17.6	14.0	54.0	--	39.4	1.5
1972-1973	1.7	2.7	2.9	--	3.3	11.7				10.6	1.4		
CRD 5													
1970-1971	12.1	9.3	--	--	30.9	19.2	11.5	--	13.5	--	11.0	2.0	9.8
1971-1972	9.3	12.3	21.4	--	7.3	13.2	12.9	8.1	26.2	--	8.9	14.3	12.2
1972-1973	14.4	7.8	8.2	3.3	12.6	7.9				2.1	8.2		

TABLE 24 (Continued)

Crop Reporting District and Selected Year	D E S T I N A T I O N S												Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha	Other East and South	Midland States	Southwest States	North Pacific Ports	Northwest States	West	In-State	Un-known	
	(percent)												
CRD 6													
1970-1971	21.7	25.0	21.9	11.1	11.7	5.6	6.8	--	3.9	--	37.2	--	23.8
1971-1972	22.1	36.7	47.5	82.7	12.7	16.2	2.5	--	1.1	--	26.5	0.6	32.8
1972-1973	16.1	26.0	18.1	19.8	28.3	6.0				0.5	1.8		
CRD 7													
1970-1971	1.5	0.8	1.7	25.0	2.1	37.7	5.4	--	36.1	--	--	54.9	2.1
1971-1972	2.4	0.4	6.0	--	4.3	30.9	3.0	1.1	23.0	39.2	--	10.1	1.4
1972-1973	0.2	0.6	0.8	21.7	7.0	12.6				10.8	21.0		
CRD 8													
1970-1971	0.7	2.5	--	22.2	1.1	1.8	0.5	1.6	0.9	--	--	1.1	2.2
1971-1972	1.9	2.2	--	--	3.0	7.9	4.4	5.3	5.2	6.8	--	9.9	2.5
1972-1973	1.4	1.6	12.0	2.8	3.1	3.1				5.4	3.0		
CRD 9													
1970-1971	9.7	22.2	54.0	8.4	19.1	23.5	2.2	--	1.3	--	32.3	30.3	20.3
1971-1972	2.1	8.7	--	--	--	2.4	--	--	0.7	--	--	4.4	7.4
1972-1973	11.2	33.2	20.7	42.9	22.3	12.5				2.3	34.6		
TOTAL													
1970-1971	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1971-1972	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972-1973	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a,b,cSee footnotes, Table 5.



TABLE 25. PROPORTION OF OATS SHIPPED BY RAIL, TRUCK AND CCC (RAIL) TO EACH DESTINATION, 1970-1971, 1971-1972 AND 1972-1973.

Mode and Year	D E S T I N A T I O N S											In-State	Un-known	Total
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha-Kansas City	Other East and South	Midland States	South-west States	North Pacific Ports	North-west States	West	West			
	(percent)													
Rail														
1970-1971	53.5	55.6	49.4	16.7	42.6	12.0	17.0	11.3	27.0	--	58.9	--	53.6	
1971-1972	44.5	40.6	24.7	--	12.1	23.0	38.0	27.8	11.5	--	71.3	1.2	40.0	
1972-1973	38.2	56.6	29.8	60.8	27.9	17.6 <sup>a</sup>				20.4 <sup>b</sup>	13.5 <sup>c</sup>			
Truck														
1970-1971	42.2	13.1	50.6	83.3	57.4	88.0	83.0	88.7	73.0	--	41.1	100.0	20.5	
1971-1972	43.0	27.2	75.3	100.0	87.9	77.0	62.0	72.2	88.5	45.9	28.7	98.8	32.3	
1972-1973	57.2	37.4	70.2	39.2	72.1	82.4				78.7	85.6			
CCC														
1970-1971	4.3	31.3	--	--	--	--	--	--	--	100.0	--	--	26.0	
1971-1972	12.5	32.2	--	--	--	--	--	--	--	54.1	--	--	27.7	
1972-1973	4.6	6.0	--	--	--	--	--	--	--	0.8	0.9			

<sup>a,b,c</sup> See footnotes, Table 5.

TABLE 26. TOTAL VOLUME OF OATS SHIPPED FROM NORTH DAKOTA BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1963-1964 THROUGH 1972-1973.

Crop Reporting District	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
	(000 bushels)							
1	2,679	1,879	976	864	1,033	1,063	745	3,156
2	671	2,065	682	712	568	1,484	860	2,504
3	744	2,827	1,978	2,607	1,800	2,220	2,334	2,682
4	493	642	120	200	157	335	323	715
5	224	768	811	1,020	792	948	1,508	1,956
6	1,370	3,218	4,050	3,339	3,073	2,942	3,674	4,992
7	986	1,179	123	21	215	844	243	1,195
8	320	589	89	283	199	144	258	395
9	1,742	3,202	2,125	1,530	1,526	1,305	446	3,783
Total	9,230	16,369	10,954	10,576	9,363	11,285	10,390	21,381

TABLE 27. PROPORTION OF TOTAL OATS SHIPPED FROM NORTH DAKOTA BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1963-1964 THROUGH 1972-1973.

Crop Reporting District	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
	(percent)							
1	29.0	11.5	8.9	8.2	11.0	9.4	7.2	14.8
2	7.3	12.6	6.2	6.7	6.1	13.1	8.3	11.7
3	8.1	17.3	18.1	24.7	19.2	19.7	22.5	12.5
4	5.3	3.9	1.1	1.9	1.7	3.0	3.1	3.3
5	2.4	4.7	7.4	9.6	8.5	8.4	14.5	9.1
6	14.8	19.7	37.0	31.6	32.8	26.1	35.3	23.3
7	10.7	7.2	1.1	0.2	2.3	7.5	2.3	5.6
8	3.5	3.6	0.8	2.7	2.1	1.3	2.5	1.8
9	18.9	19.5	19.4	14.4	16.3	11.5	4.3	17.7
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 28. PROPORTION OF TOTAL OATS SHIPPED BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1963-1964 THROUGH 1972-1973.

