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TRUCK AND RAIL SHIPMENTS OF HARD RED SPRING AND DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS 1970-1971

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\mathbf{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

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 ratemaking; and therefore, they deserve acknowledgment here:

North Dakota State Wheat Commission

Herman Schmitz, Chairman Carrington Emil Anderson, Upham Andrew Headland, Ypsilanti Reuben Stoleberg, Flasher George Smith, Amenia Floyd Poyzer, Amenia Ludger Kadlec, Pisek

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TRUCK AND RAIL SHIPMENTS OF HARD RED SPRING AND DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS 1970-1971

Dale O. Anderson*

Introduction

This is a continuation of analyses concerned with the patterns of distribution of grains from North Dakota. I 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 States moves eastbound to the terminal markets of Minneapolis-St. Paul and Duluth-Superior. The pattern of shifting the distribution of wheat from rail to truck continued through 1970-1971.

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 additon, trends in shipments by months are identified. The patterns of distribution and monthly shipments for 1970-1971 are compared to previous years' data.

Source of Data

The data used to illustrate the distribution patterns for August, 1970, through July, 1971, represent the fourth year's 100 percent population. That is, this is the fourth time period reported which includes the data from <u>all</u> 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, 16, and 17, North Dakota State University, Fargo, North Dakota.

 $²_{
m The}$ previous years, 1967-1968, 1968-1969, were reported in UGPTI Report No. 14 and 17 for wheat and durum and in UGPTI Report No. 16 and 22 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. 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 1968-1969 and continued in 1970-1971 (Tables 1 and 2).

During 1963-1964, 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 1968-1969, 1969-1970, and 1970-1971. The proportion trucked from Central North Dakota declined from 29 percent in 1963-1964 to 27 percent in 1968-1969, to 24 percent in 1969-1970, and to 23 percent in 1970-1971. 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 1963-1964 to 45 percent in 1970-1971.

The volume of wheat shipped by truck, however, increased in every area. About 9.9 million bushels originated in the West in 1963-1964, 15 million bushels in 1968-1969, 17.5 million bushels in 1969-1970, and 18.9 million in 1970-1971. About 5.4 million bushels were trucked from the Central districts in 1963-1964, 13 million in 1968-1969, 13.3 million in 1969-1970, and 16.5 million in 1970-1971. The greatest increase occurred in the Eastern part of the State where the trucked volume increased from 3.6 to 28.9 million bushels 1963-1964 through 1970-1971, respectively.

Proportion Shipped by Truck

The trend towards an increasing share of the wheat traffic going to motor carriers, which was observed 1956-1957 through 1969-1970, continued through the 1970-1971 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 1956-1957 and 1957-1958 data, and the estimate would have been about 11 percentage points low (the estimate would have been about 28 percent) since the motor carrier handled about 39 percent of the 1970-1971 shipments of wheat. 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).

³Such errors are probably insignificant.

⁴In retrospect the 1956-1957 and 1957-1958 data would have been sufficient as a basis for decision making on the part of railroads.

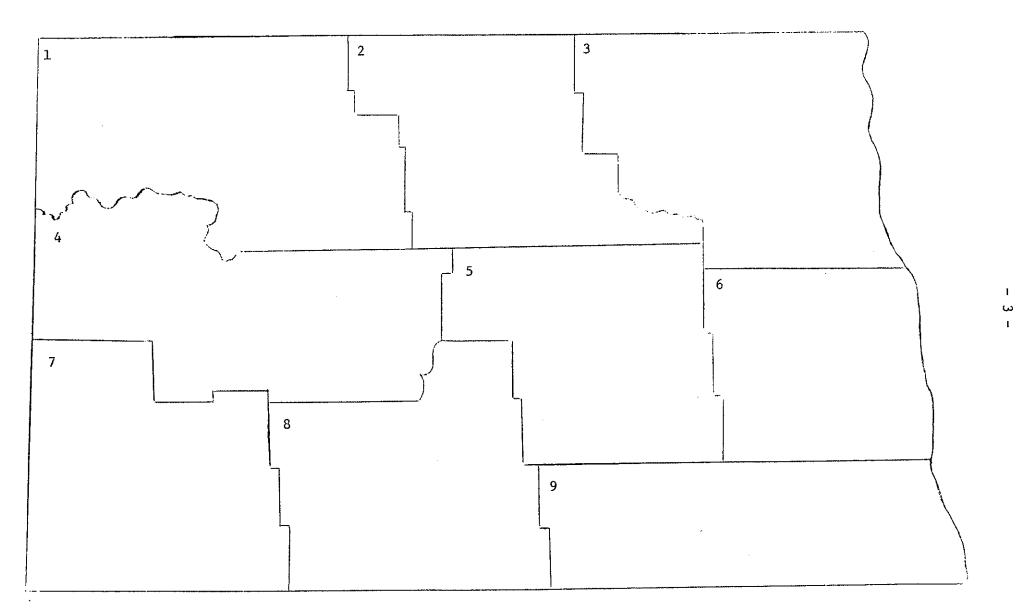


Figure 1. North Dakota Crop Reporting Districts

TABLE 1. TOTAL VOLUME OF WHEAT SHIPPED BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1956-1957 THROUGH 1970-1971

				4		Year							
Crop							Red Spri				Durum		
Reporting District	1956- 1957	1957- 1958	1958- 1959	1963- 1964	1965- 1966	1967- 1968	1968- 1969	1969 - 1970	1970- 1971	1967- 1968	1968- 1969	1969- 1970	1970~ 1971
**************************************						(000 bus	hels)						
1	390	1,920	9,584	5,328	2,446	3,556	3,918	5,662	5,236	3,836	3,227	3,174	4,214
2	148	137	213	2,848	3,404	1,941	2,212	2,514	3,328	4,692	4,278	4,041	5,406
3	920	1,598	1,421	1,817	2,088	3,061	6,273	8,914	9,919	4,263	5,781	6,381	8,317
4	166	498	200	301	1,130	1,609	2,262	2,519	2,976	334	226	393	694
5	112	599	301	1,079	825	1,692	2,335	2,383	3,358	910	839	734	910
6	624	554	1,108	1,083	1,256	3,320	5,389	6,272	6,665	633	910	812	857
7	720	705	794	4,230	4,083	4,772	5,270	5,577	5,221	221	98	139	317
8	349	346	899	1,466	3,036	2,973	3,218	3,538	3,143	267	75	67	351
9	183	309	344	668	752	1,607	2,167	2,330	2,580	553	<u>154</u>	416	656
Total	3,612	6,666	14,863	18,820	19,021	24,531	33,044	39,709	42,426	15,709	15,588	16,157	21,723
					wheat =	40,240	48,632	55,866	64,149				

TABLE 2. PROPORTION OF TOTAL WHEAT SHIPPED FROM NORTH DAKOTA BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1956-1957 THROUGH 1970-1971

							Year Hard	Red Spri	ne		Duru	m	<u></u>
Crop Reporting District	1956- 1957	1957- 1958	1958- 1959	1963- 1964	1965 - 1966	1967 - 1968	1968- 1969	1969- 1970	1970- 1971	1967- 1968	1968- 1969	1969- 1970	1970 - 1971
						(perc	ent)						
1	10.8	28.9	64.4	28.3	12.9	14.5	11.9	14.3	12.4	24.4	20.7	19.7	19.4
2	4.1	2.1	1.4	15.1	17.9	7.9	6.7	6.3	7.8	29.9	27.4	25.0	24.9
3	25.5	24.0	9.7	9.7	11.0	12.5	19.0	22.4	23.4	27.2	37.1	39.5	38.3
4	4.6	7.5	1.4	1.6	5.9	6.6	6.8	6.3	7.0	2.1	1.5	2.4	3.2
5	3.1	8.6	2.0	5.7	4.3	6.9	7.1	6.0	7.9	5.8	5.4	4.5	4.2
6	17.3	8.4	7.5	5.8	6.6	13.5	16.3	15.8	15.7	4.0	5.8	5.0	3.9
7	19.9	10.6	5.3	22.5	21.5	19.5	15.9	14.1	12.3	1.4	.6	.9	1.5
8	9.7	5.2	6.0	7.8	15.9	12.1	9.7	8.9	7.4	1.7	•5	.4	1.6
9	5.0	4.7	2.3	3.5	4.0	6.5	6.6	5.9	6.1	3.5	1.0	2.6	3.0
Total	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

