

**TRUCK AND RAIL SHIPMENTS OF
HARD RED SPRING AND DURUM
WHEAT FROM NORTH DAKOTA
COUNTRY ELEVATORS 1969-1970**

By

David C. Nelson

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BY

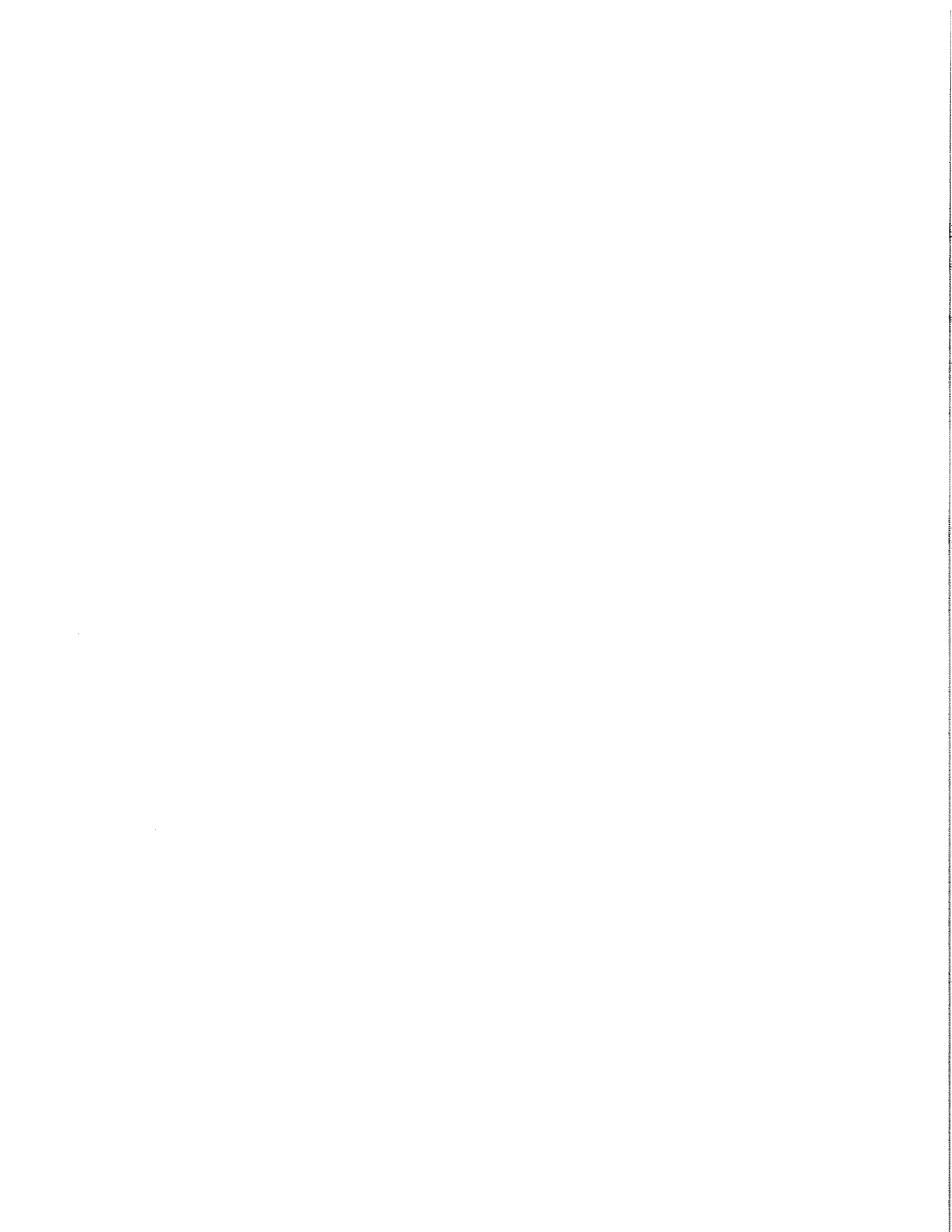
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in cooperation with

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

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Preface

In the development and presentation of data, such as follows, many people are necessarily involved. This includes personnel in the Public Service Commission, State Wheat Commission, and the Transportation Institute, such as clerical help and graduate students who spent many hours transcribing data from reports and tabulating on adding machines.

Most important in providing both funds, data, and labor, however, are the members and officers of the two State agencies. These are extremely important data in the scheme of transportation policy and rate making; and therefore, they deserve acknowledgment here:

North Dakota State Wheat Commission

Steve Reimers, Chairman Carrington	Herman Schmitz, Williston
Emil Anderson, Upham	George Smith, Amenia
Fred Mahlmann, Manning	Floyd Poyzer, Amenia
	Tom Ridley, Langdon

Paul E. R. Abrahamson, Administrator
Merle Hedlund, Assistant Administrator
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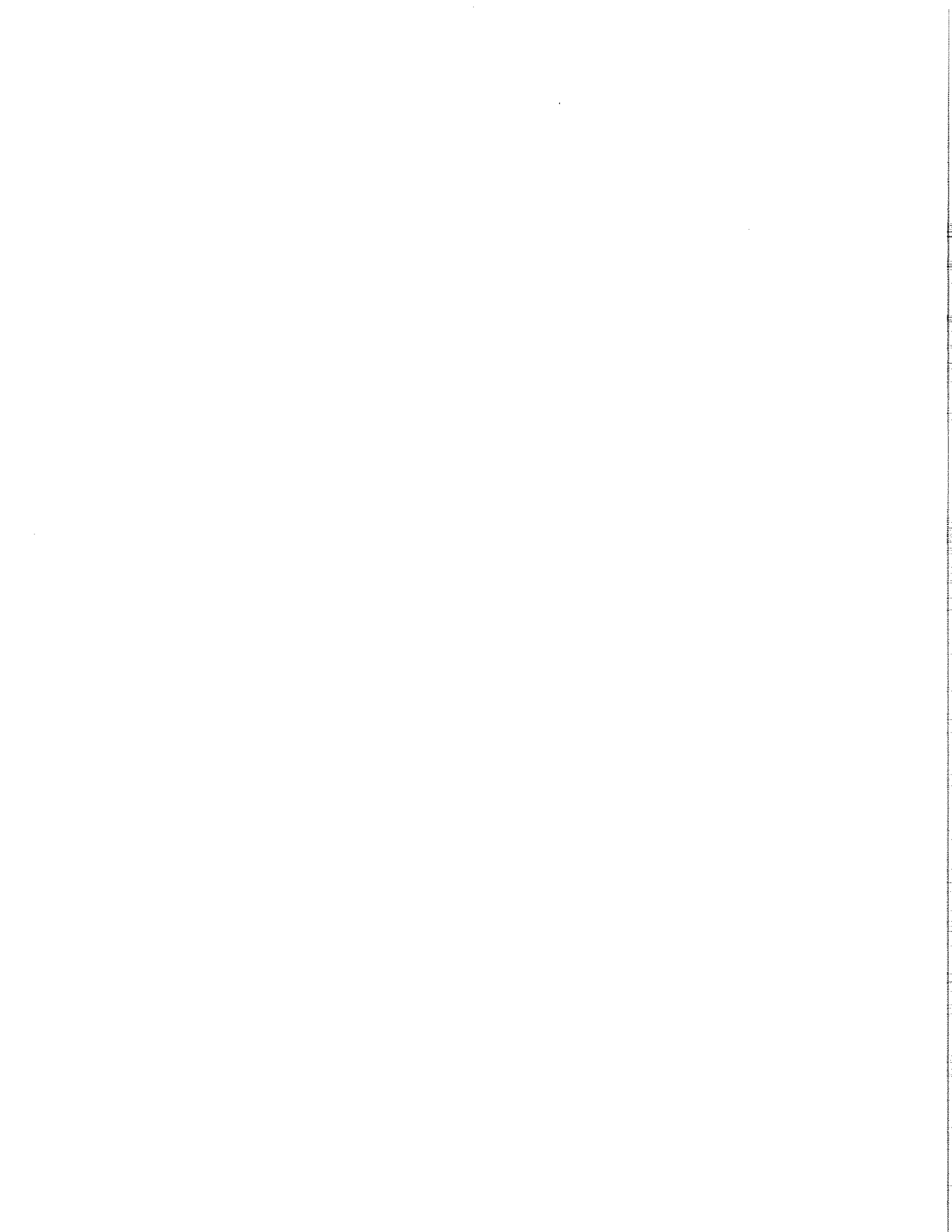


TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
OBJECTIVE	1
SOURCE OF DATA	1
SOURCES OF TRUCKED WHEAT	2
PROPORTIONS SHIPPED BY TRUCK	2
DESTINATIONS OF TRUCKED WHEAT	9
SHIPMENTS BY PERIODS	9
NUMBER OF CARS AND TRUCKS	16
APPENDIX	23

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 Total Volume of Wheat Shipped by Truck from Each Crop Reporting District, 1956-57 Through 1969-70	4
2 Proportion of Total Wheat Shipped from North Dakota by Truck from Each Crop Reporting District, 1956-57 Through 1969-70	5
3 Proportion of Total Wheat Shipped from North Dakota by Truck from Each Crop Reporting District, 1956-57 Through 1969-70	6
4 Major Destinations of Wheat Shipped by Truck from North Dakota Country Elevators, 1956-57 Through 1969-70	10
5 Proportion of Hard Red Spring and Durum Wheat Shipped by Rail, Truck, and CCC (Rail) to Each Destination, 1967-68, 1968-69, and 1969-70	11
6 Percent of Total Hard Red Spring Wheat Shipped to Each Destination by Each Crop Reporting District, 1967-68, 1968-69, and 1969-70	12
7 Percent of Total Durum Wheat Shipped to Each Destination by Each Crop Reporting District, 1967-68, 1968-69, and 1969-70	14

<u>Table</u>		<u>Page</u>
8	Average Volume of Hard Red Spring Wheat Shipped by Rail Car and by Truck from North Dakota Country Elevators by Crop Reporting District, 1967-68, 1968-69, and 1969-70 . .	19
9	Average Volume of Durum Wheat Shipped by Rail Car and by Truck from North Dakota Country Elevators by Crop Reporting District, 1967-68, 1968-69, and 1969-70	21

LIST OF APPENDIX TABLES

<u>Appendix Table</u>		<u>Page</u>
1	Shipments of Hard Red Spring Wheat from North Dakota Country Elevators, August, 1969, Through July, 1970 . . .	24
2	Shipments of Durum Wheat from North Dakota Country Elevators, August, 1969, Through July, 1970	26
3	Monthly Shipments of Hard Red Spring Wheat from North Dakota Country Elevators, August, 1969, Through July, 1970	29
4	Monthly Shipments of Durum Wheat from North Dakota Country Elevators, August, 1969, Through July, 1970	32