Crop Reporting District	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
	(percent)							
1	73.6	46.6	87.4	61.1	41.8	19.0	22.4	54.6
2	37.8	44.2	71.6	58.6	34.0	31.8	27.3	53.2
3	19.4	32.3	35.4	38.1	21.4	19.1	33.1	52.3
4	55.9	43.8	43.5	69.4	33.9	28.7	69.7	51.5
5	11.6	21.8	53.9	34.5	23.7	17.5	38.5	51.0
6	23.1	35.7	47.7	35.2	28.6	22.5	35.0	54.4
7	66.1	80.3	100.0	100.0	70.7	74.3	54.7	90.3
8	34.3	31.4	58.9	53.1	32.9	12.1	32.9	43.5
9	26.4	26.6	35.8	23.3	16.9	11.7	18.7	31.6
Total	34.2	34.8	45.4	36.1	25.3	20.5	32.3	48.4

TABLE 29. DESTINATIONS OF OATS SHIPPED BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS, 1963-1964 THROUGH 1972-1973.

Destinations	Year							
	1963-1964	1965-1966	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973
	(percent)							
Minneapolis-St. Paul	17.6	29.2	45.3	46.6	60.1	51.3	69.8	50.3
Duluth-Superior	18.2	26.9	22.2	24.4	18.2	29.9	10.2	20.0
Other Minnesota	2.7	4.8	0.6	3.1	2.4	1.1	0.5	1.2
East and South	--	--	0.3	0.3	0.6	0.7	1.6	3.1 <sup>a</sup>
Midland and Southwestern States	37.4	22.4	2.8	5.1	13.0	10.1	9.1	4.9
West Ports and States	1.9	2.2	9.3	5.3	2.9	2.0	6.1	8.8
Instate	22.1	14.5	1.4	2.3	1.1	1.7	0.5	11.7 <sup>b</sup>
Unknown	0.1	--	18.1	12.9	1.7	3.2	2.2	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>a</sup>Includes Sioux City-Omaha-Kansas City.

<sup>b</sup>For year 1972-1973 Instate and Unknown were combined.

TABLE 30. AVERAGE VOLUME OF OATS SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1970-1971, 1971-1972 AND 1972-1973.

Origin and Mode	Number of Cars			Number of Trucks			Average Volume			
	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973	
								(bushels)		
CRD 1										
Rail	778	229	546	--	--	--	3,426	3,562	3,811	
Truck	--	--	--	788	726	2,296	1,349	1,458	1,375	
CCC	529	556	145	--	--	--	3,514	3,176	3,731	
CRD 2										
Rail	602	345	592	--	--	--	3,250	3,750	3,519	
Truck	--	--	--	996	661	1,748	1,490	1,301	1,432	
CCC	385	322	41	--	--	--	3,176	3,220	3,000	
CRD 3										
Rail	2,073	713	676	--	--	--	3,008	3,246	3,139	
Truck	--	--	--	1,525	1,599	1,810	1,455	1,460	1,482	
CCC	1,059	575	90	--	--	--	3,015	2,966	3,600	
CRD 4										
Rail	172	25	160	--	--	--	3,438	3,943	3,669	
Truck	--	--	--	229	236	506	1,463	1,370	1,413	
CCC	87	15	25	--	--	--	2,762	3,222	3,440	
CRD 5										
Rail	768	417	545	--	--	--	3,211	3,243	3,187	
Truck	--	--	--	733	990	1,328	1,293	1,523	1,473	
CCC	622	322	53	--	--	--	3,214	3,271	2,642	
CRD 6										
Rail	2,214	1,449	1,065	--	--	--	3,232	3,345	3,448	
Truck	--	--	--	2,021	2,514	3,439	1,456	1,462	1,452	
CCC	956	582	152	--	--	--	3,129	3,386	3,395	

TABLE 30 (continued)

Origin and Mode	Number of Cars			Number of Trucks			Average Volume		
	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973
							(bushels)		
CRD 7									
Rail	74	1	31	--	--	--	3,347	1,300	3,097
Truck	--	--	--	501	240	846	1,684	1,460	1,413
CCC	14	30	10	--	--	--	3,233	3,156	3,200
CRD 8									
Rail	116	49	133	--	--	--	3,272	3,093	2,316
Truck	--	--	--	100	200	297	1,441	1,292	1,330
CCC	198	115	26	--	--	--	3,360	3,173	2,769
CRD 9									
Rail	2,403	1,889	2,401	--	--	--	3,255	3,660	3,295
Truck	--	--	--	820	1,614	2,551	1,591	1,450	1,483
CCC	637	421	85	--	--	--	3,242	3,243	3,282
STATE									
Rail	9,200	5,130	6,149	--	--	--	3,209	3,467	3,371
Truck	--	--	--	7,923	8,780	14,821	1,424	1,447	1,443
CCC	4,487	2,882	627	--	--	--	3,183	3,264	3,367

TABLE 31. MONTHLY SHIPMENTS OF OATS FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972, THROUGH JUNE, 1973

Origin and Mode	M O N T H S ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APRIL	MAY	JUNE	
	(000 bushels)												
CRD 1													
Rail	9	69	187	131	204	118	281	223	102	191	329	237	2,081
Truck	63	126	189	211	386	395	335	158	347	227	333	387	3,157
CCC	236	147	134	--	--	--	--	--	--	--	8	16	541
Total	308	342	510	342	590	513	616	381	449	418	670	640	5,779
CRD 2													
Rail	122	101	342	137	245	149	186	132	87	121	243	218	2,083
Truck	110	170	190	214	229	221	174	175	183	151	266	420	2,503
CCC	22	16	6	17	6	3	6	3	3	--	6	34	122
Total	254	287	538	368	480	373	366	310	273	272	515	672	4,708
CRD 3													
Rail	205	262	463	108	98	116	90	49	80	136	186	239	2,032
Truck	234	177	349	141	340	210	10	236	129	117	364	374	2,681
CCC	233	26	--	19	--	--	--	--	--	--	--	45	323
Total	672	465	812	268	438	326	100	285	209	253	550	658	5,036
CRD 4													
Rail	3	71	90	47	40	49	15	77	42	31	31	92	588
Truck	21	39	90	47	55	95	59	48	36	75	90	60	715
CCC	18	13	--	--	--	--	18	8	6	10	--	14	87
Total	42	123	180	94	95	144	92	133	84	116	121	166	1,390
CRD 5													
Rail	42	164	244	64	73	77	118	135	238	140	177	265	1,737
Truck	100	228	213	76	185	255	169	124	71	155	196	184	1,956
CCC	110	--	23	--	--	--	--	--	--	--	--	8	141
Total	252	392	480	140	258	332	287	259	309	295	373	457	3,834



TABLE 31 (CONT.)