TABLE 3. PROPORTION OF TOTAL WHEAT SHIPPED BY CROP REPORTING DISTRICT FROM NORTH DAKOTA BY TRUCK FROM EACH CROP REPORTING DISTRICT, 1956-1957 THROUGH 1970-1971

						Year	. 1 D - 1 C				Durum		
Crop				10.00	7065		rd Red S 1968-	1969-	1970-	1967-	1968-	1969-	1970-
Reporting District	1956- 1957	1957- 1958	1958- 1959	1963 - 1964	1965- 1966	1967- 1968	1968-	1970	1970-	1968	1969	1970	1971
						(percen	t)		·				
1	2.0	9.7	38.0	22.1	7.4	28.7	25.3	26.9	30.8	36.4	21.3	21.1	30.4
2	1.0	1.1	1.6	25.0	19.4	30.5	32.4	34.3	48.1	45.0	37.6	42.5	55.2
3	4.0	7.6	7.5	8.0	6.8	16.3	33.8	44.3	55.3	23.9	25.5	35.9	52.0
4	2.0	7.0	3.3	4.2	10.7	20.6	24.0	25.7	40.2	18.8	9.9	15.6	24.1
5	1.0	7.2	3.7	12.0	7.9	19.3	19.7	22.5	23.0	19.5	10.1	13.0	13.2
6	6.0	4.7	12.6	11.1	7.9	21.0	31.7	40.6	49.0	23.1	20.3	22.4	29.7
7	8.0	6.2	9.5	30.9	24.7	32.4	35.0	33.8	40.2	30.4	10.2	16.2	26.6
8	6.0	5.4	19.7	34.0	34.1	35.7	36.6	34.8	44.7	49.8	15.2	15.6	25.5
9	2.0	<u>5.4</u>	6.0	10.1	7.9	18.0	21.3	25.0	<u>31.5</u>	18.6	3.9	<u>13.7</u>	22.0
Total	3.5	6.4	15.0	17.3	12.4	24.1	29.2	33.0	40.1	30.1	22.4	27.6	37.9
					wheat	= 26.1	26.6	31.3	39.3				

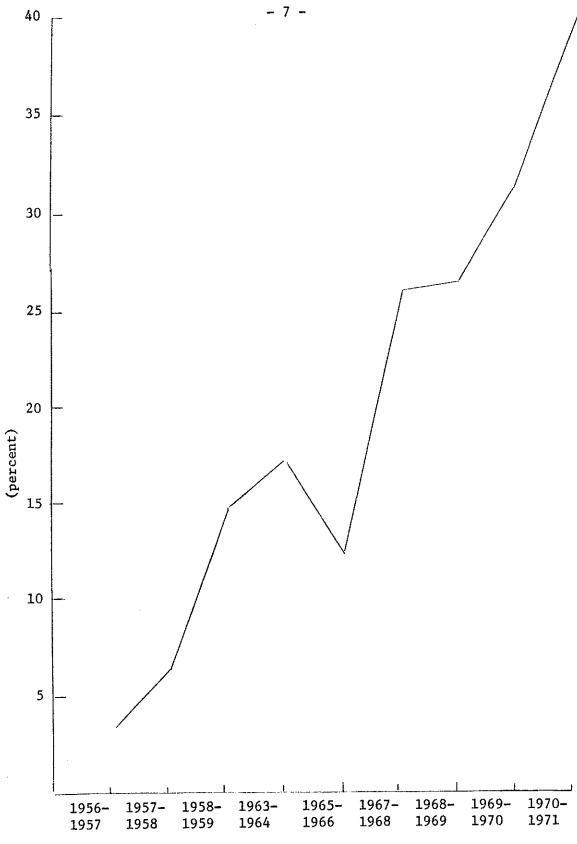


Figure 2. Percent of Total Wheat Shipped by Truck From North Dakota Country Elevators, 1956-1957 Through 1970-1971

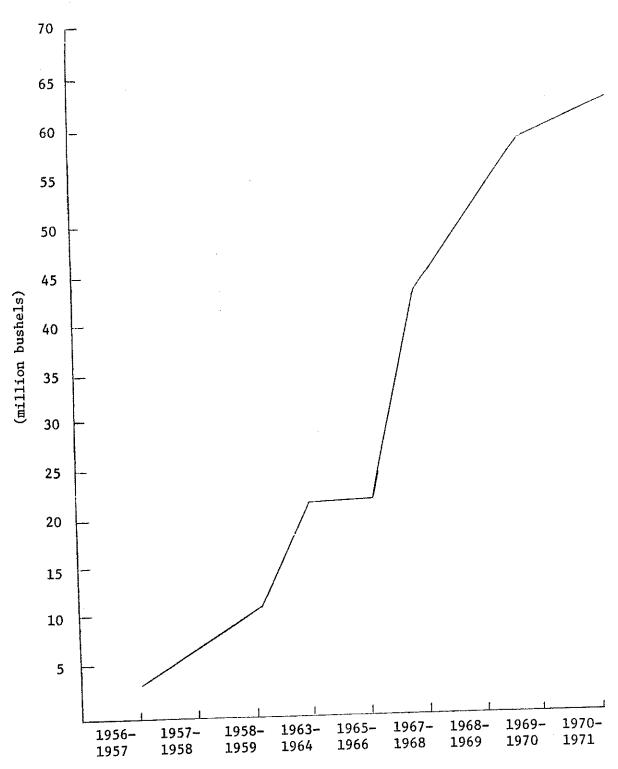


Figure 3. Total Volume of Wheat Shipped by Truck to All Destinations From North Dakota Country Elevators, 1956-1957 Through 1970-1971

Destinations of Trucked Wheat

Nearly 96 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 1956-1957 through 1968-1969 the proportion going to Minneapolis-St. Paul declined, while the share destined Duluth-Superior increased. During 1969-1970 the percent going to Minneapolis-St. Paul increased to 30.5 percent compared to 24.1 percent in 1968-1969, and the proportion destined Duluth-Superior dropped from 72.3 to 66 percent. The most recent changes in 1970-1971, showed a decrease in the proportion of wheat shipped via truck to Minneapolis-St. Paul of 1.9 percent bringing the total shipped this market to 28.6 percent. The Duluth-Superior destination realized an increase in proportion of wheat shipped via truck 66 percent in 1969-1970 to 67.7 percent in 1970-1971.

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 1968-1969. This proportion rose to 40.2 percent in 1969-1970, and 56.9 percent in 1970-1971. The proportion of Hard Red Spring destined Duluth-Superior declined from 62.6 to 55.5 percent, 1968-1969 through 1969-1970, and a further decline to 38.1 percent was realized through 1970-1971.

The proportions of Durum destined Minneapolis-St. Paul and Duluth-Superior changed very little from 1969-1970 through 1970-1971. The percent going to Minneapolis-St. Paul increased from 6.6 to 9.9 percent, while the share destined Duluth-Superior declined from 91.7 to 88.8 percent.

Although the 1970-1971 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.