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	North Dakota Crop Reporting Districts	3
2	Percent of Total Wheat Shipped by Truck from North Dakota Country Elevators, 1956-57 Through 1969-70	7
3	Total Volume of Wheat Shipped by Truck to All Destinations from North Dakota Country Elevators, 1956-57 Through 1969-70	8
4	Shipments of Hard Red Spring Wheat from North Dakota Country Elevators, by Months, August, 1967, Through July, 1970	17
5	Shipments of Durum Wheat from North Dakota Country Elevators, by Months, August, 1967, Through July, 1970 . .	18

HIGHLIGHTS

The major findings of research reported in this publication are as follows:

1. The proportion of trucked wheat originating in the eastern part of the State increased from 19 percent in 1963-64 to 45 percent in 1969-70.
2. The volume of wheat shipped by motor carrier from every area increased from 1963-64 through 1969-70.
3. The motor carrier industry continued to increase its share of the total wheat traffic through 1969-70. Its share of the total haul was about 31 percent compared to 3.5 percent in 1956-57.
4. Duluth-Superior and Minneapolis-St. Paul receive 97 percent of the trucked wheat from North Dakota. Duluth-Superior receives about two-thirds of the trucked wheat, while Minneapolis-St. Paul is the dominant market for wheat shipped by rail.
5. Observable seasonal fluctuations in shipments of both Hard Red Spring and durum wheat continued from the 24-month period, August, 1967, through July, 1969, to the period, August, 1969, through July, 1970.
6. There were slight increases in the average volume of Hard Red Spring and Durum wheat hauled per rail car during 1969-70 compared to 1967-68. Slight increases in the average volume per truckload also occurred over this period.
7. There were substantial increases in the number of truckloads of wheat compared to the number of carloads.



TRUCK AND RAIL SHIPMENTS OF
HARD RED SPRING AND DURUM WHEAT
FROM NORTH DAKOTA COUNTRY ELEVATORS
1969-70

David C. Nelson*

Introduction

This is a continuation of analyses concerned with the patterns of distribution of grains from North Dakota.¹ This set of data represents one of the best bases for identifying trends in the distribution of grains from a state.

The results of this analysis indicate that the traditional methods of marketing grain from North Dakota have not changed greatly other than what past trends predicted. A large proportion of wheat exported from the State moves eastbound to the terminal markets of Minneapolis-St. Paul and Duluth-Superior. Larger volumes of wheat are now moving west than when the surveys first began in 1957, although the absolute amount shipped in 1969-70 is slightly less than in 1968-69. The pattern of shifting the distribution of wheat from rail to truck continued through 1969-70.

Objective

The major emphasis in this report is to illustrate the distribution methods and patterns of Hard Red Spring and Durum wheat from North Dakota origins. In addition, trends in shipments by months are identified. The patterns of distribution and monthly shipments for 1969-70 are compared to previous years' data.

Source of Data

The data used to illustrate the distribution patterns for August, 1969, through July, 1970, represent the third year's 100 percent population. That is, this is the third time period reported which includes the data from all country elevators in North Dakota.² Any error in the

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

²The previous years, 1967-68 and 1968-69, were reported in UGPTI Report No. 14 for wheat and durum and in UGPTI Report No. 16 for barley, oats, rye, and flax.

data for the most part results from errors in reporting to the North Dakota Public Service Commission by the elevators.³ As in the past, the data are reported by crop reporting district (Figure 1).

Sources of Trucked Wheat

The primary areas of the State from which wheat is trucked have observably changed since the early 1960's. This pattern was observed in 1968-69 and continued in 1969-70 (Tables 1 and 2).

During 1963-64, about 52 percent of the trucked wheat originated in the Western part of the state (Districts 1, 4, and 7), 29 percent from the Central area (Districts 2, 5, and 8), and 19 percent from the Eastern part (Districts 3, 6, and 9).

The proportion originating in the Western part of the State declined to 31 percent in 1968-69 and 1969-70. The proportion trucked from Central North Dakota declined from 29 percent in 1963-64 to 27 percent in 1968-69 and to 24 percent in 1969-70. The results of the declines in the West and Central areas were offset by volumes originating in the Eastern areas where the proportion of the total increased from 19 percent in 1963-64 to 45 percent in 1969-70.

The volume of wheat shipped by truck, however, increased in every area. About 9.9 million bushels originated in the West in 1963-64, 15 million bushels in 1968-69, and 17.5 million bushels in 1969-70. About 5.4 million bushels were trucked from the Central districts in 1963-64, 13 million in 1968-69, and 13.3 million in 1969-70. The greatest increase occurred in the Eastern part of the State where the trucked volume increased from 3.6 to 25.1 million bushels 1963-64 through 1969-70, respectively.

Proportions Shipped by Truck

The trend towards an increasing share of the wheat traffic going to motor carriers, which was observed 1956-57 through 1968-69, continued through the 1969-70 shipping period (Table 3). The trend is well illustrated in Figures 2 and 3. In the case of proportions, a straight-line projection could have been made on the 1956-57 and 1957-58 data, and the estimate would have been about 6 percentage points low (the estimate would have been about 25 percent) since the motor carrier handled about 31 percent of the 1969-70 shipments of wheat.⁴ Over the period, shippers in every district increased both the volume of wheat shipped by truck (Table 1) and the proportion of the total shipped by truck (Table 3)

³They may be minor, but very insignificant.

⁴In retrospect the 1956-57 and 1957-58 data would have been sufficient as a basis for decision making on the part of railroads.

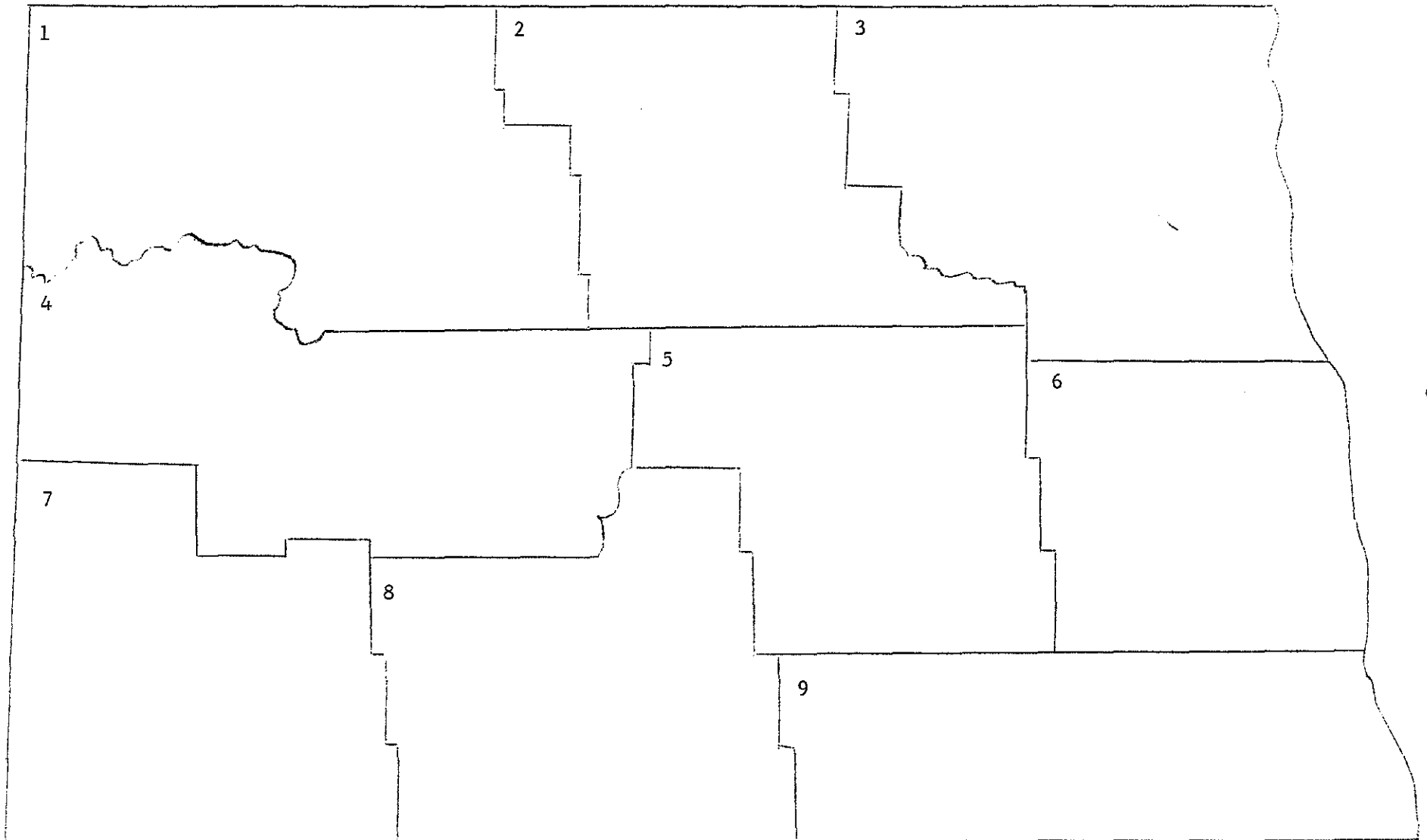


Figure 1. North Dakota Crop Reporting Districts

TABLE 1. TOTAL VOLUME OF WHEAT SHIPPED BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1956-57 THROUGH 1969-70

Crop Reporting District	Year										
	1956-1957	1957-1958	1958-1959	1963-1964	1965-1966	Hard Red Spring			Durum		
						1967-1968	1968-1969	1969-1970	1967-1968	1968-1969	1969-1970
(000 bushels)											
1	390	1,920	9,584	5,328	2,446	3,556	3,918	5,662	3,836	3,227	3,174
2	148	137	213	2,848	3,404	1,941	2,212	2,514	4,692	4,278	4,041
3	920	1,598	1,421	1,817	2,088	3,061	6,273	8,914	4,263	5,781	6,381
4	166	498	200	301	1,130	1,609	2,262	2,519	334	226	393
5	112	599	301	1,079	825	1,692	2,335	2,383	910	839	734
6	624	554	1,108	1,083	1,256	3,320	5,389	6,272	633	910	812
7	720	705	794	4,230	4,083	4,772	5,270	5,577	221	98	139
8	349	346	899	1,466	3,036	2,973	3,218	3,538	267	75	67
9	<u>183</u>	<u>309</u>	<u>344</u>	<u>668</u>	<u>752</u>	<u>1,607</u>	<u>2,167</u>	<u>2,330</u>	<u>553</u>	<u>154</u>	<u>416</u>
Total	3,612	6,666	14,863	18,820	19,021	24,531	33,044	39,709	15,709	15,588	16,157
						wheat = 40,240	48,632	55,866			