Origin and Mode	M O N T H S ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
CRD 6													
Rail	349	340	658	164	362	379	205	196	179	164	349	327	3,672
Truck	418	404	401	315	326	361	315	487	365	479	580	541	4,992
CCC	394	81	5	--	--	--	--	--	--	--	--	36	516
Total	1,161	825	1,064	479	688	740	520	683	544	643	929	904	9,180
CRD 7													
Rail	--	3	12	--	9	6	6	3	10	18	13	15	95
Truck	23	25	47	110	160	128	135	88	98	83	135	163	1,195
CCC	--	--	3	24	--	--	--	5	--	--	--	--	32
Total	23	28	62	134	169	134	141	96	108	101	148	178	1,322
CRD 8													
Rail	--	21	36	--	6	9	11	--	25	129	100	102	439
Truck	33	8	72	31	25	43	54	18	13	21	33	44	395
CCC	9	--	16	--	--	--	--	--	--	--	--	48	73
Total	42	29	124	31	31	52	65	18	38	150	133	194	907
CRD 9													
Rail	630	880	760	301	628	661	640	453	596	596	845	921	7,911
Truck	280	391	308	219	370	394	365	241	215	243	483	273	3,782
CCC	112	109	6	8	--	--	--	--	--	--	--	44	279
Total	1,022	1,380	1,074	528	998	1,055	1,005	694	811	839	1,328	1,238	11,972
STATE													
Rail	1,359	1,911	2,788	957	1,666	1,565	1,551	1,555	1,072	1,527	2,273	2,415	20,639
Truck	1,282	1,570	1,863	1,363	2,077	2,103	1,614	1,576	1,457	1,551	2,479	2,447	21,382
CCC	1,134	410	175	68	6	3	22	18	10	10	14	254	2,124
Total	3,775	3,891	4,826	2,388	3,749	3,671	3,187	3,149	2,539	3,088	4,766	5,116	44,145

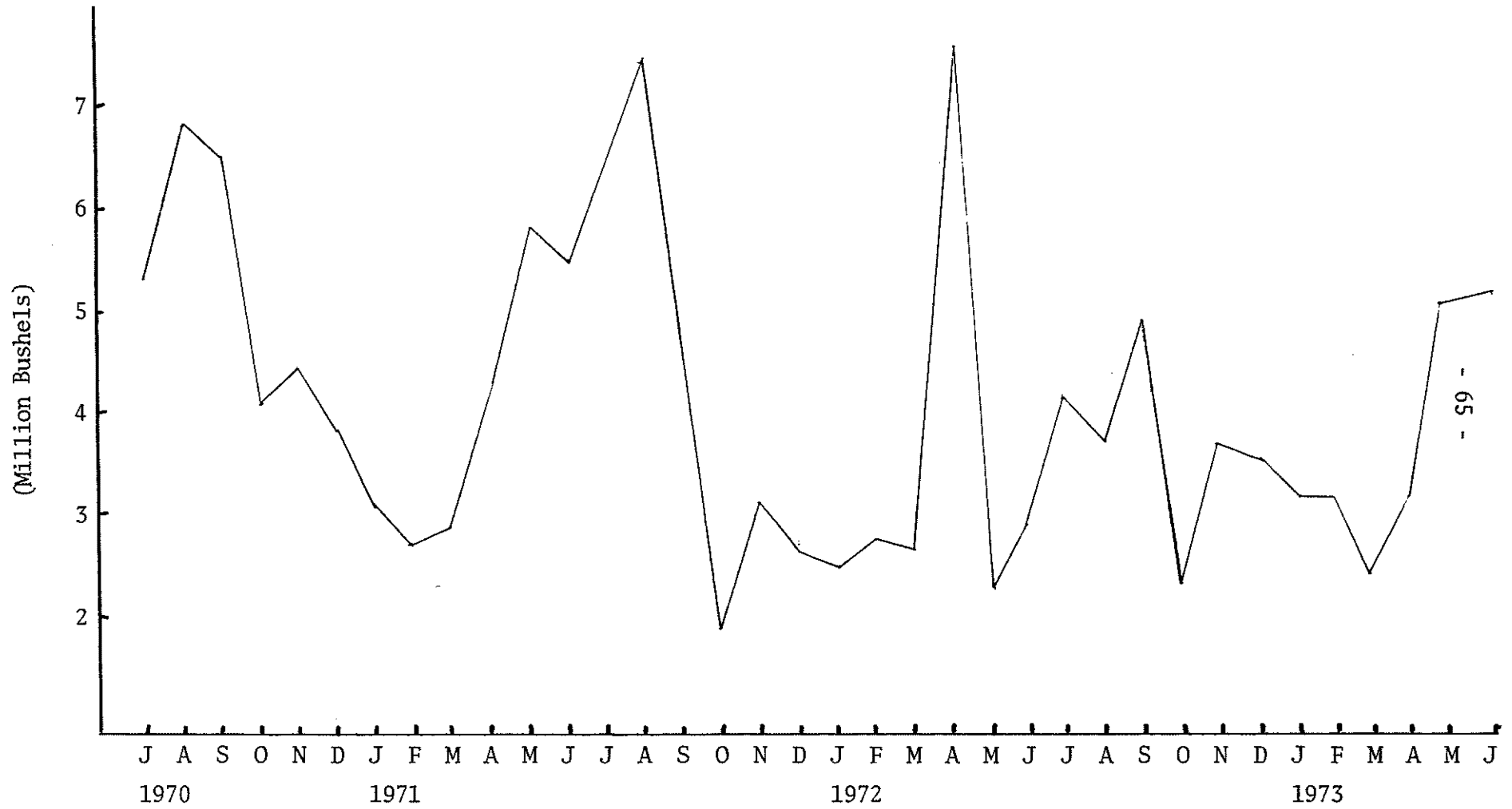


Figure 7. Shipments of Oats from North Dakota Country Elevators by Months, July, 1970 through June, 1973.