Shipments by Periods

Shipments of Hard Red Spring and Durum wheat by time period (months) are now available for 48 consecutive months, beginning August, 1967. The seasonal fluctuations in shipments which appeared from the data for the 36-month period, August, 1967, through July, 1970 continued through July, 1971, 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.

Number of Cars and Trucks

Data are now available for the 48-month period, August, 1967, through July, 1971, 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 1967-1968 through 1968-1969 was 45 bushels per car. The volume

TABLE 4. MAJOR DESTINATIONS OF WHEAT SHIPPED BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS, 1956-1957 THROUGH 1970-1971

						Year							
							rd Red	Spring			Durun	1	
Destination	1956- 1957	1957- 1958	1958 - 1959	1963- 1964	1965- 1966	1967- 1968 ^a	1968- 1969 ^a	1969- 1970 ^a	1970- 1971 ^a	1967 - 1968	1968- 1969	1969- 1970	1970- 1971
						(perce	nt)						
Minneapolis-St. Paul	67.3	58.4	64.2	36.9	27.2	41.4	32.5	40.2	56.9	15.9	6.2	6.6	9.9
Duluth-Superior	10.9	24.3	30.2	59.3	53.4	51.3	62.6	55.5	38.1	82.7	92.8	91.7	88.8
Other Minnesota	11.5	6.4	1.7		8.3	3.1	3.1	2.5	2.8	.3	.3	.2	.9
East and South						2.1	.7	.2	.6	.3		000 415	.1
Midland and South- west States	.3					1.3	.6	.8	.9	.3		. 	
West Ports and States		***	THE MEAN		4.9 ^b	.1	.1.	.5	.3	.1	.1	.7	.1
In-State	2.6	8.4	3.7	3.8	6.2	.4	.2	.2	.1	.3	.4	.6	.1
Jnknown	7.4	2.5	.2			.3	.1	.1	.3	.1	.2	.2	.1

a 1967-1968 all wheat, Minneapolis-St. Paul = 31.4 percent; Duluth-Superior = 63.5 percent. 1968-1969 all wheat, Minneapolis-St. Paul = 24.1 percent; Duluth-Superior = 72.3 percent. 1969-1970 all wheat, Minneapolis-St. Paul = 30.5 percent; Duluth-Superior = 66.0 percent. 1970-1971 all wheat, Minneapolis-St. Paul = 28.6 percent; Duluth-Superior = 67.7 percent.

bMidland and Southwest States and West Ports and States aggregated in 1965-1966 analysis.

TABLE 5. PROPORTION OF HARD RED SPRING AND DURUM WHEAT SHIPPED BY RAIL, TRUCK, AND CCC (RAIL) TO EACH DESTINATION, 1967-1968, 1968-1969, 1969-1970, and 1970-1971

			Ι	ESTI	NAT	IONS						
				Sioux				······		· · · · · · · · · · · · · · · · · · ·		
				City-	Other							
				Omaha-	East		South-	North	North-			
	Duluth-	Minneapolis-	Other	Kansas	and	Midland	west	Pacific			In-	Un-
Year and Mode	Superior	St. Paul ^a	Minnesotab	City	South	Statesd	States	Ports ^r	States	West	State	known
				(perce	nt)	· · · · · · · · · · · · · · · · · · ·				<u>.</u>		
Hard Red Spring	g:											
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	-
1970-1971	44.2	60.9	28.9	75.7	57.4	52.9	90.4	98.7	98.6		93.0	
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
1970-1971	55.3	35.8	71.1	24.3	42.6	47.1	9.6	1.3	1.4		7.0	100.0
CCC												
1967-1968	•5	.8			***]	100.0		
1968-1969	.6	1.0		~~ ···					+- 1	100.0		
1969-1970	•5	4.2]	0.001		
1970-1971	.5	3.3]	100.0		10.9
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	
1970-1971	35.3	85.1	44.7		100.0	100.0	100.0	100.0	96.5		92.1	

⁻ continued -

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TABLE 5. PROPORTION OF HARD RED SPRING AND DURUM WHEAT SHIPPED BY RAIL, TRUCK, AND CCC (RAIL) TO EACH DESTINATION, 1967-1968, 1968-1969, 1969-1970, and 1970-1971 - continued

			I	ESTI	NAT	IONS						
Year and Mode		Minneapolis- St. Paul ^a	Other Minnesota ^b	Sioux City- Omaha- Kansas City	Other East and South ^c	Midland States ^d		North Pacific Ports ^f	North- west States		In- State	Un- known
				(perce	nt)					· · · · · · · · · · · · · · · · · · ·		
Truck				(berce	II.C.)							
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
CCC												
1967-1968								~~				
1968-1969	.1	.1	***							100.0		
1969-1970	.6	4.1								100.0		
1970-1971	.6	6.5										33.2

TABLE 6. PERCENT OF TOTAL HARD RED SPRING WHEAT SHIFFED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT, 1967-1968, 1968-1969, 1969-1970, and 1970-1971

				D I	STI	NATI	ONS						
Crop Reporting District	Duluth- Superior	Minneapolis- St. Paul ^a	Other Minnesota ^b	Sioux City- Omaha- Kansas	Other East		South- l west States ^e	North Pacific Ports	North- west States	g West	In- State	Un- known	- Total
1.					(percen	t)					· · · · · · · · · · · · · · · · · · ·		
1: 1967-1968 1968-1969 1969-1970 1970-1971 2: 1967-1968 1968-1969 1969-1970 1970-1971	10.4 13.2 9.1 6.4 5.8 6.9	13.1 14.6 18.3 19.6 4.3 3.1 4.5 3.9	3.9 13.6 8.5 1.0 .2 2.2 5.7 2.3	18.0 49.5 54.9 .2 2.6 1.0	36.5 29.7 17.7 13.7 7.9 6.5 3.2	33.8 8.6 2.8 28.7 1.3 1.7	 100.0 25.1 8.9 33.1 37.8	8.5 16.2 18.8 25.5 8.8 17.7 14.3	13.4 19.7 27.8 27.5 12.3 13.2 12.3 15.1	34.1 10.0 38.6 19.7 8.6 .5 .7	6.9 23.4 11.1 3.5 1.2 1.1 4.8 1.0	11.6 1.3 4.4 15.9 2.2 1.3	12.1 13.7 17.5 14.9 6.2 6.1 6.1
1967-1968 1968-1969 1969-1970 1970-1971 4: 1967-1968 1968-1969	22.3 27.9 20.7 8.2 7.7	15.1 14.2 13.5 13.8 7.1 8.9	10.1 5.5 4.6 3.2 2.6 3.8	.9 4.1 5.4 .2	.9 .9 7.5	1.7 1.4 .6 5.8	37.9 2.2	25.9 3.1 .7 9.0 13.2 13.0	28.8 11.2 3.0 7.2 7.5 7.4	8.7 21.8 2.1 2.1 5.0	53.2 41.2 34.5 18.6	1.4 27.3 6.6	18.4 16.4 16.7 15.8 7.7 8.3
1969-1970 1970-1971 5:	6.2	7.9 6.2	8.3 15.4	.3 .5	3.6 1.0	1.5 3.2		21.8 12.8	9.4 5.9	5.8 8.1	9.6 10.1	5.9 18.6	8.1 6.5
1967-1968 1968-1969 1969-1970 1970-1971	11.2 9.1	7.3 8.5 9.1 10.2	8.7 6.3 9.4 9.2	8.7	3.6 10.8 31.6 10.0	 .5 .2 2.8	34.4	5.0 12.3 7.0 9.2	5.3 14.9 7.6 12.5	8.7 23.3 7.4 41.8	2.0 12.0 9.2 5.4	20.3 15.9 17.7 15.2	8.6 10.5 8.8 13.3