TABLE 2. PROPORTION OF TOTAL WHEAT SHIPPED FROM NORTH DAKOTA BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1956-57 THROUGH 1969-70

Crop Reporting District	Year										
	1956-1957	1957-1958	1958-1959	1963-1964	1965-1966	Hard Red Spring			Durum		
						1967-1968	1968-1969	1969-1970	1967-1968	1968-1969	1969-1970
	(percent)										
1	10.8	28.9	64.4	28.3	12.9	14.5	11.9	14.3	24.4	220.7	19.7
2	4.1	2.1	1.4	15.1	17.9	7.9	6.7	6.3	29.9	27.4	25.0
3	25.5	24.0	9.7	9.7	11.0	12.5	19.0	22.4	27.2	37.1	39.5
4	4.6	7.5	1.4	1.6	5.9	6.6	6.8	6.3	2.1	1.5	2.4
5	3.1	8.6	2.0	5.7	4.3	6.9	7.1	6.0	5.8	5.4	4.5
6	17.3	8.4	7.5	5.8	6.6	13.5	16.3	15.8	4.0	5.8	5.0
7	19.9	10.6	5.3	22.5	21.5	19.5	15.9	14.1	1.4	.6	.9
8	9.7	5.2	6.0	7.8	15.9	12.1	9.7	8.9	1.7	.5	.4
9	<u>5.0</u>	<u>4.7</u>	<u>2.3</u>	<u>3.5</u>	<u>4.0</u>	<u>6.5</u>	<u>6.6</u>	<u>5.9</u>	<u>3.5</u>	<u>1.0</u>	<u>2.6</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

15

TABLE 3. PROPORTION OF TOTAL WHEAT SHIPPED FROM NORTH DAKOTA BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1956-57 THROUGH 1969-70

Crop Reporting District	Year										
	1956-1957	1957-1958	1958-1959	1963-1964	1965-1966	Hard Red Spring			Durum		
						1967-1968	1968-1969	1969-1970	1967-1968	1968-1969	1969-1970
	(percent)										
1	2.0	9.7	38.0	22.1	7.4	28.7	25.3	26.9	36.4	21.3	21.1
2	1.0	1.1	1.6	25.0	19.4	30.5	32.4	34.3	45.0	37.6	42.5
3	4.0	7.6	7.5	8.0	6.8	16.3	33.8	44.3	23.9	25.5	35.9
4	2.0	7.0	3.3	4.2	10.7	20.6	24.0	25.7	18.8	9.9	15.6
5	1.0	7.2	3.7	12.0	7.9	19.3	19.7	22.5	19.5	10.1	13.0
6	6.0	4.7	12.6	11.1	7.9	21.0	31.7	40.6	23.1	20.3	22.4
7	8.0	6.2	9.5	30.9	24.7	32.4	35.0	33.8	30.4	10.2	16.2
8	6.0	5.4	19.7	34.0	34.1	35.7	36.6	34.8	49.8	15.2	15.6
9	<u>2.0</u>	<u>5.4</u>	<u>6.0</u>	<u>10.1</u>	<u>7.9</u>	<u>18.0</u>	<u>21.3</u>	<u>25.0</u>	<u>18.6</u>	<u>3.9</u>	<u>13.7</u>
Total	3.5	6.4	15.0	17.3	12.4	24.1	29.2	33.0	30.1	22.4	27.6
					wheat	=	26.1	26.6	31.3		

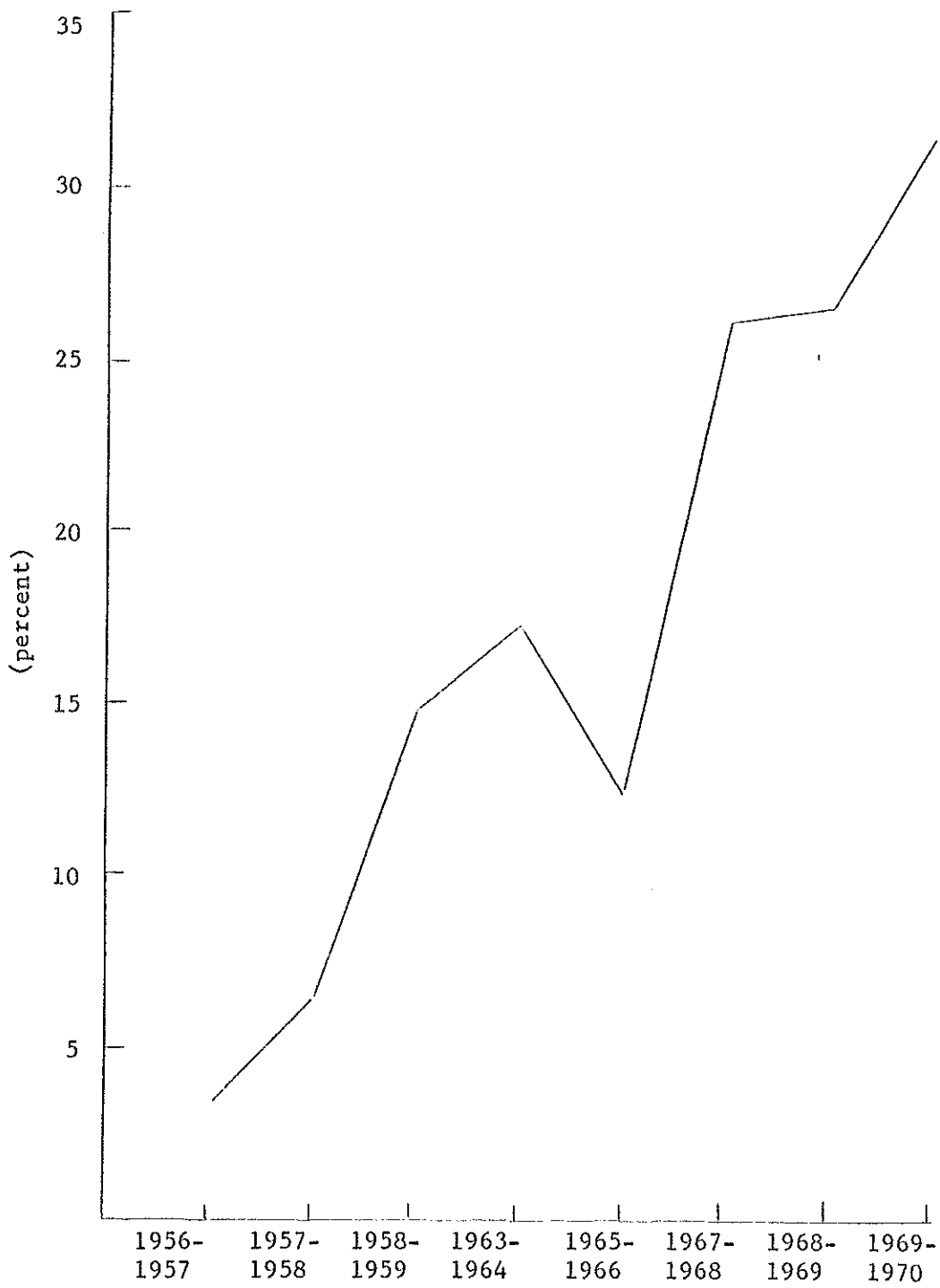


Figure 2. Percent of Total Wheat Shipped by Truck From North Dakota Country Elevators, 1956-57 Through 1969-70

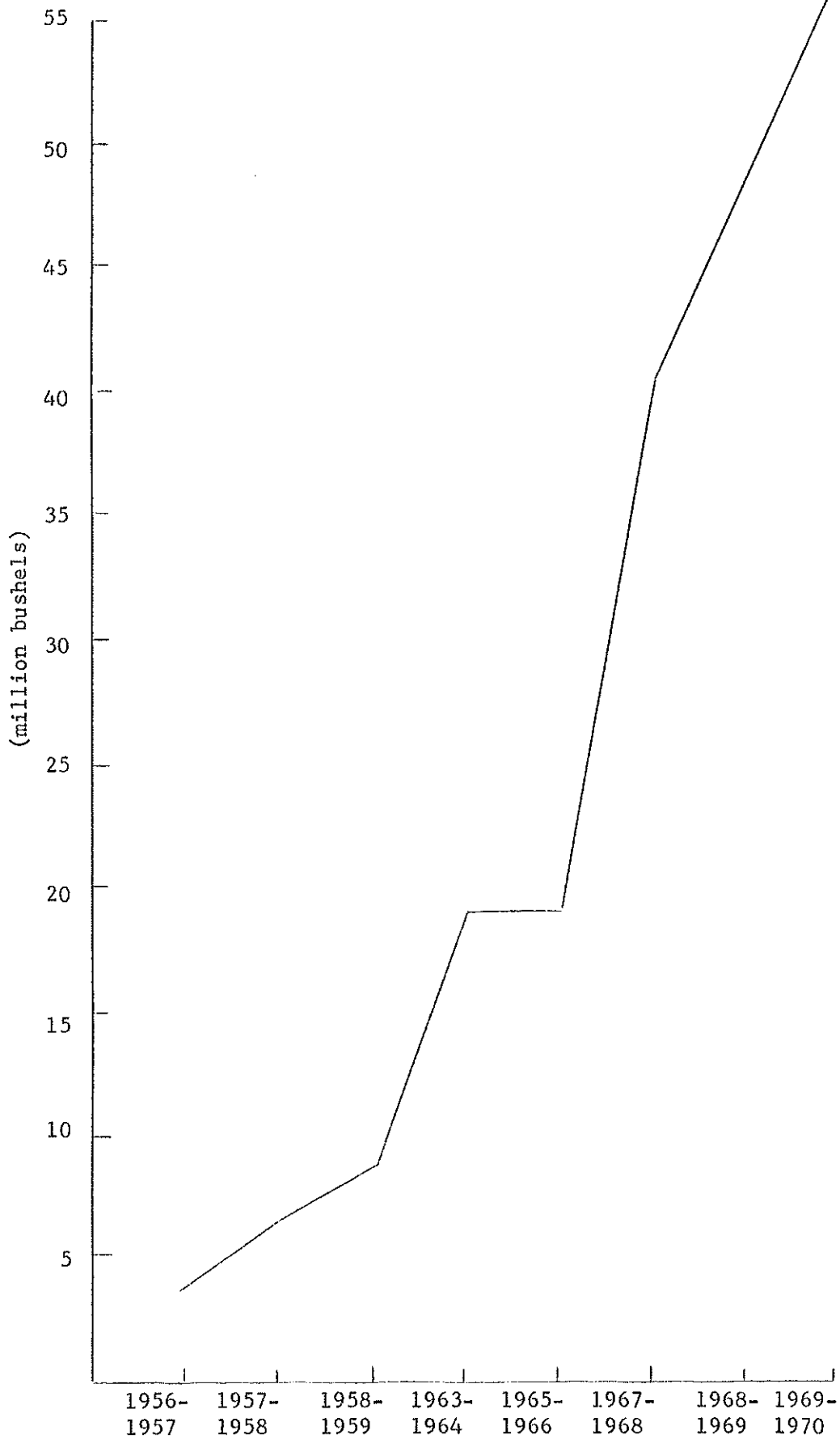


Figure 3. Total Volume of Wheat Shipped by Truck to All Destinations from North Dakota Country Elevators, 1956-57 Through 1969-70

Destinations of Trucked Wheat

Nearly 97 percent of the wheat (Hard Red Spring and Durum) is destined to the major Minnesota markets of Minneapolis-St. Paul and Duluth-Superior (Table 4). From 1956-57 through 1968-69 the proportion going to Minneapolis-St. Paul declined, while the share destined Duluth-Superior increased. During 1969-70 the percent going to Minneapolis-St. Paul increased to 30.5 percent compared to 24.1 percent in 1968-69. The proportion destined Duluth-Superior dropped from 72.3 to 66 percent.