### Rye

A little over 5 million bushels of rye were shipped from North Dakota country elevators from July, 1972, through June, 1973, of which 85 percent was destined for the markets of Duluth-Superior and Minneapolis-St. Paul (Table 32). Approximately 46 percent of all rye shipments from the state originated in Crop Reporting District 9 in 1972-73. Of the 5 million bushels of rye shipped from North Dakota in 1972-73, 38 percent were shipped via rail, 35 percent by truck, and 26 percent by CCC. Disregarding CCC shipments, the truck was the dominant mode in the Duluth-Superior market while rail had a substantial edge in the Minneapolis-St. Paul market.

North Dakota loaded 865 rail cars with rye during 1972-73, compared with 363 during 1971-72 (Table 33). Truck loads of rye were down marginally from 2,167 in 1971-72 to 2,085 in 1972-73. The average volume of rye per rail car in 1972-73 was 2,214 bushels and for trucks 843 bushels.

The average monthly shipment of rye during 1972-73 was 749,000 bushels (Table 34 and Figure 8). The largest monthly shipment of rye occurred in August and the lowest in June. Rail shipments averaged 492,000 bushels per month and trucks 146,000 bushels.

TABLE 32. SHIPMENTS OF RYE FROM NORTH DAKOTA COUNTRY ELEVATORS JULY, 1972, THROUGH JUNE, 1973.

Origin and Mode	D E S T I N A T I O N S								Total	
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha Kansas City	Other East and South	Midland and Southwest	West	Misc.		
(000 bushels)										
CRD 1										
Rail	119	44	--	--	--	--	--	--	2	166
Truck	111	28	5	--	1	--	59	--	--	203
CCC	62	104	--	--	--	--	2	11	--	180
Total	292	176	5	--	1	--	61	13	--	549
CRD 2										
Rail	56	31	--	--	--	15	--	--	--	102
Truck	146	14	4	--	2	--	46	10	--	221
CCC	35	--	--	--	--	--	--	--	--	35
Total	237	45	4	--	2	15	46	10	--	358
CRD 3										
Rail	61	14	--	--	--	--	--	2	--	77
Truck	34	3	--	1	--	--	--	2	--	44
CCC	27	17	--	--	--	--	--	--	--	44
Total	122	34	--	1	--	--	--	4	--	165
CRD 4										
Rail	29	34	--	--	--	--	--	--	--	63
Truck	19	1	1	--	--	2	10	3	--	36
CCC	23	28	--	--	--	--	--	--	--	51
Total	71	63	1	--	--	2	10	3	--	150
CRD 5										
Rail	64	67	2	--	--	--	--	--	--	132
Truck	223	20	9	--	6	1	9	3	--	273
CCC	26	77	--	--	--	--	--	--	--	103
Total	313	164	11	--	6	1	9	3	--	508

TABLE 32 (Continued)

Origin and Mode	D E S T I N A T I O N S								Total	
	Duluth-Superior	Minneapolis-St. Paul	Other Minnesota	Sioux City-Omaha Kansas City	Other East and South	Midland and Southwest	West	Misc.		
CRD 6										
Rail	63	36	12	--	--	--	--	25	137	
Truck	93	16	7	--	1	--	--	14	130	
CCC	48	62	--	--	--	--	--	--	110	
Total	204	114	19	--	1	--	--	39	377	
CRD 7										
Rail	5	4	--	--	--	--	1	--	10	
Truck	7	15	5	--	3	24	112	81	248	
CCC	74	37	--	--	--	--	--	--	111	
Total	86	56	5	--	3	24	113	81	369	
CRD 8										
Rail	17	14	8	--	--	--	--	--	40	
Truck	14	9	11	--	--	20	21	15	90	
CCC	47	48	--	--	--	--	--	--	95	
Total	78	71	19	--	--	20	21	15	225	
CRD 9										
Rail	439	675	67	--	6	--	--	--	1,188	
Truck	250	201	40	--	2	1	9	14	516	
CCC	194	412	--	--	--	--	--	--	608	
Total	883	1,288	107	--	8	1	9	14	2,312	
STATE										
Rail	854	920	89	--	6	15	1	30	1,915	
Truck	897	307	81	1	14	48	267	141	1,757	
CCC	537	785	--	--	--	--	2	11	1,338	
Total	2,288	2,012	170	1	20	63	270	182	5,010	

TABLE 33. AVERAGE VOLUME OF RYE SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1970-1971, 1971-1972 AND 1972-1973.