⁻ continued -

TABLE 6. PERCENT OF TOTAL HARD RED SPRING WHEAT SHIPPED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT, 1967-1968, 1968-1969, 1969-1970, and 1970-1971 - continued

				D F	STI	NATI	ONS						_
				Sioux									-
				City-	Other								
Crop				Omaha-	East		South-	North	North-	•			
Reporting		Minneapolis-	Other b	Kansas	and	Midland	west	Pacific		o	In-	Un-	
District	Superior	St. Paul ^a	Minnesotab	City	South	Statesu	States ^e	Ports	States	⁵ West	State	known	Total
					(percen	t)		-					·
6:													
1967-1968		14.8	16.1			2.1	***	5.5	2.8	12.3	24.4	34.8	15.5
1968-1969		14.7	12.3		27.0	1.3		2.4	1.3	23.0	12.5		15.0
1969-1970		13.0	14.1	1.1	8.9	1.6		.3	1.1	2.7	20.3	22.1	12.8
1970-1971	l 13.1	13.4	14.1	7.2	3.7	8.5		.3	1.6	2.4	29.0	2.7	11.9
7:													
1967-1968		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		12.5	38.5	17.0	32.5	83.4		26.0	14.6	5.9	1.2	18.2	13.3
1969-1970		12.2	29.0	22.6	16.3	71.4	3.9	23.1	24.4	21.3	2.0	25.0	13.7
1970-197	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
8:									~		- 0	, ,	0.0
1967-1968		7.2	8.0	14.5	10.2	6.2		12.4	14.9	6.1	1.3	4.3	8.2
1968-1969		7.6	5.0	19.0		3.4		6.4	14.9	2.7	2.8	4.5	7.7
1969-1970		9.2	9.8	12.8	5.3	20.0		12.5	13.4	14.6	.9	.7	8.5
1970-197	1 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
9:		10.7		•	_				, -		•	06.3	0 0
1967-1968		13.4	3.0	.9	.5			4.0	4.7	5.6	.8	26.1	8.8
1968-1969		15.9	12.8			1.4		2.9	2.7	11.2	1.2	18.2	9.0
1969-1970		12.3	10.6	1.8	9.2	.6		1.5	1.0	6.8	7.6	14.8	7.8
1970-197	1 3.8	12.3	10.3	.8	5.7	4.5		1.8	2.4	3.2	13.7	18.5	7.2
TOTAL:													
1967-196	8 100.0	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
1969-197		100.0		100.0	100.0			100.0	100.0	100.0	100.0	100.0	100.0
1970-197		100.0		100.0	100.0			100.0	100.0	100.0	100.0		100.0
												····	

TABLE 7. PERCENT OF TOTAL DURUM WHEAT SHIPPED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT, 1967-1968, 1968-1969, 1969-1970, and 1970-1971

				D E	STIN	ATIO	N S						
				Sioux									
				City	Other								
Crop				Omaha-	East		South-	North	North-				
Reporting		Minneapolis-	Other	Kansas	and	Midland	west	Pacific	west		In-	Un-	
District	Superior	St. Paul ^a	Minnesota	^b City	South	Statesd	Statese	Ports ^I	States ^g	West	State	known	Total
				(F	ercent)								
1:													
1967-1968	3 20.2	20.3	11.2					11.6	21.6		21.0	22.2	
1968-1969		22.9	10.7					24.7	20.3		21.6		21.7
1969-1970	24.1	27.3	26.7					31.1		75.5	16.1	2.8	25.8
1970-1971	L 20.7	27.8	30.5 1	00.0	73.3		15.0	59.3	23.9		18.8	7.4	24.1
2:													
1967-1968	3 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
1970-1971	L 20.5	12.7	2.9				32.5	22.7	37.4		7.8	18.5	17.0
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
1970-197	L 34.6	20.4	27.6			25.0		2.7	27.8		29.5	14.8	27.9
4:													
1967-1968	3 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
1970-197	1 3.4	7.3	•5	m							.7		5.0
5:													
1967-1968	3 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		11.1	3.0		73.9			2.0		18.4	.3		9.6
1970-197		14.4	23.3				52.5		9.2		1.3	14.8	11.9

⁻ continued -

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TABLE 7. PERCENT OF TOTAL DURUM WHEAT SHIPPED TO EACH DESTINATION BY EACH CROP REPORTING DISTRICT, 1967-1968, 1968-1969, 1969-1970, and 1970-1971 - continued

				DΕ	STIN	ATIO	N S						
	~			Sioux									
				City	Other								
Crop				Omaha-	East		South-	North	North-				
Reporting	Duluth-	Minneapolis-	Other	Kansas	and	Midland		Pacific			In-	Un-	
District	${\tt Superior}$	St. Paul ^a	Minnesota ^b	City	South ^C	Statesd	Statese	Ports ¹	States	West	State	known	Total
				(1	percent)								
6:													
1967-1968		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		6.0	14.1						1.4		4.5		6.2
1970-1971	L 4.5	5.7	7.5		26.7			6.7			36.9		5.4
7:													
1967-1968	3 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
1970-1973	L 2.2	1.9	1.2			75.0		3.3	.8			3.7	2.1
8:													
1967-1968	3 1.5	.6									1.1		1.0
1968-1969	9.7	.7	.8								.1		.7
1969-1970	0.6	•9	1.8			41.1						16.5	.7
1970-197	1 1.4	1.7		'				5.3	.3				1.5
9:													
1967-1968		7.7	4.8			50.0			.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
1970-197	1 2.7	8.1	6.5						.6		5.0	40.8	5.1
TOTAL:												7, ,,, -1,,	
1967-196	8 100.0	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 1			100.0	
1969-1970		100.0	100.0		100.0	100.0		100.0	100.0			100.0	
1970-197		100.0		100.0	100.0	100.0		100.0	100.0		100.0	100.0	

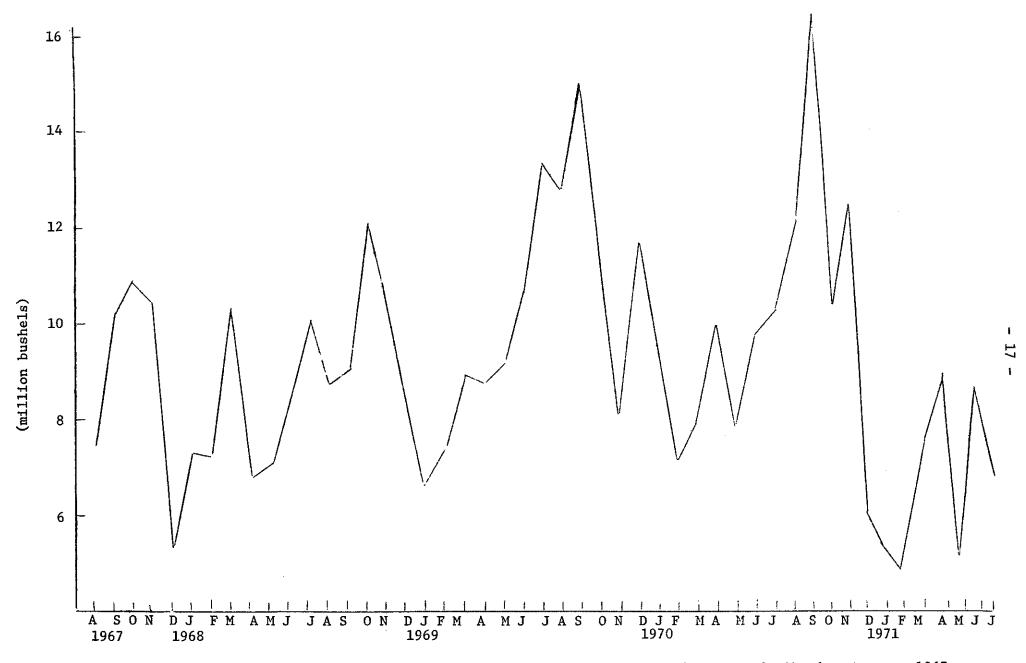


Figure 4. Shipments of Hard Red Spring Wheat from North Dakota Country Elevators, by Months, August, 1967, Through July, 1971