In terms of specific classes, the change in relative amounts going to each market occurred mostly in Hard Red Spring wheat. About 32.5 percent of the Hard Red Spring wheat went to the Twin City markets in 1968-69. This proportion rose to 40.2 percent in 1969-70. The proportion of Hard Red Spring destined Duluth-Superior declined from 62.6 to 55.5 percent, 1968-69 through 1969-70.

The proportions of Durum destined Minneapolis-St. Paul and Duluth-Superior changed very little from 1968-69 through 1969-70. The percent going to Minneapolis-St. Paul increased from 6.2 to 6.6 percent, while the share destined Duluth-Superior declined from 92.8 to 91.7 percent.

Although the 1969-70 period saw slight changes, the general trend of shipping about two-thirds of the trucked wheat to Duluth-Superior continued. This pattern has been predominant during the 1960's as opposed to the 1950's when about two-thirds of the trucked wheat went to Minneapolis-St. Paul.

An interesting observation from the data is that a larger percentage of the volume of Hard Red Spring shipped to each destination went by motor carrier in 1969-70 than in either 1968-69 or 1967-68 (Table 5). About 54 percent of the Hard Red Spring shipped to Duluth-Superior went by truck as opposed to 36 percent in 1967-68. About 27 percent of the volume shipped to Minneapolis-St. Paul went by truck in 1969-70 compared to 23 percent in 1967-68 and 1968-69. When Durum and Hard Red Spring are combined, the proportion shipped by truck to each market is greater in 1969-70 than 1967-68. About 54 percent of the wheat shipped from North Dakota to Duluth-Superior in 1969-70 went by truck, compared to 44 percent in 1967-68. Nearly 19½ percent went by truck to Minneapolis-St. Paul in 1969-70 compared to 18 percent in 1967-68.

Shipments by Periods

Shipments of Hard Red Spring and Durum wheat by time period (months) are now available for 36 consecutive months, beginning August, 1967, (See Appendix Tables 5, 6, 7, and 8 of UGPTI Report No. 14 and Appendix Tables 3 and 4 of this report). The seasonal fluctuations in shipments which appeared from the data for the 24-month period, August, 1967, through July, 1969, continued through July, 1970, for both Hard Red Spring and Durum wheat (Figures 4 and 5). The fluctuations in shipments by time period do not appear to be materially affected by CCC movements over the entire 36-month period.

TABLE 4. MAJOR DESTINATIONS OF WHEAT SHIPPED BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS, 1956-57 THROUGH 1969-70

Destination	Year										
	1956- 1957	1957- 1958	1958- 1959	1963- 1964	1965- 1966	Hard Red Spring			Durum		
						1967- 1968 ^a	1968- 1969 ^a	1969- 1970 ^a	1967- 1968	1968- 1969	1969- 1970
(percent)											
Minneapolis-St. Paul	67.3	58.4	64.2	36.9	27.2	41.4	32.5	40.2	15.9	6.2	6.6
Duluth-Superior	10.9	24.3	30.2	59.3	53.4	51.3	62.6	55.5	82.7	92.8	91.7
Other Minnesota	11.5	6.4	1.7	--	8.3	3.1	3.1	2.5	.3	.3	.2
East and South	--	--	--	--	--	2.1	.7	.2	.3	--	--
Midland and South- west States	.3	--	--	--		1.3	.6	.8	.3	--	--
West Ports and States	--	--	--	--	4.9 ^b	.1	.1	.5	.1	.1	.7
In-State	2.6	8.4	3.7	3.8	6.2	.4	.2	.2	.3	.4	.6
Unknown	7.4	2.5	.2	--	--	.3	.1	.1	.1	.2	.2

^a1967-68 all wheat, Minneapolis-St. Paul = 31.4 percent; Duluth-Superior = 63.5 percent.
 1968-69 all wheat, Minneapolis-St. Paul = 24.1 percent; Duluth-Superior = 72.3 percent.
 1969-70 all wheat, Minneapolis-St. Paul = 30.5 percent; Duluth-Superior = 66.0 percent.

^bMidland and Southwest States and West Ports and States aggregated in 1965-66 analysis.

TABLE 5. PROPORTION OF HARD RED SPRING AND DURUM WHEAT SHIPPED BY RAIL, TRUCK, AND CCC (RAIL) TO EACH DESTINATION, 1967-68, 1968-69, AND 1969-70

Year and Mode	D E S T I N A T I O N S											
	Duluth- Superior	Minneapolis- St. Paul ^a	Other Minnesota ^b	Sioux City- Omaha- Kansas City	Other East and South ^c	Midland States ^d	South- west States ^e	North Pacific Ports ^f	North- west States ^g	West	In- State	Un- known
(percent)												
Hard Red Spring:												
Rail												
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	--
Truck												
1967-1968	36.4	22.9	80.2	53.9	97.1	61.7	50.0	.3	.2	--	6.9	100.0
1968-1969	47.7	22.9	73.5	83.7	10.8	30.8	--	.2	.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
CCC												
1967-1968	.5	.8	--	--	--	--	--	--	--	100.0	--	--
1968-1969	.6	1.0	--	--	--	--	--	--	--	100.0	--	--
1969-1970	.5	4.2	--	--	--	--	--	--	--	100.0	--	--
Durum:												
Rail												
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	--
Truck												
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
CCC												
1967-1968	--	--	--	--	--	--	--	--	--	--	--	--
1968-1969	.1	.1	--	--	--	--	--	--	--	100.0	--	--
1969-1970	.6	4.1	--	--	--	--	--	--	--	100.0	--	--

For the footnotes to this table, see page 28.

TABLE 6. PERCENT OF TOTAL HARD RED SPRING WHEAT SHIPPED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT, 1967-68, 1968-69, AND 1969-70

Crop Reporting District	DESTINATIONS											In-State	Un-known	Total
	Duluth-Superior	Minneapolis-St. Paul ^a	Other Minnesota ^b	Sioux City-Kansas City	Other East and South ^c	Midland States ^d	South-west States ^e	North Pacific Ports ^f	North-west States ^g	West	States ^h			
(percent)														
1:														
1967-1968	9.2	13.1	3.9	18.0	36.5	33.8	--	8.5	13.4	34.1	6.9	--	12.1	
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	
2:														
1967-1968	6.4	4.3	.2	2.6	7.9	--	--	8.8	12.3	8.6	1.2	4.4	6.2	
1968-1969	5.8	3.1	2.2	1.0	--	--	--	17.7	13.2	.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	.7	4.8	2.2	6.1	
3:														
1967-1968	18.0	15.1	10.1	.9	.9	1.7	--	25.9	28.8	8.7	53.2	1.4	18.4	
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	.9	.6	37.9	.7	3.0	2.1	34.5	--	16.7	
4:														
1967-1968	8.2	7.1	2.6	.9	2.4	--	--	13.2	7.5	5.0	9.8	--	7.7	
1968-1969	7.7	8.9	3.8	.7	--	--	--	13.0	7.4	1.7	4.6	--	8.3	
1969-1970	7.2	7.9	8.3	.3	3.6	1.5	--	21.8	9.4	5.8	9.6	5.9	8.1	
5:														
1967-1968	12.5	7.3	8.7	--	3.6	--	--	5.0	5.3	8.7	2.0	20.3	8.6	
1968-1969	11.2	8.5	6.3	8.7	10.8	.5	--	12.3	14.9	23.3	12.0	15.9	10.5	
1969-1970	9.1	9.1	9.4	--	31.6	.2	--	7.0	7.6	7.4	9.2	17.7	8.8	

- continued -

TABLE 6. PERCENT OF TOTAL HARD RED SPRING WHEAT SHIPPED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT, 1967-68, 1968-69, AND 1969-70 - continued

Crop Reporting District	D E S T I N A T I O N S												Un-known	Total
	Duluth-Superior	Minneapolis-St. Paul ^a	Other Minnesota ^b	Sioux City-Kansas City	Other East and South ^c	Midland States ^d	Southwest States ^e	North Pacific Ports ^f	Northwest States ^g	West	In-State	Un-known		
(percent)														
6:														
1967-1968	22.8	14.8	16.1	--	--	2.1	--	5.5	2.8	12.3	24.4	34.8	15.5	
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	--	.3	1.1	2.7	20.3	22.1	12.8	
7:														
1967-1968	10.2	17.7	47.9	62.3	38.0	56.2	50.0	16.7	10.3	10.9	4.4	8.7	14.5	
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	
8:														
1967-1968	6.8	7.2	8.0	14.5	10.2	6.2	--	12.4	14.9	6.1	1.3	4.3	8.2	
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	.9	.7	8.5	
9:														
1967-1968	5.9	13.4	3.0	.9	.5	--	--	4.0	4.7	5.6	.8	26.1	8.8	
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	.6	--	1.5	1.0	6.8	7.6	14.8	7.8	
TOTAL:														
1967-1968	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	
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	

For the footnotes to this table, see page 28.