Origin and Mode	Number of Cars			Number of Trucks			Average Volume		
	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973
							(bushels)		
CRD 1									
Rail	74	44	71	--	--	--	2,021	2,043	2,338
Truck	--	--	--	198	300	246	824	782	825
CCC	110	97	80	--	--	--	2,040	2,340	2,250
CRD 2									
Rail	70	14	49	--	--	--	2,048	1,746	2,449
Truck	--	--	--	159	410	260	1,363	813	850
CCC	88	5	16	--	--	--	2,564	2,220	2,188
CRD 3									
Rail	17	15	36	--	--	--	1,753	1,514	2,139
Truck	--	--	--	60	72	46	786	744	957
CCC	12	4	21	--	--	--	1,957	1,533	2,095
CRD 4									
Rail	31	7	29	--	--	--	2,021	1,941	2,172
Truck	--	--	--	61	59	44	973	817	818
CCC	28	13	22	--	--	--	2,169	2,297	2,318
CRD 5									
Rail	100	37	90	--	--	--	2,183	1,935	1,467
Truck	--	--	--	71	236	313	810	843	872
CCC	99	88	41	--	--	--	2,002	2,367	2,512
CRD 6									
Rail	59	34	56	--	--	--	2,073	2,363	2,446
Truck	--	--	--	137	254	155	845	920	839
CCC	64	68	50	--	--	--	2,193	2,221	2,200

TABLE 33 (continued)

Origin and Mode	Number of Cars			Number of Trucks			Average Volume (bushels)		
	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973
CRD 7									
Rail	27	8	5	--	--	--	2,156	2,834	2,000
Truck	--	--	--	113	273	299	837	848	829
CCC	149	22	47	--	--	--	2,318	2,095	2,362
CRD 8									
Rail	25	9	20	--	--	--	1,928	1,756	2,000
Truck	--	--	--	20	34	110	739	762	818
CCC	32	24	41	--	--	--	2,326	2,793	2,317
CRD 9									
Rail	272	172	509	--	--	--	2,112	2,135	2,334
Truck	--	--	--	386	529	612	854	853	843
CCC	381	273	255	--	--	--	2,130	2,338	2,384
STATE									
Rail	669	363	865	--	--	--	2,103	1,952	2,214
Truck	--	--	--	1,407	2,167	2,085	781	836	843
CCC	1,099	619	573	--	--	--	1,915	2,237	2,335

TABLE 34. MONTHLY SHIPMENTS OF RYE FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972 - JUNE, 1973

Origin and Mode	MONTHS ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
(000 bushels)													
CRD 1													
Rail	26	24	4	2	2	2	2	--	--	10	--	94	166
Truck	24	23	39	12	8	1	4	11	4	18	24	36	204
CCC	50	33	2	--	--	--	11	--	4	--	--	79	179
Total	100	80	45	14	10	3	17	11	8	28	24	209	549
CRD 2													
Rail	2	2	--	--	8	2	6	11	8	--	23	40	102
Truck	18	64	19	17	11	6	13	12	12	11	18	20	221
CCC	--	--	3	--	--	--	--	--	--	--	2	30	35
Total	20	66	22	17	19	8	19	23	20	11	43	90	358
CRD 3													
Rail	6	6	12	--	--	2	9	21	1	6	1	14	78
Truck	2	9	6	9	4	--	--	4	2	--	2	3	41
CCC	5	15	2	--	--	--	--	--	--	--	5	17	44
Total	13	30	20	9	4	2	9	25	3	6	8	34	163
CRD 4													
Rail	--	2	21	2	2	--	7	--	--	2	9	18	63
Truck	1	14	--	4	1	2	2	3	1	2	5	3	38
CCC	23	13	--	--	--	--	--	--	--	--	--	15	51
Total	24	29	21	6	3	2	9	3	1	4	14	36	152
CRD 5													
Rail	--	4	--	7	6	6	4	13	2	2	51	38	133
Truck	6	26	9	8	11	19	3	23	27	9	40	92	273
CCC	35	11	9	--	--	--	8	--	--	--	7	34	104
Total	41	41	18	15	17	25	15	36	29	11	98	164	510



TABLE 34 (CONT.)

Origin and Mode	M O N T H S ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
(000 bushels)													
CRD 6													
Rail	4	5	2	16	10	31	2	8	4	6	29	103	220
Truck	17	31	16	12	1	11	--	4	8	5	15	8	128
CCC	51	15	2	7	--	--	--	--	--	--	4	32	111
Total	72	51	20	35	11	42	2	12	12	11	48	143	459
CRD 7													
Rail	--	--	--	2	2	--	--	1	--	--	--	5	10
Truck	2	11	13	13	23	14	33	32	39	24	28	13	245
CCC	38	32	5	--	--	--	--	--	--	--	--	34	109
Total	40	43	18	15	26	14	33	33	39	24	28	52	364
CRD 8													
Rail	--	5	2	--	--	--	--	2	--	2	2	26	39
Truck	--	1	1	2	--	3	6	17	19	12	23	6	90
CCC	22	11	--	--	--	--	--	--	--	2	6	54	95
Total	22	17	3	2	--	3	6	19	19	16	31	86	224
CRD 9													
Rail	6	113	52	48	72	88	34	61	43	98	235	338	1,188
Truck	14	63	28	17	75	12	19	32	29	24	99	103	515
CCC	171	239	31	--	--	--	--	--	--	--	--	167	608
Total	191	415	111	65	147	100	53	93	72	122	334	608	2,311
STATE													
Rail	44	160	94	76	102	131	62	116	59	127	351	676	5,898
Truck	84	245	131	94	124	76	81	127	151	105	170	366	1,754
CCC	394	370	42	18	--	--	19	3	3	2	102	384	1,337
Total	522	775	267	188	226	207	162	246	213	234	623	1,422	8,989