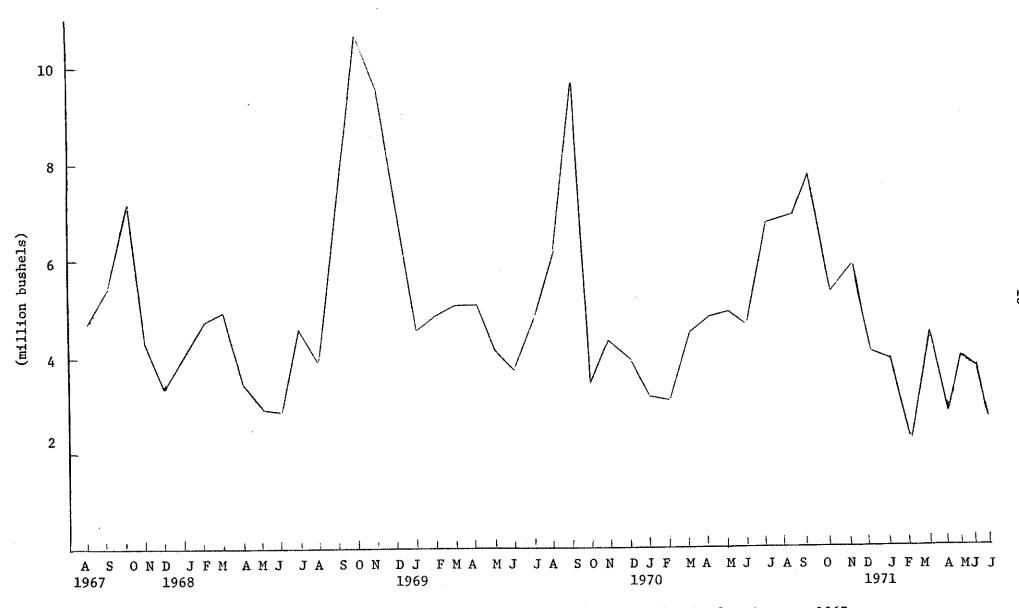


Figure 5. Shipments of Durum Wheat from North Dakota Country Elevators, by Months, August, 1967, Through July, 1971

hauled by truck decreased by 13 bushels. From 1968-1969 through 1969-1970 the average volume hauled in rail cars increased only two bushels per car, while the amount handled per truckload increased by 33 bushels. During the 1969-1970 through 1970-1971 time period rail car capacity on an average increased by 63 bushels while the average load for trucks decreased by 8 bushels.

The average hauls of Durum are somewhat different. The average volume handled in railcars 1967-1968 through 1968-1969 increased by 158 bushels per car and by 47 bushels per car 1968-1969 through 1969-1970 (a decrease of 6 bushels per car was experienced during 1969-1970, 1970-1971 time period). The average truckload of Durum decreased by 10 bushels 1967-1968 through 1968-1969, increased 21 bushels 1968-1969 through 1969-1970, and decreased 156 bushels 1969-1970 through 1970-1971.

The number of vehicles (rail cars and motor vehicles) transporting wheat increased from 1969-1970 through 1970-1971 by 5,043 bringing the total number of vehicles to 123,580. The increase can be accounted for by the increase in trucked Durum wheat. The number of truckloads of Durum wheat increased from 20,389 in 1969-1970 to 33,858 in 1970-1971, an increase of 66 percent.

The number of vehicles shipping Hard Red Spring wheat decreased during the 1969-1970 through 1970-1971 time period from 85,060 to 79,722. The decrease is due to a reduction in the number of rail cars which dropped from 32,223 in 1969-1970 to 23,735 in 1970-1971, a 26 percent decline.

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, 1967-1968, 1968-1969, 1969-1970, and 1970-1971

		Number	r of Car			Number	of Truck	s		Average	Volume	
	1967-	1968-	1969-	1970-	1967-	1968-	1969-	1970-	1967-	1968-	1969-	1970-
Origin and Mode	1968	1969	1970	1971	1968	1969	1970	1971	1968	1969	1970	1971
-										(bushe1s)	
1: Rail	3,560	4,689	5,543	4,326					2,183	2,418	2 404	2 414
raii Truck	3,200	4,009	J,J43 	4,320	4,811	5,783	7,498	6,866	739	678	2,494 804	2,414 763
CCC	447	100	673	587	4,011	3,703	7,430	0,000	2,347	2,460	2,360	
CCC	44/	100	0/3	301					2,347	2,400	2,300	2,285
2:												
Rail	1,916	2,044	1,905	1,458		 .			2,185	2,247	2,359	2,316
Truck					2,543	2,847	3,171	4,222	763	777	797	788
CCC	110	13	121	89					2,073	2,077	1,969	2,422
3:												
Rail	6,533	5,018	4,540	3,497					2,358	2,356	2,383	2,181
Truck					3,816	7,899	10,890	12,220	802	794	817	812
CCC	104	193	234	166	 _				2,615	2,472	2,308	2,229
4:												
Rai1	2,531	2,656	2,878	1,630					2,386	2,690	2,410	2,390
Truck	-,551	_,050			2,107	2,934	3,245	3,894	764	771	778	764
CCC	65	6	160	231					2,446	2,167	2,279	2,299
5:												
Rail	5,493	4,023	3,278	2,957					2,162	2,312	2,300	3,009
Truck	J,473	7,023		-,//	2,128	3,081	3,025	4,267	795	758	788	. 787
CCC	111	111	311	910	2,120	J,001	J,02J	4,207	2,261	2,090	2,243	2,569
	***	111	711	910					2,201	2,090	2,243	2,309
6: P-41	5 (00	F 000	2 07/	2 225					0.011	0.001	0.000	
Rail	5,493	5,092	3,974	3,096					2,216	2,226	2,229	2,158
Truck					4,254	6,916	7,906	8,498	780	779	788	784
CCC	156	146	98	107					1,929	1,945	2,510	2,312

⁻ continued -

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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, 1967-1968, 1968-1969, 1969-1970, and 1970-1971 - continued

		Numbe	r of Car	s		Number	of Truck	s		Average	Volume	
Origin and Mode	1967- 1968	1968- 1969	1969- 1970	1970- 1971	1967 - 1968	1968 - 1969	1969- 1970	1970- 1971	1967- 1968	1968- 1969	1969- 1970	1970- 1971
7:					· · ·			· · · · · · · · · · · · · · · · · · ·		(bushels)	
Rail Truck CCC	3,954 125	4,369 24	4,487 458	2,823 335	6,138	6,844 	7,011 	 6,750 	2,447 777 2,376	2,223 770 2,417	2,211 790 2,170	2,479 774 2,328
Rail Truck CCC	2,419 100	2,518 25	2,764 278	1,537 185	3,852 —	4,207	4,592 —	 4,079 	2,131 771 2,020	2,187 765 2,320	2,182 770 2,172	2,222 771 2,550
Rail Truck CCC	3,316 78	3,432 46	2,854 212	2,411 115	1,993 	2,833 	2,957 —	3,106	2,156 806 2,103	2,302 765 2,630	2,294 789 2,160	2,221 831 2,230
STATE: Rail Truck CCC	32,643 1,296	33,841 664	32,223 2,542	23,735 2,085	31,642	43,344	 50,295	53,902	2,279 775 2,255	2,324 762 2,283	2,326 795 2,254	2,389 787 3,143