TABLE 7. PERCENT OF TOTAL DURUM WHEAT SHIPPED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT, 1967-68, 1968-69, AND 1969-70

Crop Reporting District	D E S T I N A T I O N S											In-State	Un-known	Total
	Duluth-Superior	Minneapolis-St. Paul ^a	Other Minnesota ^b	Sioux City-Omaha-Kansas City	Other East and South ^c	Midland States ^d	South-west States ^e	North Pacific Ports ^f	North-west States ^g	West				
(percent)														
1:														
1967-1968	20.2	20.3	11.2	--	--	--	--	11.6	21.6	--	21.0	22.2	20.2	
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	
2:														
1967-1968	23.5	16.6	25.4	--	70.8	--	--	8.7	45.6	--	6.7	--	20.0	
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	
3:														
1967-1968	30.6	36.3	36.2	--	25.0	50.0	--	63.8	24.8	--	68.5	22.2	34.2	
1968-1969	33.4	31.3	.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	
4:														
1967-1968	2.7	4.2	--	--	--	--	--	7.9	4.4	--	--	--	3.4	
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	
5:														
1967-1968	10.1	8.4	3.9	--	--	--	--	7.9	2.9	--	.2	33.3	8.9	
1968-1969	12.5	11.8	11.5	--	--	--	--	2.6	16.7	--	.3	--	11.9	
1969-1970	8.6	11.1	3.0	--	73.9	--	--	2.0	1.8	18.4	.3	--	9.6	

- continued -

TABLE 7. PERCENT OF TOTAL DURUM WHEAT SHIPPED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT, 1967-68, 1968-69, AND 1969-70 - continued

Crop Reporting District	D E S T I N A T I O N S											In- State	Un- known	Total
	Duluth- Superior	Minneapolis- St. Paul ^a	Other Minnesota ^b	Sioux City- Omaha- Kansas City	Other East and South ^c	Midland States ^d	South- west States ^e	North Pacific Ports ^f	North- west States ^g	West	West			
(percent)														
6:														
1967-1968	6.7	4.1	18.1	--	--	--	100.0	--	--	--	2.5	--	5.2	
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	
7:														
1967-1968	1.0	1.8	.4	--	4.2	--	--	--	.4	--	--	--	1.4	
1968-1969	1.0	1.7	--	--	--	--	100.0	2.6	17.3	--	--	--	1.4	
1969-1970	1.4	1.5	14.6	--	--	--	--	--	.7	--	--	--	1.5	
8:														
1967-1968	1.5	.6	--	--	--	--	--	--	--	--	1.1	--	1.0	
1968-1969	.7	.7	.8	--	--	--	--	--	--	--	.1	--	.7	
1969-1970	.6	.9	1.8	--	--	41.1	--	--	--	--	--	16.5	.7	
9:														
1967-1968	3.7	7.7	4.8	--	--	50.0	--	--	2.3	--	--	22.2	5.7	
1968-1969	3.8	7.3	37.0	--	--	--	--	--	--	--	--	--	5.6	
1969-1970	3.4	7.0	24.2	--	--	--	--	--	--	--	--	--	5.2	
TOTAL:														
1967-1968	100.0	100.0	100.0	--	100.0	100.0	100.0	100.0	100.0	--	100.0	100.0	100.0	
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	

For the footnotes to this table, see page 28.

Number of Cars and Trucks

Data are now available for the 36-month period, August, 1967, through July, 1970, regarding numbers of rail cars and trucks hauling Hard Red Spring and Durum wheat (Tables 8 and 9). The increase in bushels hauled in rail cars 1967-68 through 1968-69 was 45 bushels per car. The volume hauled by truck decreased by 13 bushels. From 1968-69 through 1969-70 the average volume hauled in rail cars increased only two bushels per car, while the amount handled per truckload increased by 33 bushels.

The average hauls of durum are somewhat different. The average volume handled in rail cars 1967-68 through 1968-69 increased by 158 bushels per car and by 47 bushels per car 1968-69 through 1969-70. The average truckload of Durum decreased by 10 bushels 1967-68 through 1968-69 and increased 21 bushels 1968-69 through 1969-70.

The increase in the number of vehicles hauling Hard Red Spring (rail cars and motor vehicles) is dramatic. The total number increased by 19,479 vehicles or nearly 30 percent 1967-68 through 1969-70. About 95 percent of this change was accounted for by the increase in the number of truckloads. The remainder was accounted for by the increase in the number of CCC loads (the number non-CCC rail loads actually decreased).

The changes in the number of vehicles hauling Durum wheat are not so dramatic 1967-68 to 1969-70. The number of non-CCC rail cars increased by 392, while the number of CCC rail cars increased from 8 to 714. The number of motor vehicles hauling Durum increased by 492.

In 1967-68 there were 2,297 more rail carloads of Hard Red Spring than truckloads. In 1969-70 there were 15,530 more truckloads than rail carloads. In 1967-68 there were 2,937 more truckloads of Durum than rail carloads. In 1969-70 this difference narrowed somewhat to 2,331 more truckloads than rail carloads.

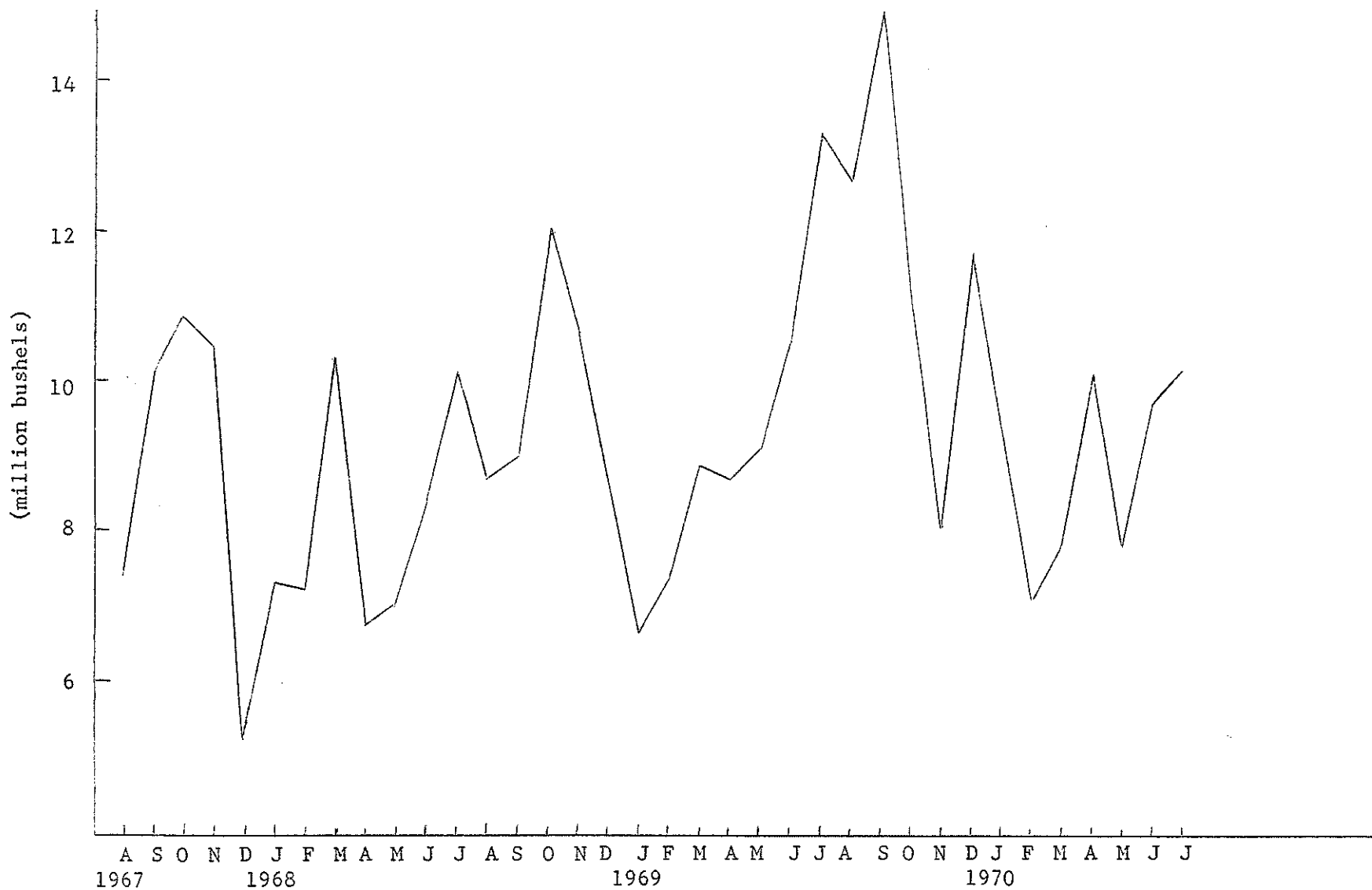


Figure 4. Shipments of Hard Red Spring Wheat from North Dakota Country Elevators, by Months, August, 1967, Through July, 1970

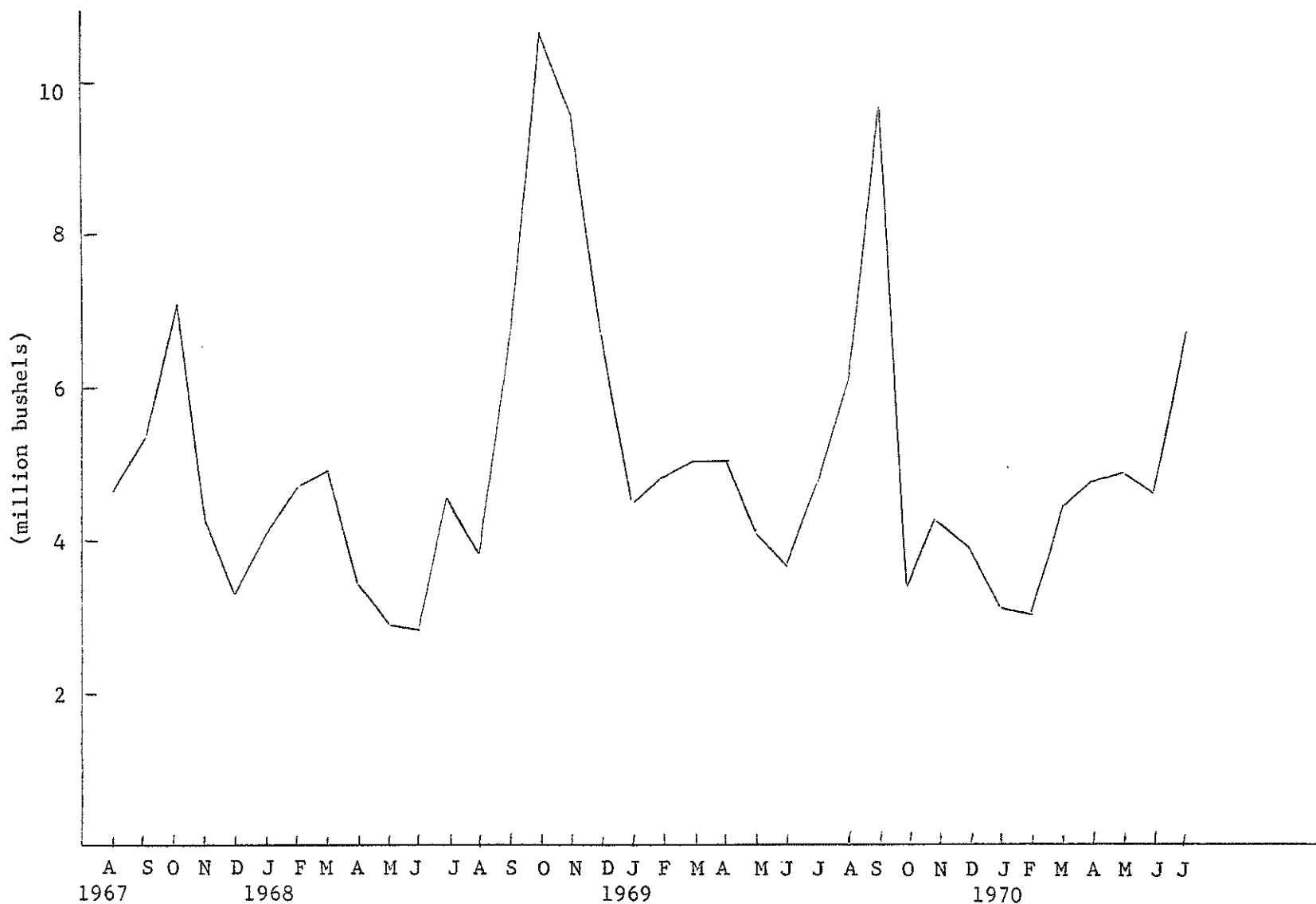


Figure 5. Shipments of Durum Wheat from North Dakota Country Elevators, by Months, August, 1967, Through July, 1970