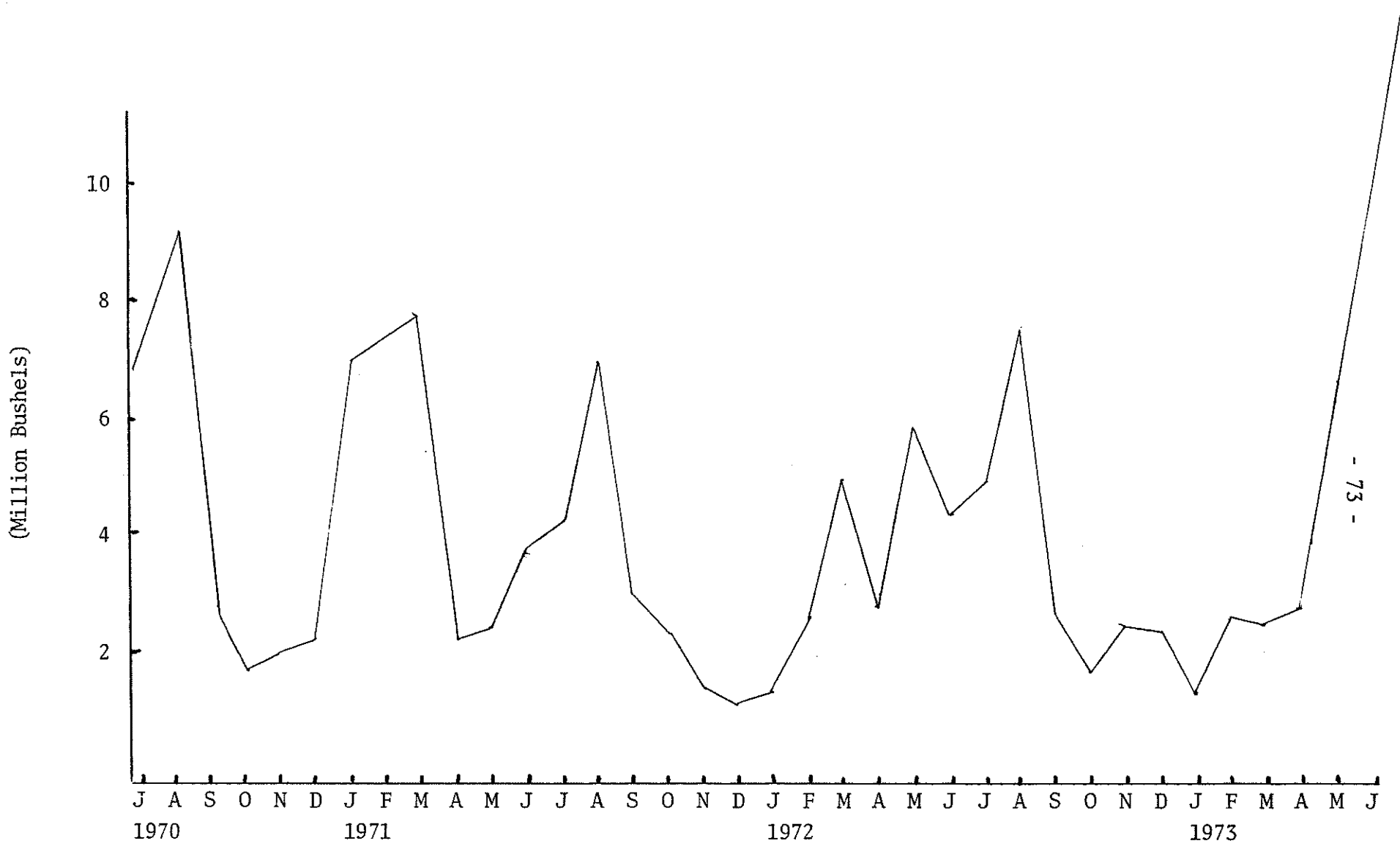


Figure 8. Shipments of Rye from North Dakota Country Elevators by Months, July, 1970 through June, 1973.

### Flax

Approximately 11.4 million bushels of flax were transported from the state of North Dakota to all markets during crop year 1972-73 (Table 35). Over 90 percent of this movement went to the two primary markets of Duluth-Superior and Minneapolis-St. Paul. Other Minnesota markets received 774,000 bushels. Crop Reporting District 9 was the primary source of flax shipments in 1972-73. The primary source of flax for the Duluth-Superior market was Crop Reporting District 5 and for the Minneapolis St. Paul market, Crop Reporting District 9.

Over 70 percent of all flax shipped from the state of North Dakota to all markets arrived by truck in 1972-73, with 17 percent arriving by rail and the remainder by CCC. The truck was the dominant mode in all three major markets of Duluth-Superior, Minneapolis-St. Paul and Other Minnesota.

The number of rail cars loaded with flax in North Dakota during 1972-73 was 954, up from 615 in 1971-72 (Table 36). Truckloads of flax increased from 7,973 in 1971-72 to 10,041 in 1972-73. The average volume of flax per rail car was 2,096 bushels and for trucks 819 bushels.

During crop year 1972-73 flax shipments averaged 996,000 bushels per month (Table 37 and Figure 9). The largest monthly shipment occurred in October and the lowest in December. Shipments of flax by rail averaged 167,000 bushels per month attaining a maximum in September and a minimum in December. Truck shipments averaged 731,000 bushels per month with October and August high and low volume months, respectively.

TABLE 35. SHIPMENTS OF FLAX FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972 THROUGH JUNE, 1973.

Origin & Mode	D E S T I N A T I O N S								Total	
	Duluth-Superior	Mpls.-St. Paul	Other Minn.	Sioux City Omaha Kansas City	Other East and South	Midland and Southwest States	West	Misc.		
(000 bushels)										
CRD 1										
Rail	3	23	--	--	--	--	--	--	--	26
Truck	113	236	5	--	--	1	122	5		483
CCC	--	16	--	--	--	--	--	1		17
Total	116	275	5	--	--	1	122	6		526
CRD 2										
Rail	56	133	2	--	--	--	--	--	--	191
Truck	546	619	42	--	--	--	14	2		1,222
CCC	12	42	--	--	--	--	--	--		55
Total	614	794	44	--	--	--	14	2		1,468
CRD 3										
Rail	71	94	--	--	--	--	21	--		186
Truck	326	303	97	--	--	--	--	3		730
CCC	--	47	--	--	--	--	--	--		47
Total	397	444	97	--	--	--	21	3		963
CRD 4										
Rail	43	49	--	--	--	--	--	--		92
Truck	171	315	32	--	--	--	56	1		574
CCC	20	51	--	--	--	--	--	13		84
Total	234	415	32	--	--	--	56	14		750
CRD 5										
Rail	140	196	8	--	--	--	--	--		344
Truck	536	983	172	--	--	--	1	5		1,697
CCC	29	175	33	--	--	--	--	--		237
Total	705	1,354	213	--	--	--	1	5		2,278