TABLE 9. AVERAGE VOLUME OF DURUM WHEAT SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1967-1968, 1968-1969, 1969-1970 and 1970-1971

			r of Car			Number (Average	Volume	
	1967-	1968-	1969-	1970-	1967-	1968-	1969~	1970-	1967-	1968-	1969-	1970-
Origin and Mode	1968	1969	1970	1971	1968	1969	1970	1971	1968	1969	1970	1971
4										(bushels)	
1:	2 005	. naa	4 740	2 020					0 770	0 /17	0 201	0 000
Rail Truck	3,085	4,923	4,749	3,830	 - 025	/ 122	2 001	 E 210	2,173	2,417	2,391	2,330
CCC			201	210	5,025	4,133	3,981	5,318	763	781	791	792
CCC	1		294	319				****		2,000	1,665	2,305
2:												
Rail	2,672	2,990	2,233	1,766		***		***	2,150	2,377	2,286	2,308
Truck		 ·	-		5,886	5,435	5,019	6,830	797	787	806	792
CCC			101	141							2,177	2,178
3:												
Rail	6,172	7,446	4,682	3,311					2,200	2,234	2,387	3,206
Truck					5,233	7,214	8,147	10,286	815	801	806	809
CCC	3	118	153	160	-~				2,000	2,508	2,289	1,744
									_,000	-,500	2,205	2,777
4: Rail	616	788	700	905					0.047	0 (1/	0.600	
Truck	 0T0	700	780 	895 	 /25	217	 		2,347	2,614	2,630	2,373
CCC			29	21	425	311	538	894	786	727	730	776
CCC			29	21	~~						2,373	2,745
5:												
Rail	1,769	3,200	2,062	2,177					2,118	2,338	2,281	2,659
Truck			- <u>-</u>		1,189	1,057	912	1,101	765	794	803	827
CCC			85	73				<u></u>			2,395	2,458
											•	•
6: Rail	1,039	1,655	1 210	839					2 022	0.160	0.050	0 0 7 7 7
Truck		-	1,219			1 /00	1 005	1 010	2,022	2,149	2,258	2,277
CCC					819	1,428	1,005	1,012	773	637	807	847
CCC	1	11	29	58		***			2,000	1,909	2,105	2,044

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TABLE 9. AVERAGE VOLUME OF DURUM WHEAT SHIPPED BY RAIL CAR AND BY TRUCK FROM NORTH DAKOTA COUNTRY ELEVATORS BY CROP REPORTING DISTRICT, 1967-1968, 1968-1969, 1969-1970 and 1970-1971 - continued

		Number	r of Car			Number	of Truck			Average	Volume	
	1967-	1968-	1969-	1970-	1967-	1968-	1969-	1970-	1967-	1968-	1969-	1970-
origin and Mode	1968	1969	1970	1971	1968	1969	1970	1971	1968	1969	1970	1971
					· · · · · · · · · · · · · · · · · · ·					(bushels))	
7 :												
Rail	249	416	336	358					2,028	2,075	2,125	2,329
Truck					260	127	174	400	850	772	797	792
CCC	1		2	21			****		2,000	***	1,830	1,992
3:												
Rail	134	197	160	237					2,007	2,127	2,225	2,156
Truck					423	85	86	443	631	8 82	782	793
CCC			3	9			BAC 4888				2,477	1,951
);												
Rail	1,216	1,721	1,123	994					1,981	2,178	2,287	2,224
Truck			-		637	204	527	741	868	755	798	886
CCC	3	1	18	59		480			2,000	2,000	2,330	1,940
STATE:												
Rail	16,952	23,336	17,344	14,407					2,154	2,304	2,351	2,345
Truck					19,897	19,994	20,389	33,690	790	780	801	645
CCC	8	131	714	861					2,000	2,450	2,025	2,150

APPENDIX

APPENDIX TABLE 1. SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1970, THROUGH July, 1971

				D	E S T I	NATI	ONS				<u>-</u>	· · · · · · · · · · · · · · · · · · ·	
Origin and Mode	Duluth- Superior	Minneapolis St. Paul ^a	Other Minnesota ^b	Sioux City Omaha- Kansas City	Other East and	Midland States ^d	South- west States ^e	North Pacific Ports ^f	North- west States ^g	West	In- State	Un- known	Total
	·····				(000	bushels)			· · · · · · · · · · · · · · · · · · ·		· ·· · · · · · · · · · · · · · · · · ·		
1: Rail Truck CCC	2,055 2,671 4 4,730	6,266 2,217 351 8,834	8 9 <u></u> 17	1 1	4 51 55	3 231 234	8 	595 1 <u></u> 596	1,493 44 —————————————————————————————————	945 945	18 2 		10,442 5,237 1,300
2:	1,100	0,004	4.7	_	,,	234	O	230	Τ, J37	945	20	2	16,979
Rail Truck CCC	816 2,898 3,714	1,208 373 199 1,780	5 33 38	100 to 100 100 to 100 100 to 100 100 to 100 100 to 100	4 9 13	14 14	34 34	463 463	843 843	16 16	6 6		$3,379 \\ 3,329 \\ \underline{215} \\ 6,923$
Rail Truck CCC	2,590 8,104 31 10,725	4,276 1,716 237 6,229	15 38 53	 1 1	4 26 <u></u> 30	34 13 47	2 2	207 4 <u></u> 211	398 4 <u></u> 402	101 101	102 4 106	10 10	7,628 9,920 369 17,917
4: Rail Truck CCC	1,470 1,709 9 3,188	1,720 960 135 2,815	15 239 254	 2 2	 4 4	24 2 26		283 17 —— 300	326 1 327	387 387	58 58	28 28	3,896 2,962 531 7,389
Rail Truck CCC	4,785 1,955 576 7,316	3,054 1,262 262 4,578	67 85 <u></u> 152	alle alle die alle die alle die alle die alle	9 31 40	5 18 23	31 31	216 216		 2,004 2,004	31 31	7 16 23	8,898 3,358 2,858 15,114

⁻ continued -

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APPENDIX TABLE 1. SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1970, THROUGH July, 1971 - continued

				D	ESTI	NATI	ONS						
Origin and Mode	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	North Pacifi Ports	North- c west States ^g	West	In- State	Un- know	m Total
					(000	bushels)							
6:					•	·							
Rail Truck CCC	3,404 3,365 <u>48</u> 6,817	2,883 3,087 <u>82</u> 6,052	116 116 232	29 29	6 9 <u></u> 15	20 49 <u></u> 69		6 6	88 88	 117 117	159 7 <u></u> 166	4 4	6,682 6.666 247 13,595
7:	0,017	0,032	to a to			0,5						•	,
Rail Truck CCC	1,967 1,668 40	2,669 2,931 45	177 518 	287 8	188 11 	302 7 	6 1	338 7 	1,051 25 	 695	15 	 48 	7,000 5,224 780
8:	3,675	45 5,645	695	295	199	309	 7	345	1,076	695	15	48	13,004
o: Rail	8,604	1,734	21	16	3	45	8	158	475		92		11,156
Truck	1,112	1,823	18	53	20	10		1				6	3,043
CCC	${9,716}$	$\frac{94}{3,651}$	 39	<u></u> 69	 23	 55		 159	 475	$\frac{377}{377}$	${92}$		$\frac{471}{14,670}$
9:	J,710	3,034	3,	0,5		33	J			0	, _	J	,0,0
Rail Truck CCC	1,333 642 4 1,979	3,733 1,710 101 5,544	52 118 170	3 3	$ \begin{array}{r} 12 \\ 11 \\ \hline 23 \end{array} $	4 33 37		41 41	129 7 <u></u> 136	151 151	50 28 78	28 28	5,354 2,580 256 8,190
TOTAL:										··			
Rail Truck CCC	19,280 2,412 235 21,927	27,543 16,177 1,506 45,226	477 1,175 1,652	3,030 97 3,127	230 171 401	439 390 <u></u> 829	80 9 <u></u> 89	2,306 30 2,336	5,502 81 —— 5,583	 4,795 4,795	532 40 <u></u> 572	134 16 150	59.419 20,716 6,552 86,687