TABLE 8. AVERAGE VOLUME OF HARD RED SPRING WHEAT SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1967-68, 1968-69, AND 1969-70

Origin and Mode	Number of Cars			Number of Trucks			Average Volume		
	1967- 1968	1968- 1969	1969- 1970	1967- 1968	1968- 1969	1969- 1970	1967- 1968	1968- 1969	1969- 1970
							(bushels)		
1:									
Rail	3,560	4,689	5,543	--	--	--	2,183	2,418	2,494
Truck	--	--	--	4,811	5,783	7,498	739	678	804
CCC	447	100	673	--	--	--	2,347	2,460	2,360
2:									
Rail	1,916	2,044	1,905	--	--	--	2,185	2,247	2,359
Truck	--	--	--	2,543	2,847	3,171	763	777	797
CCC	110	13	121	--	--	--	2,073	2,077	1,969
3:									
Rail	6,533	5,018	4,540	--	--	--	2,358	2,356	2,383
Truck	--	--	--	3,816	7,899	10,890	802	794	817
CCC	104	193	234	--	--	--	2,615	2,472	2,308
4:									
Rail	2,531	2,656	2,878	--	--	--	2,386	2,690	2,410
Truck	--	--	--	2,107	2,934	3,245	764	771	778
CCC	65	6	160	--	--	--	2,446	2,167	2,279
5:									
Rail	5,493	4,023	3,278	--	--	--	2,152	2,312	2,300
Truck	--	--	--	2,128	3,081	3,025	795	758	788
CCC	111	111	311	--	--	--	2,261	2,090	2,243
6:									
Rail	5,493	5,092	3,974	--	--	--	2,216	2,226	2,229
Truck	--	--	--	4,254	6,916	7,906	780	779	788
CCC	156	146	98	--	--	--	1,929	1,945	2,510

- continued -

TABLE 8. AVERAGE VOLUME OF HARD RED SPRING WHEAT SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1967-68, 1968-69, AND 1969-70 - continued

Origin and Mode	Number of Cars			Number of Trucks			Average Volume		
	1967- 1968	1968- 1969	1969- 1970	1967- 1968	1968- 1969	1969- 1970	1967- 1968	1968- 1969	1969- 1970
	(bushels)								
7:									
Rail	3,954	4,369	4,487	--	--	--	2,447	2,223	2,211
Truck	--	--	--	6,138	6,844	7,011	777	770	790
CCC	125	24	458	--	--	--	2,376	2,417	2,170
8:									
Rail	2,419	2,518	2,764	--	--	--	2,131	2,187	2,182
Truck	--	--	--	3,852	4,207	4,592	771	765	770
CCC	100	25	278	--	--	--	2,020	2,320	2,172
9:									
Rail	3,316	3,432	2,854	--	--	--	2,156	2,302	2,294
Truck	--	--	--	1,993	2,833	2,957	806	765	789
CCC	78	46	212	--	--	--	2,103	2,630	2,160
STATE:									
Rail	32,643	33,841	32,223	--	--	--	2,279	2,324	2,326
Truck	--	--	--	31,642	43,344	50,295	775	762	795
CCC	1,296	664	2,542	--	--	--	2,255	2,283	2,254

TABLE 9. AVERAGE VOLUME OF DURUM WHEAT SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1967-68, 1968-69, AND 1969-70

Origin and Mode	Number of Cars			Number of Trucks			Average Volume		
	1967- 1968	1968- 1969	1969- 1970	1967- 1968	1968- 1969	1969- 1970	1967- 1968	1968- 1969	1969- 1970
	(bushels)								
1:									
Rail	3,085	4,923	4,749	--	--	--	2,173	2,417	2,391
Truck	--	--	--	5,025	4,133	3,981	763	781	791
CCC	1	--	294	--	--	--	--	2,000	1,665
2:									
Rail	2,672	2,990	2,233	--	--	--	2,150	2,377	2,286
Truck	--	--	--	5,886	5,435	5,019	797	787	806
CCC	--	--	101	--	--	--	--	--	2,177
3:									
Rail	6,172	7,446	4,682	--	--	--	2,200	2,234	2,387
Truck	--	--	--	5,233	7,214	8,147	815	801	806
CCC	3	118	153	--	--	--	2,000	2,508	2,289
4:									
Rail	616	788	780	--	--	--	2,347	2,614	2,630
Truck	--	--	--	425	311	538	786	727	730
CCC	--	--	29	--	--	--	--	--	2,373
5:									
Rail	1,769	3,200	2,062	--	--	--	2,118	2,338	2,281
Truck	--	--	--	1,189	1,057	912	765	794	803
CCC	--	--	85	--	--	--	--	--	2,395
6:									
Rail	1,039	1,655	1,219	--	--	--	2,022	2,149	2,258
Truck	--	--	--	819	1,428	1,005	773	637	807
CCC	1	11	29	--	--	--	2,000	1,909	2,105

- continued -

TABLE 9. AVERAGE VOLUME OF DURUM WHEAT SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1967-68, 1968-69, AND 1969-70 - continued

Origin and Mode	Number of Cars			Number of Trucks			Average Volume		
	1967- 1968	1968- 1969	1969- 1970	1967- 1968	1968- 1969	1969- 1970	1967- 1968	1968- 1969	1969- 1970
	(bushels)								
7:									
Rail	249	416	336	--	--	--	2,028	2,075	2,125
Truck	--	--	--	260	127	174	850	772	797
CCC	1	--	2	--	--	--	2,000	--	1,830
8:									
Rail	134	197	160	--	--	--	2,007	2,127	2,225
Truck	--	--	--	423	85	86	631	882	782
CCC	--	--	3	--	--	--	--	--	2,477
9:									
Rail	1,216	1,721	1,123	--	--	--	1,981	2,178	2,287
Truck	--	--	--	637	204	527	868	755	798
CCC	3	1	18	--	--	--	2,000	2,000	2,330
STATE:									
Rail	16,952	23,336	17,344	--	--	--	2,154	2,304	2,351
Truck	--	--	--	19,897	19,994	20,389	790	780	801
CCC	8	131	714	--	--	--	2,000	2,450	2,025

APPENDIX

APPENDIX TABLE 1. SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1969, THROUGH JULY, 1970

Origin and Mode	D E S T I N A T I O N S											In-State	Un-known	Total
	Duluth-Superior	Minneapolis-St. Paul ^a	Other Minnesota ^b	Sioux City-Omaha-Kansas City	Other East and South ^c	Midland States ^d	Southwest States ^e	North Pacific Ports ^f	Northwest States ^g	West	West			
(000 bushels)														
1:														
Rail	2,020	8,142	82	--	2	20	4	825	2,321	--	115	--	13,531	
Truck	3,328	2,083	36	117	42	22	1	1	22	--	4	7	5,662	
CCC	38	554	--	--	--	--	--	--	--	1,280	--	--	1,872	
	<u>5,386</u>	<u>10,779</u>	<u>118</u>	<u>117</u>	<u>44</u>	<u>42</u>	<u>5</u>	<u>826</u>	<u>2,343</u>	<u>1,280</u>	<u>119</u>	<u>7</u>	<u>21,065</u>	
2:														
Rail	869	1,938	29	--	15	18	6	627	1,030	--	47	--	4,582	
Truck	1,928	521	50	2	1	1	--	--	6	--	5	1	2,514	
CCC	21	195	--	--	--	--	--	--	--	23	--	--	238	
	<u>2,818</u>	<u>2,654</u>	<u>79</u>	<u>2</u>	<u>16</u>	<u>19</u>	<u>6</u>	<u>627</u>	<u>1,036</u>	<u>23</u>	<u>52</u>	<u>1</u>	<u>7,334</u>	
3:														
Rail	3,743	6,260	33	--	2	5	--	29	223	--	361	--	10,658	
Truck	7,614	1,209	30	11	--	4	7	--	28	--	11	--	8,914	
CCC	37	448	--	--	--	--	--	--	--	68	--	--	553	
	<u>11,394</u>	<u>7,917</u>	<u>63</u>	<u>11</u>	<u>2</u>	<u>9</u>	<u>7</u>	<u>29</u>	<u>251</u>	<u>68</u>	<u>372</u>	<u>--</u>	<u>20,125</u>	
4:														
Rail	1,860	3,194	20	--	9	12	--	940	789	--	82	--	6,906	
Truck	1,099	1,272	95	1	--	10	--	16	1	--	22	4	2,518	
CCC	4	168	--	--	--	--	--	--	--	192	--	--	365	
	<u>2,963</u>	<u>4,634</u>	<u>115</u>	<u>1</u>	<u>9</u>	<u>22</u>	<u>--</u>	<u>956</u>	<u>790</u>	<u>192</u>	<u>104</u>	<u>4</u>	<u>9,789</u>	
5:														
Rail	2,366	3,993	41	--	79	--	--	304	638	--	99	--	7,521	
Truck	1,266	1,013	89	--	--	3	--	2	--	--	--	11	2,383	
CCC	77	375	--	--	--	--	--	--	--	245	--	--	698	
	<u>3,709</u>	<u>5,381</u>	<u>130</u>	<u>--</u>	<u>79</u>	<u>3</u>	<u>--</u>	<u>306</u>	<u>638</u>	<u>245</u>	<u>99</u>	<u>11</u>	<u>10,602</u>	

- continued -

APPENDIX TABLE 1. SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1969, THROUGH JULY, 1970