TABLE 35 (Continued)

D E S T I N A T I O N S									
Origin & Mode	Duluth-Superior	Mpls.-St. Paul	Other Minn.	Sioux City Omaha Kansas City	Other East and South	Midland and Southwest States	West	Misc.	Total
(000 bushels)									
CRD 6									
Rail	73	259	12	--	--	--	--	--	344
Truck	407	550	25	--	--	--	10	4	995
CCC	41	190	--	--	--	--	--	--	231
Total	521	999	37	--	--	--	10	4	1,570
CRD 7									
Rail	--	6	--	--	--	--	--	--	6
Truck	4	53	3	--	--	--	--	--	59
CCC	3	6	--	--	--	--	--	--	9
Total	7	65	3	--	--	--	--	--	74
CRD 8									
Rail	87	252	--	--	--	--	--	--	339
Truck	66	406	62	--	--	--	7	1	541
CCC	3	92	--	--	--	--	--	--	95
Total	156	750	62	--	--	--	7	1	975
CRD 9									
Rail	135	320	14	--	3	--	--	--	472
Truck	207	1,440	268	--	--	5	2	2	1,925
CCC	95	314	--	--	--	--	--	--	409
Total	437	2,074	282	--	3	5	2	2	2,806
STATE									
Rail	610	1,330	36	--	3	--	21	--	2,000
Truck	2,376	4,906	705	--	--	6	211	22	8,228
CCC	204	933	33	--	--	--	--	14	1,184
Total	3,190	7,169	774	--	3	6	232	36	11,412

TABLE 36. AVERAGE VOLUME OF FLAX SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1970-1971; 1971-1972; AND 1972-1973.

Origin & Mode	Number of Cars			Number of Trucks			Average Volume		
	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973
CRD 1									
Rail	71	29	14	--	--	--	2,187	1,716	1,857
Truck	--	--	--	908	563	587	848	712	823
CCC	98	59	10	--	--	--	2,167	2,107	1,700
CRD 2									
Rail	209	53	82	--	--	--	2,066	1,781	2,329
Truck	--	--	--	827	1,569	1,511	781	605	809
CCC	149	114	21	--	--	--	2,488	2,189	2,619
CRD 3									
Rail	209	50	81	--	--	--	2,284	2,590	2,296
Truck	--	--	--	707	654	868	882	734	841
CCC	124	86	24	--	--	--	2,273	1,961	1,958
CRD 4									
Rail	120	23	44	--	--	--	2,190	2,331	2,091
Truck	--	--	--	396	364	719	798	740	798
CCC	31	15	38	--	--	--	2,627	2,800	2,211
CRD 5									
Rail	216	103	149	--	--	--	2,173	2,199	2,309
Truck	--	--	--	762	1,285	2,064	792	816	822
CCC	421	75	177	--	--	--	2,532	2,585	1,339
CRD 6									
Rail	214	100	161	--	--	--	2,098	1,917	2,137
Truck	--	--	--	1,084	1,032	1,179	794	782	844
CCC	439	164	86	--	--	--	2,441	2,460	2,686

TABLE 36 (Continued)

Origin & Mode	Number of Cars			Number of Trucks			Average Volume		
	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973	1970-1971	1971-1972	1972-1973
								(bushels)	
CRD 7									
Rail	12	11	2	--	--	--	1,613	1,800	3,000
Truck	--	--	--	96	242	77	813	877	766
CCC	13	18	5	--	--	--	2,294	2,466	1,800
CRD 8									
Rail	180	101	176	--	--	--	2,038	2,157	1,926
Truck	--	--	--	357	620	682	842	795	793
CCC	246	98	44	--	--	--	2,246	2,112	2,159
CRD 9									
Rail	315	145	245	--	--	--	2,244	1,952	1,927
Truck	--	--	--	1,202	1,644	2,354	833	827	818
CCC	532	162	196	--	--	--	2,502	2,541	2,087
STATE									
Rail	1,540	615	954	--	--	--	2,168	2,059	2,096
Truck	--	--	--	6,339	7,973	10,041	820	755	819
CCC	2,053	791	601	--	--	--	2,434	2,332	1,970

TABLE 37. MONTHLY SHIPMENTS OF FLAX FROM NORTH DAKOTA COUNTRY ELEVATORS, JULY, 1972 - JUNE, 1973

Origin and Mode	MONTHS ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
(000 bushels)													
CRD 1													
Rail	6	--	4	--	5	--	7	--	2	3	--	--	27
Truck	35	25	38	91	60	21	39	34	83	20	17	20	483
CCC	9	5	--	--	1	--	--	--	--	--	--	2	17
Total	50	30	42	91	66	21	46	34	85	23	17	22	527
CRD 2													
Rail	11	28	12	20	20	--	27	9	20	20	25	--	192
Truck	60	29	118	321	193	48	123	131	93	48	26	34	1,224
CCC	8	23	19	8	3	--	--	--	--	--	--	--	61
Total	79	80	149	349	216	48	150	140	113	68	51	34	1,477
CRD 3													
Rail	1	20	43	13	3	--	12	24	15	34	8	11	184
Truck	24	16	49	189	117	22	70	78	95	47	22	2	731
CCC	28	7	3	5	--	--	--	--	--	4	--	--	47
Total	53	43	95	207	120	22	82	102	110	85	30	13	962
CRD 4													
Rail	17	6	29	19	12	--	3	--	1	2	2	3	94
Truck	46	13	74	98	91	27	39	46	33	39	44	27	577
CCC	13	20	8	43	--	--	--	--	--	--	--	--	84
Total	76	39	111	160	103	27	42	46	34	41	46	30	755
CRD 5													
Rail	3	23	106	78	31	--	28	46	15	--	8	6	344
Truck	91	42	188	304	211	65	202	228	89	114	98	66	1,698
CCC	37	34	21	13	--	--	--	2	34	34	42	22	239
Total	131	99	315	395	242	65	230	276	138	148	148	94	2,281



TABLE 37 (CONT.)