APPENDIX TABLE 2. SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1970, THROUGH JULY, 1971

					ESTI	NATI	ONS						
Origin and Mode	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 Portsf	North- west States ^g	West	In- State	Un- knowi	n Total
 				(000 bus	hels)				<u> </u>		···········	
1: Rail Truck CCC	2,417 3,722 <u>97</u> 6,236	6,084 401 <u>638</u> 7,123	54 73 <u></u> 127	 14 14	11 11		6 6	89 89	162 2 <u></u> 164	 	102 102	2 2	8,925 4,214 735 13,874
2: Rail Truck CCC	1,045 5,129 ————————————————————————————————————	2,713 241 307 3,261	2 10 12		 		13 13	34 34	236 21 257		42 	5 == 5	4,085 5,406 <u>307</u> 9,798
Rail Truck CCC	2,581 7,759 52 10,392	4,462 526 <u>227</u> 5,215	86 29 —— 115		 	2 2		4 4	191 191	44- 44-	160 160	 4 4	7,486 8,318 279 16,083
4: Rail Truck CCC	545 465 —— 1,010	1,573 228 58 1,859	2 2	 	000 007 000 000 000 000 000 000	 			 		4 4		2,124 693 58 2,875
Rail Truck CCC	2,368 619 10 2,997	3,277 244 169 3,690	54 43 <u></u> 97				21 21		63 63		7 - - 7	5 == 5	5,790 911 179 6,880

⁻ continued -

APPENDIX TABLE 2. SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1970, THROUGH JULY, 1971 - continued

				D	ESTI	NATI	ONS						
Origin and Mode	Duluth- Superior	Minneapolis St. Paul ^a	Other Minnesota ^b	Sioux City Omaha- Kansas City	Other East and	Midland States ^d		North Pacific Ports ^f	North- west States ⁸	West	In-	Un- known	ı Total
6:				······································	(000 1	oushels)							. _ .,
Rail Truck CCC	655 707 $\frac{2}{1,364}$	1,220 134 <u>116</u> 1,470	16 15 31		4 4			10 10	700 and		4 166 —— 170		1,909 1,022 118 3,049
7: Rail Truck CCC	381 276 <u>15</u> 672	433 37 <u>27</u> 497	2 3 —— 5			6 	*** *** *** *** ———	5 	6	 		1	833 317 42
8:		497	5			- - 6		<u>==</u> 5	 6			1	1,192
Rail Truck CCC	118 313 —— 431	382 38 <u>18</u> 438	 	 			1974 tum	8 8	2 - <u>-</u> 2			200	510 351 <u>18</u> 879
Rail Truck CCC	502 295 <u>13</u> 810	1,684 307 92 2,083	2 25 27					 	4 4		27 27	2 9 11	$ \begin{array}{r} 2,192 \\ 656 \\ \underline{114} \\ 2,962 \end{array} $
Truck CCC	10,612 19,286 189 30,087	21,828 2,156 1,652 25,636	158 197 355	14 14	15 15	8 8	40 40	150 150	654 23 <u></u> 677		319 27 —— 346	18 9	33,784 21,721 1,850 57,355

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.

 $^{
m d}{
m Includes}$ 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).

f Includes the ports of Portland, Seattle, Astoria, Vancouver, Long-view, Tacoma, and Kaloma.

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

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APPENDIX TABLE 3. MONTHLY SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1970 THROUGH JULY, 1971

Origin					Month	ıs (1970–7	⁷ 1)						
and Mode	August	September	October	November	December	January	February	March	April	May	June	July	Total
	· · · · · · · · · · · · · · · · · · ·	· • • · · · · · · · · · · · · · · · · ·		*************************************	(000)	bushels)							
1:													
Rail	1,491	2,947	1,563	1,287	438	440	355	526	402	140	505	349	10,443
Truck	377	370	438	433	434	409	351	351	466	323	621	663	5,236
CCC	206	101	$\frac{68}{2,069}$	14	6	4	68	408	337	13	44	73	1,342
	2,074	3,418	2,069	$\frac{14}{1,734}$	<u>6</u> 878	<u>4</u> 853	<u>68</u> 774		,205	476			$\frac{2,0,12}{17,021}$
2:								•	•		-,	_,,	-,,
Rail	392	588	212	638	189	119	238	430	266	139	119	46	3,376
Truck	342	371	316	373	233	233	136	147	178	169	427	402	3,327
CCC	46	28	18	5			-						214
4	<u>46</u> 780	<u>28</u> 987	<u>18</u> 546	$\frac{5}{1,016}$	$\frac{2}{424}$	352	374	 577	$\frac{32}{476}$	$\frac{4}{312}$	$\frac{79}{625}$	448	$\frac{214}{6,917}$
3:				·						J		770	0,717
Rail	860	2,202	1,014	907	419	293	202	449	426	289	379	189	7,629
Truck	968	1,163	932	1,033	692	527	452	553	587		1,228		9,919
CCC	724	27						11	142	40	10	52	1,021
	2,552	$\frac{27}{3,392}$	1,946	$\frac{2}{1,942}$	${1,111}$	$\frac{2}{822}$	$\frac{11}{665}$,155		1,617	1 412	18,569
4:	•	-		•	•			-,	.,	J-12	-, 0-,	1,412	10,505
Rail	524	840	595	519	189	204	195	277	212	124	138	80	3,897
Truck	195	238	261	216	211	211	265	300	208	212	336	321	2,974
CCC												4	531 531
	<u>169</u> 888	$\frac{57}{1,135}$	$\frac{6}{862}$	<u>13</u> 748	2 402	415	460	<u>4</u> 581	<u>178</u> 598	2 <u>1</u> 357	<u>77</u> 551	405	$\frac{331}{7,402}$
5:		-			- -	· _		201	370	331	<i></i>	400	7,402
Rail	912	1,162	706	3,154	357	387	245	677	232	230	517	320	8,899
Truck	390	309	259	252	245	177	191	227	205	307	498	298	
CCC	78	83						79 1					3,358
	1,380	1,554	<u>29</u> 994	3,406	602	<u>3</u> 567	32 468	$\frac{75}{983} \frac{1}{2}$		38 575	35 1,050	${618}$	$\frac{2,339}{14,596}$

⁻ continued -

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APPENDIX TABLE 3. MONTHLY SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1970, THROUGH JULY, 1971 - continued