Origin and Mode	D E S T I N A T I O N S											Un-known	Total
	Duluth-Superior	Minneapolis-St. Paul ^a	Other Minnesota ^b	Sioux City-Omaha-Kansas City	Other East and South ^c	Midland States ^d	Southwest States ^e	North Pacific Ports ^f	Northwest States ^g	West	In-State		
(000 bushels)													
6:													
Rail	3,828	4,641	97	--	18	10	--	15	93	--	215	--	8,917
Truck	3,282	2,854	99	2	4	13	--	--	--	--	4	13	6,272
CCC	20	139	--	--	--	--	--	--	--	88	--	--	248
	<u>7,130</u>	<u>7,634</u>	<u>196</u>	<u>2</u>	<u>22</u>	<u>23</u>	<u>--</u>	<u>15</u>	<u>93</u>	<u>88</u>	<u>219</u>	<u>13</u>	<u>15,437</u>
7:													
Rail	1,946	3,934	35	10	37	986	--	943	2,025	--	2	--	9,917
Truck	1,989	2,965	368	38	4	72	1	70	36	--	19	15	5,577
CCC	18	268	--	--	--	--	--	--	--	708	--	--	994
	<u>3,953</u>	<u>7,167</u>	<u>403</u>	<u>48</u>	<u>41</u>	<u>1,058</u>	<u>1</u>	<u>1,013</u>	<u>2,061</u>	<u>708</u>	<u>21</u>	<u>15</u>	<u>16,488</u>
8:													
Rail	981	3,060	18	--	3	293	--	547	1,126	--	9	--	6,038
Truck	1,156	2,216	118	27	10	3	--	--	6	--	1	--	3,538
CCC	4	114	--	--	--	--	--	--	--	486	--	--	604
	<u>2,141</u>	<u>5,390</u>	<u>136</u>	<u>27</u>	<u>13</u>	<u>296</u>	<u>--</u>	<u>547</u>	<u>1,132</u>	<u>486</u>	<u>10</u>	<u>--</u>	<u>10,180</u>
9:													
Rail	1,046	5,198	52	--	4	9	--	64	90	--	73	--	6,537
Truck	362	1,833	95	4	19	--	--	--	--	--	9	9	2,330
CCC	--	231	--	--	--	--	--	--	--	226	--	--	458
	<u>1,408</u>	<u>7,262</u>	<u>147</u>	<u>4</u>	<u>23</u>	<u>9</u>	<u>--</u>	<u>64</u>	<u>90</u>	<u>226</u>	<u>82</u>	<u>9</u>	<u>9,325</u>
TOTAL:													
Rail	18,659	40,359	406	10	171	1,355	9	4,296	8,335	--	1,004	--	74,606
Truck	22,023	15,967	981	202	80	127	9	88	98	--	75	61	39,709
CCC	219	2,493	--	--	--	--	--	--	--	3,317	--	--	6,028
	<u>40,901</u>	<u>58,819</u>	<u>1,387</u>	<u>212</u>	<u>251</u>	<u>1,482</u>	<u>18</u>	<u>4,384</u>	<u>8,433</u>	<u>3,317</u>	<u>1,079</u>	<u>61</u>	<u>120,343</u>

For the footnotes to this table, see page 28.

APPENDIX TABLE 2. SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS , AUGUST, 1969, THROUGH JULY, 1970

Origin and Mode	D E S T I N A T I O N S												Total
	Duluth-Superior	Minneapolis-St. Paul ^a	Other Minnesota ^b	Sioux City-		Midland States ^d	South-west States ^e	North Pacific Ports ^f	North-west States ^g	In-West	Un-State known		
				Omaha-Kansas City	Other East and South ^c								
(000 bushels)													
1:													
Rail	3,457	7,555	40	--	--	--	--	66	188	--	118	--	11,424
Truck	3,021	110	--	--	--	--	--	--	43	--	--	1	3,175
CCC	109	331	--	--	--	--	--	--	--	41	--	--	481
	<u>6,587</u>	<u>7,996</u>	<u>40</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>66</u>	<u>231</u>	<u>41</u>	<u>118</u>	<u>1</u>	<u>15,080</u>
2:													
Rail	1,078	3,675	2	--	4	15	--	90	291	--	97	--	5,252
Truck	3,737	245	1	--	--	--	--	4	50	--	3	1	4,041
CCC	4	207	--	--	--	--	--	--	--	--	--	--	220
	<u>4,829</u>	<u>4,127</u>	<u>3</u>	<u>--</u>	<u>4</u>	<u>15</u>	<u>--</u>	<u>94</u>	<u>341</u>	<u>--</u>	<u>100</u>	<u>1</u>	<u>9,513</u>
3:													
Rail	3,359	7,253	18	--	--	--	--	--	52	--	362	--	11,046
Truck	6,204	158	--	--	--	--	--	--	--	--	12	7	6,381
CCC	39	307	--	--	--	--	--	--	--	3	--	--	348
	<u>9,602</u>	<u>7,718</u>	<u>18</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>52</u>	<u>3</u>	<u>374</u>	<u>7</u>	<u>17,775</u>
4:													
Rail	429	1,501	2	--	--	--	--	48	51	--	20	--	2,051
Truck	202	84	--	--	--	--	--	--	12	--	83	12	393
CCC	--	69	--	--	--	--	--	--	--	--	--	--	69
	<u>631</u>	<u>1,654</u>	<u>2</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>48</u>	<u>63</u>	<u>--</u>	<u>103</u>	<u>12</u>	<u>2,513</u>
5:													
Rail	1,786	2,884	2	--	10	--	--	4	12	--	2	--	4,701
Truck	561	170	3	--	--	--	--	--	--	--	--	--	734
CCC	--	195	--	--	--	--	--	--	--	10	--	--	204
	<u>2,347</u>	<u>3,248</u>	<u>5</u>	<u>--</u>	<u>10</u>	<u>--</u>	<u>--</u>	<u>4</u>	<u>12</u>	<u>10</u>	<u>2</u>	<u>--</u>	<u>5,639</u>

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APPENDIX TABLE 2. SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1969, THROUGH JULY, 1970 - continued

Origin and Mode	D E S T I N A T I O N S												Total
	Duluth-Superior	Minneapolis-St. Paul ^a	Other Minnesota ^b	Sioux City-		Midland States ^d	Southwest States ^e	North Pacific Ports ^f	Northwest States ^g	In-West State	Un-known		
				Omaha-Kansas City	Other East and South ^c								
(000 bushels)													
6:													
Rail	1,116	1,577	19	--	--	--	--	--	10	--	32	--	2,753
Truck	700	108	2	--	--	--	--	--	--	--	1	--	812
CCC	3	57	--	--	--	--	--	--	--	--	--	--	61
	<u>1,819</u>	<u>1,742</u>	<u>21</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>10</u>	<u>--</u>	<u>33</u>	<u>--</u>	<u>3,626</u>
7:													
Rail	278	433	--	--	--	--	--	--	3	--	--	--	714
Truck	108	7	22	--	--	--	--	--	2	--	--	--	139
CCC	--	4	--	--	--	--	--	--	--	--	--	--	3
	<u>386</u>	<u>444</u>	<u>22</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>5</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>856</u>
8:													
Rail	106	237	3	--	--	10	--	--	--	--	--	--	356
Truck	47	16	--	--	--	--	--	--	--	--	--	4	67
CCC	1	7	--	--	--	--	--	--	--	--	--	--	8
	<u>154</u>	<u>260</u>	<u>3</u>	<u>--</u>	<u>--</u>	<u>10</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>4</u>	<u>431</u>
9:													
Rail	691	1,842	36	--	--	--	--	--	--	--	--	--	2,569
Truck	240	175	--	--	--	--	--	--	--	--	--	--	416
CCC	9	33	--	--	--	--	--	--	--	--	--	--	42
	<u>940</u>	<u>2,050</u>	<u>36</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>3,027</u>
TOTAL:													
Rail:	12,299	26,958	123	--	14	25	--	208	608	--	631	--	40,866
Truck	14,821	1,073	27	--	--	--	--	4	106	--	101	25	16,157
CCC	174	1,208	--	--	--	--	--	--	--	55	--	--	1,436
	<u>27,294</u>	<u>29,239</u>	<u>150</u>	<u>--</u>	<u>14</u>	<u>25</u>	<u>--</u>	<u>212</u>	<u>714</u>	<u>55</u>	<u>732</u>	<u>25</u>	<u>58,459</u>

For the footnotes to this table, see page 28.

FOOTNOTES

^aIncludes Savage and Shakopee.

^bRed Wing, Hastings, New Ulm, and Mankato.

^cWisconsin, 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.

^dIncludes the states of Nebraska, Kansas, Iowa, Missouri, and South Dakota.

^eIncludes the states of Wyoming, Utah, Texas, Colorado, Arizona, New Mexico, Oklahoma, Nevada, (southwest designation).

^fIncludes the ports of Portland, Seattle, Astoria, Vancouver, Longview, Tacoma, and Kaloma.

^gIncludes Montana, Idaho, Washington, Oregon, (northwest designation).

APPENDIX TABLE 3. MONTHLY SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1969, THROUGH JULY, 1970

Origin and Mode	Months (1969-70)												Total
	August	September	October	November	December	January	February	March	April	May	June	July	
(000 bushels)													
1:													
Rail	1,609	2,200	2,025	764	1,011	1,060	493	632	981	902	914	1,230	13,824
Truck	891	1,016	514	363	444	344	411	381	455	239	479	495	6,031
CCC	90	59	41	2	4	--	39	125	288	375	298	267	1,588
	<u>2,590</u>	<u>3,275</u>	<u>2,580</u>	<u>1,129</u>	<u>1,459</u>	<u>1,404</u>	<u>943</u>	<u>1,138</u>	<u>1,724</u>	<u>1,516</u>	<u>1,691</u>	<u>1,992</u>	<u>21,443</u>
2:													
Rail	375	556	263	361	473	368	325	277	468	485	186	357	4,493
Truck	241	191	247	139	182	216	147	209	240	222	267	226	2,527
CCC	42	8	--	--	--	--	13	15	61	36	46	17	238
	<u>658</u>	<u>755</u>	<u>510</u>	<u>500</u>	<u>655</u>	<u>584</u>	<u>485</u>	<u>501</u>	<u>769</u>	<u>743</u>	<u>499</u>	<u>600</u>	<u>7,258</u>
3:													
Rail	1,074	1,907	1,192	1,129	1,413	1,069	438	392	651	587	395	570	10,817
Truck	851	654	597	708	976	775	527	580	894	675	856	802	8,895
CCC	102	24	50	24	9	3	3	9	54	77	106	77	540
	<u>2,027</u>	<u>2,585</u>	<u>1,839</u>	<u>1,861</u>	<u>2,399</u>	<u>1,848</u>	<u>968</u>	<u>981</u>	<u>1,599</u>	<u>1,339</u>	<u>1,357</u>	<u>1,449</u>	<u>20,252</u>
4:													
Rail	468	1,081	664	417	664	582	453	481	609	359	518	639	6,935
Truck	198	163	192	173	260	216	221	269	173	211	198	250	2,525
CCC	6	--	12	--	--	--	--	--	105	61	123	57	365
	<u>672</u>	<u>1,244</u>	<u>868</u>	<u>590</u>	<u>924</u>	<u>798</u>	<u>674</u>	<u>750</u>	<u>887</u>	<u>631</u>	<u>839</u>	<u>946</u>	<u>9,825</u>
5:													
Rail	672	1,144	615	643	978	606	474	469	617	426	498	395	7,539
Truck	241	179	105	154	261	179	124	190	214	199	294	245	2,384
CCC	35	4	--	31	18	5	20	19	160	89	113	204	698
	<u>948</u>	<u>1,327</u>	<u>720</u>	<u>828</u>	<u>1,257</u>	<u>790</u>	<u>618</u>	<u>678</u>	<u>991</u>	<u>714</u>	<u>905</u>	<u>844</u>	<u>10,621</u>