Origin and Mode	M O N T H S ( 1 9 7 2 - 1 9 7 3 )												TOTAL
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
(000 bushels)													
CRD 6													
Rail	17	10	76	25	22	22	49	14	66	23	7	12	343
Truck	43	23	112	200	114	63	76	182	127	23	22	9	994
CCC	88	90	5	25	13	10	--	--	--	--	--	--	231
Total	148	123	193	250	149	95	125	196	193	46	29	21	1,568
CRD 7													
Rail	--	--	--	--	--	--	--	3	--	--	--	--	3
Truck	--	--	5	6	7	3	11	8	18	--	--	--	58
CCC	6	3	--	--	--	--	--	--	--	--	--	--	9
Total	6	3	5	6	7	3	11	11	18	--	--	--	70
CRD 8													
Rail	17	28	76	26	20	--	39	28	29	20	30	27	340
Truck	64	36	72	74	54	21	54	47	34	27	25	33	541
CCC	67	24	--	2	2	--	--	--	--	--	--	--	95
Total	148	88	148	102	76	21	93	75	63	47	55	60	976
CRD 9													
Rail	22	26	141	123	29	21	16	35	16	14	9	21	473
Truck	179	50	288	263	176	112	161	140	209	217	72	58	1,925
CCC	123	84	22	22	49	--	--	11	48	29	21	--	409
Total	324	160	451	408	254	133	177	186	273	260	102	79	2,807
STATE													
Rail	95	140	487	304	144	42	180	160	163	114	87	82	1,998
Truck	542	155	1,025	1,547	1,023	380	775	893	781	535	326	788	8,770
CCC	379	290	78	113	67	10	--	13	82	67	62	24	1,185
Total	1,016	585	1,590	1,964	1,234	432	955	1,066	1,026	716	475	894	11,953

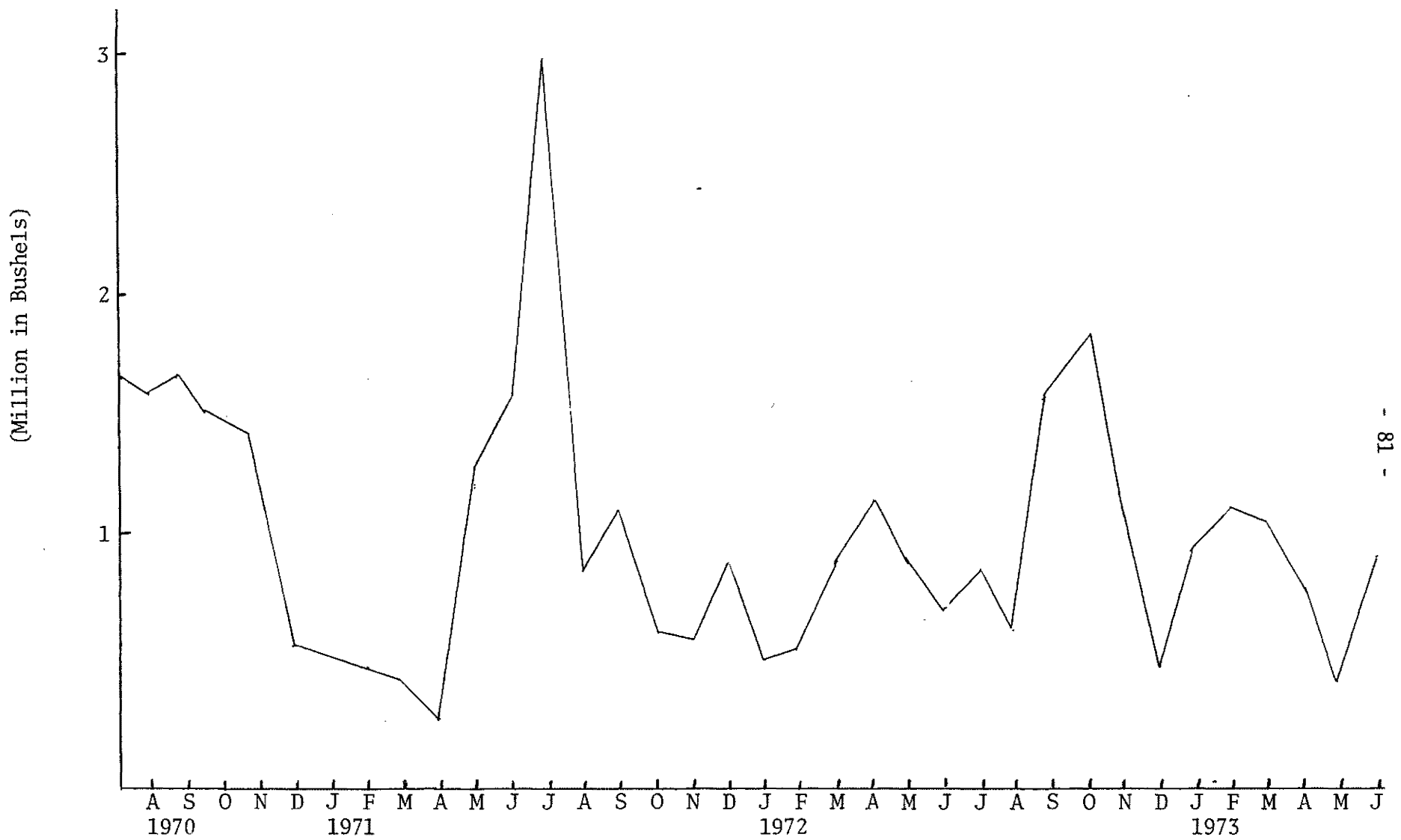


Figure 9. Shipments of Flax from North Dakota Country Elevators by Months, July, 1970 through June, 1973.