- continued -

APPENDIX TABLE 3. MONTHLY SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1969, THROUGH JULY, 1970 - continued

Origin and Mode	Months (1969-70)												Total
	August	September	October	November	December	January	February	March	April	May	June	July	
(000 bushels)													
6:													
Rail	1,120	1,255	1,289	690	898	800	515	425	458	396	502	511	8,860
Truck	493	636	564	494	715	476	267	424	764	514	506	376	6,228
CCC	87	4	2	22	--	2	2	--	34	22	9	62	246
	<u>1,700</u>	<u>1,895</u>	<u>1,855</u>	<u>1,206</u>	<u>1,613</u>	<u>1,278</u>	<u>784</u>	<u>849</u>	<u>1,256</u>	<u>932</u>	<u>1,017</u>	<u>949</u>	<u>15,335</u>
7:													
Rail	1,086	1,026	889	491	987	831	893	735	897	389	653	1,039	9,919
Truck	379	359	443	416	645	453	413	512	413	417	520	574	5,535
CCC	40	6	53	--	--	20	21	66	156	141	295	198	994
	<u>1,497</u>	<u>1,391</u>	<u>1,385</u>	<u>907</u>	<u>1,632</u>	<u>1,304</u>	<u>1,327</u>	<u>1,313</u>	<u>1,466</u>	<u>947</u>	<u>1,468</u>	<u>1,811</u>	<u>16,448</u>
8:													
Rail	891	1,016	514	363	444	344	411	381	455	239	479	495	6,031
Truck	312	371	292	221	304	277	237	259	282	230	397	353	3,536
CCC	46	2	23	--	10	--	9	12	44	79	244	136	604
	<u>1,249</u>	<u>1,389</u>	<u>829</u>	<u>584</u>	<u>758</u>	<u>621</u>	<u>657</u>	<u>652</u>	<u>781</u>	<u>548</u>	<u>1,120</u>	<u>984</u>	<u>10,171</u>
9:													
Rail	908	881	426	351	679	527	434	652	442	356	551	340	6,546
Truck	259	210	124	160	246	182	182	233	171	117	208	241	2,334
CCC	87	24	3	20	13	--	11	61	67	39	90	43	458
	<u>1,254</u>	<u>1,115</u>	<u>5,532</u>	<u>531</u>	<u>938</u>	<u>709</u>	<u>627</u>	<u>946</u>	<u>680</u>	<u>512</u>	<u>849</u>	<u>624</u>	<u>9,338</u>

- continued -

APPENDIX TABLE 3. MONTHLY SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1969, THROUGH JULY, 1970 - continued

Origin and Mode	Months (1969-70)												Total	
	August	September	October	November	December	January	February	March	April	May	June	July		
(000 bushels)														
RAIL:														
Vehicles	4	5	3	2	3	3	2	2	2	2	2	2	2	32
Bushels	8,204	11,067	7,877	5,208	7,549	6,187	4,435	4,445	5,579	4,140	4,696	5,576	74,962	
TRUCK:														
Vehicles	4	4	4	4	5	4	3	4	5	4	5	4	50	
Bushels	3,856	3,779	3,078	2,828	4,033	3,119	2,529	3,058	3,605	2,824	3,724	3,563	39,997	
CCC:														
Vehicles	--	--	--	--	--	--	--	--	--	--	1	--	3	
Bushels	534	132	186	101	54	29	118	304	969	920	1,324	1,060	5,730	
TOTAL														
BUSHEL	12,594	14,978	11,142	8,137	11,636	9,335	7,083	7,807	10,153	7,884	9,744	10,199	120,690	

APPENDIX TABLE 4. MONTHLY SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1969, THROUGH JULY, 1970

Origin and Mode	Months (1969-70)												Total
	August	September	October	November	December	January	February	March	April	May	June	July	
(000 bushels)													
1:													
Rail	921	2,234	994	978	605	815	624	890	789	878	650	975	11,353
Truck	358	461	237	210	252	113	155	177	213	282	316	377	3,150
CCC	13	5	8	12	3	--	4	--	10	108	98	228	490
	<u>1,292</u>	<u>2,700</u>	<u>1,239</u>	<u>1,200</u>	<u>860</u>	<u>928</u>	<u>783</u>	<u>1,067</u>	<u>1,012</u>	<u>1,268</u>	<u>1,064</u>	<u>1,580</u>	<u>14,993</u>
2:													
Rail	315	956	193	604	606	336	283	401	417	414	163	416	5,104
Truck	434	606	284	249	346	109	93	167	317	309	486	648	4,047
CCC	--	--	1	--	--	2	--	--	4	87	61	65	220
	<u>749</u>	<u>1,562</u>	<u>478</u>	<u>853</u>	<u>952</u>	<u>447</u>	<u>376</u>	<u>568</u>	<u>738</u>	<u>810</u>	<u>710</u>	<u>1,129</u>	<u>9,371</u>
3:													
Rail	1,204	2,394	554	987	796	693	563	849	931	723	622	857	11,174
Truck	613	726	455	275	595	157	139	408	602	733	754	1,112	6,566
CCC	75	33	16	7	12	2	4	--	15	82	45	59	350
	<u>1,892</u>	<u>3,153</u>	<u>1,025</u>	<u>1,269</u>	<u>1,403</u>	<u>852</u>	<u>706</u>	<u>1,257</u>	<u>1,548</u>	<u>1,538</u>	<u>1,421</u>	<u>2,028</u>	<u>18,090</u>
4:													
Rail	107	376	94	284	100	92	167	170	145	179	150	186	2,051
Truck	25	31	26	17	20	15	72	14	19	28	62	65	393
CCC	--	--	--	--	--	--	--	--	--	29	17	23	69
	<u>132</u>	<u>407</u>	<u>120</u>	<u>301</u>	<u>120</u>	<u>107</u>	<u>239</u>	<u>184</u>	<u>164</u>	<u>236</u>	<u>229</u>	<u>274</u>	<u>2,513</u>
5:													
Rail	654	813	227	239	144	262	360	496	420	348	317	423	4,703
Truck	72	86	36	16	55	9	3	17	47	74	92	227	732
CCC	7	--	--	3	--	--	13	--	6	53	34	86	204
	<u>733</u>	<u>899</u>	<u>263</u>	<u>258</u>	<u>199</u>	<u>271</u>	<u>376</u>	<u>513</u>	<u>473</u>	<u>475</u>	<u>443</u>	<u>736</u>	<u>5,639</u>

- continued -

APPENDIX TABLE 4. MONTHLY SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1969, THROUGH JULY, 1970 - continued

Origin and Mode	Months (1969-70)												Total
	August	September	October	November	December	January	February	March	April	May	June	July	
(000 bushels)													
6:													
Rail	592	404	146	157	137	199	188	216	240	151	140	182	2,752
Truck	60	87	32	18	57	4	14	74	61	105	117	182	812
CCC	22	--	--	2	--	4	--	--	14	13	6	--	61
	<u>674</u>	<u>491</u>	<u>178</u>	<u>177</u>	<u>194</u>	<u>207</u>	<u>202</u>	<u>290</u>	<u>315</u>	<u>269</u>	<u>263</u>	<u>364</u>	<u>3,625</u>
7:													
Rail	117	103	35	50	45	33	82	43	50	21	37	98	714
Truck	2	5	--	7	27	30	--	6	33	13	1	12	139
CCC	--	--	--	--	--	--	--	--	--	--	--	4	3
	<u>119</u>	<u>108</u>	<u>35</u>	<u>57</u>	<u>72</u>	<u>63</u>	<u>82</u>	<u>49</u>	<u>83</u>	<u>34</u>	<u>38</u>	<u>114</u>	<u>856</u>
8:													
Rail	59	78	12	7	8	24	9	47	15	33	36	26	356
Truck	5	--	2	--	2	1	--	10	10	2	1	34	67
CCC	--	--	--	--	--	--	--	--	--	--	--	7	8
	<u>64</u>	<u>78</u>	<u>14</u>	<u>7</u>	<u>10</u>	<u>25</u>	<u>9</u>	<u>57</u>	<u>25</u>	<u>35</u>	<u>37</u>	<u>67</u>	<u>431</u>
9:													
Rail	362	187	93	123	120	227	232	354	267	159	268	178	2,568
Truck	52	26	31	11	42	18	7	5	15	19	68	125	421
CCC	--	1	--	4	--	--	--	--	--	3	12	22	42
	<u>414</u>	<u>214</u>	<u>124</u>	<u>138</u>	<u>162</u>	<u>245</u>	<u>239</u>	<u>359</u>	<u>282</u>	<u>181</u>	<u>348</u>	<u>325</u>	<u>3,031</u>

- continued -

APPENDIX TABLE 4. MONTHLY SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1969, THROUGH JULY, 1970 - continued

Origin and Mode	Months (1969-70)											Total	
	August	September	October	November	December	January	February	March	April	May	June		July
(000 bushels)													
RAIL:													
Vehicles	2	3	1	1	1	1	1	1	1	1	1	1	173
Bushels	4,331	7,546	2,350	3,430	2,560	2,683	2,508	3,466	3,274	2,906	2,382	3,342	40,777
TRUCK:													
Vehicles	2	3	1	1	2	1	1	1	2	2	2	3	20
Bushels	1,622	2,026	1,102	803	1,395	454	482	879	1,317	1,566	1,898	2,782	16,326
CCC:													
Vehicles	1	--	--	--	--	--	--	--	--	--	--	--	1
Bushels	<u>117</u>	<u>39</u>	<u>25</u>	<u>29</u>	<u>16</u>	<u>8</u>	<u>21</u>	<u>--</u>	<u>49</u>	<u>375</u>	<u>274</u>	<u>493</u>	<u>1,446</u>
TOTAL BUSHELS	6,070	9,611	3,477	4,262	3,971	3,145	3,011	4,345	4,640	4,847	4,554	6,617	58,549