Origin					Months	(1970-71)							
and Mode	August	September	October	November	December	January	February	March	April	May	June	July	Total
					(000 bu	shels)							
6:					•	,							
Rail	904	1,504	746	794	452	326	275	472	281	340	372	216	6,682
Truck	630	681	687	687	457	364	340	457	347	551	842	623	6,666
CCC	25	55									22		247
	$\frac{25}{1,559}$	$\frac{55}{2,240}$	$\overline{1,433}$	1,481	909	690	<u>43</u> 658	$\frac{11}{940}$	<u>55</u> 683	<u>8</u> 899	$\frac{22}{1,236}$	<u>28</u> 867	$\frac{247}{13,595}$
7:			-	•				, , ,	003		1,250	007	13,393
Rail	909	1,199	989	826	283	280	348	568	479	265	454	400	7,000
Truck	453	349	404	411	476	479	415	497	386	405	500	445	5,220
CCC	<u> 76</u>	$\frac{40}{1,588}$						84	345				779
	1,438	1,588	1,393	1,237	 759	 759	<u>29</u> 792	1,149	1,210	$\frac{44}{714}$	$\frac{81}{1,035}$	<u>80</u> 925	$\frac{7999}{12,999}$
8:							-	y	_,,		_,000	723	42,777
Rail	703	588	431	277	121	158	170	307	164	155	224	116	3,414
Truck	330	374	297	221	232	204	243	261	199	156	338	289	3,144
CCC	$\frac{135}{1,168}$	<u>30</u> 992	****								46		
	1,168	992	728	 498	353	362	413	<u>2</u> 570	<u>176</u> 539	40 351	608	$\frac{42}{447}$	$\frac{471}{7,029}$
9:												,	,,025
Rai1	1,131	480	309	327	358	365	271	669	286	395	438	326	5,355
Truck	320	175	191	219	245	195	127	190	183	203	260	273	2,581
CCC	$\frac{22}{1,473}$	<u>23</u> 678				5							
	1,473	678	500	546	603	<u>5</u> 565	$\frac{3}{401}$	<u>10</u> 869	<u>112</u> 581	48 646	$\frac{24}{722}$	$\frac{10}{609}$	$\frac{257}{8,193}$

⁻ continued -

APPENDIX TABLE 3. MONTHLY SHIPMENTS OF HARD RED SPRING WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1970, THROUGH JULY, 1971 - continued

Origin					Months (1970-71)							
and Mode	August	September	October	November	December	January	February	March	April	May	June	July	Total
					(000 bus	hels)			· · · · · · · · · · · · · · · · · · ·			·	·
RAIL:													
Vehicle	3	5	3	3	1	1	2	2	1	1	1.	1	24
Bushels	7,825	11,510	6,564	8,730	2,806	2,571	2,297	4,375	2,750	2,076	3,146	2,043	56,693
TRUCK:													
Vehicle	5	5	5	5	4	4	3	4	4	3	6	6	54
Bushels	4,004	4,031	3,785	3,844	3,226	2,800	2,521	2,982	2,759	_	-	4,485	42,426
CCC:													
Vehicle		Direction							1				1
Bushels	830	445	122	34	10	14	<u> 186</u>	609	3,339	<u>257</u>	417	290	6,553
TOTAL:													
BUSHELS	12,659	15,986	10,471	12,608	6,042	5,385	5,004	7,966	8,848	5,272	8,613	6,818	105,672

APPENDIX TABLE 4. MONTHLY SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1970, THROUGH JULY, 1971

Origin	Months (1970-71)												
and Mode	August	September	October	November	December	January	February	March	April	May	June	Ju1y	Total
***************************************		 			(000 ъ	ushels)	····		· · · · · · · · · · · · · · · · · · ·				<u> </u>
1:													
Rail	1,270	1,633	1,229	829	609	637	819	720	325	280	344	229	8,924
Truck	445	336	327	282	460	276	137	317	300	461	441	432	4,214
CCC	94	<u>273</u>	<u> </u>	$\frac{2}{1,113}$	<u>15</u>	14	79	115					711
	1,809	2,242	1,573	1,113	1,084	<u>14</u> 927	1,035	1,152	<u>38</u> 663	$\frac{11}{752}$	<u>12</u> 797	$\frac{41}{702}$	13,849
2:													
Rail	488	584	386	700	318	290	248	417	218	147	153	126	4,075
Truck	586	506	509	411	569	338	279	294	517	507	527	363	5,406
ccc	74	52	<u>15</u> 910	1,111	<u>11</u> 898	$\frac{6}{634}$	<u>6</u> 533	$\frac{16}{727}$	<u>8</u> 743		24	84	296
	$\overline{1,148}$	1,142	910	1,111	898	634	533	727	743	654	$\frac{24}{704}$	573	9,777
3:													•
Rail	860	1,354	737	1,071	457	397	355	609	451	466	327	324	7,408
Truck	1,061	718	825	723	845	510	343	534	543	881	795	539	8,317
CCC	83	$\frac{52}{2,124}$				9 916		9		6	2	119 982	280
4:	2,004	2,124	1,562	1,794	1,302	916	698	1,152	994	1,353	1,124	982	16,005
Rail	215	200	226	222	100								
Truck	215 96	388 71	236	332	130	150	166	219	97	58	78	55	2,124
CCC			39	23	46	40	30	53	25	113	90	67	693
000	$\frac{3}{314}$	 459	27 5	$\frac{2}{357}$	${176}$	${190}$	196	$\frac{2}{274}$	${122}$		$\frac{43}{211}$	$\frac{8}{130}$	$\frac{58}{2,875}$
5:	214	477	2/3	337	1/6	190	196	274	122	171	211	130	2,875
Rail	689	728	359	750	309	1,174	375	387	21/	206	265	0.0	
Truck	106	80	63	68	138	1,174 51	373 28	387 904	214 76	296	265	243	5,789
CCC					T20	 T			-	110	- 55	31	1,710
	 795	$\frac{41}{849}$	422	818	447	$\frac{1,225}{1,225}$	$\frac{20}{423}$	${1,291}$	 290	77 483	$\frac{6}{326}$	36	180
	3	Q-12	744	010	44/	1,223	443	1,291	290	403	326	310	7,679

⁻ continued -

APPENDIX TABLE 4. MONTHLY SHIPMENTS OF DURUM WHEAT FROM NORTH DAKOTA COUNTRY ELEVATORS, AUGUST, 1970, THROUGH JULY, 1971 - continued

Origin and Mode	Months (1970-71)												
	August	September	October	November	December	January	February	March	April	May	June	July	Total
					(000 bu	shels)				····			· · · · · · · · · · · · · · · · · · ·
6:													
Rail Truck CCC 7:	$ \begin{array}{r} 200 \\ 110 \\ \hline 11 \\ \hline 321 \end{array} $	226 70 <u>12</u> 308	$ \begin{array}{r} 178 \\ 61 \\ \hline 3 \\ \hline 242 \end{array} $	$ \begin{array}{r} 167 \\ 62 \\ \hline 2 \\ \hline 231 \end{array} $	116 76 <u>2</u> 194	79 75 <u></u> 154	130 18 148	232 48 280	90 74 <u></u> 164	236 137 <u>17</u> 390	167 98 <u>5</u> 270	90 28 66 184	1,911 857 118 2,886
Rail Truck CCC	149 24 173	152 33 2 187	105 24 —— 129	60 38 98	37 56 <u></u> 93	52 11 ——————————————————————————————————	61 3 64	29 36 15 80	25 13 2 40	34 36 12 82	54 30 —— 84	76 12 <u>11</u> 99	$ \begin{array}{r} 834 \\ 316 \\ \underline{42} \\ 1,192 \end{array} $
Rail Truck CCC	86 54 —— 140	54 40 —— 94	38 25 ———————————————————————————————————	58 16 <u></u> 74	44 46 —— 90	25 48 <u></u> 73	21 24 —— 45	46 11 4 61	35 16 10 61	22 43 —— 65	41 18 <u></u> 59	43 10 <u>4</u> 57	513 351 <u>18</u> 882
Rail Truck CCC	231 87 <u>6</u> 324	138 40 <u>2</u> 180	107 62 —— 169	201 59 <u></u> 260	198 49 <u></u> 247	224 41 —— 265	148 38 <u>12</u> 198	273 55 —— 328	103 71 174	244 43 <u>36</u> 323	183 59 32 274	160 53 25 238	2,210 657 113 2,980

⁻ continued -

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

Origin and Mode	Months (1970-71)												
	August	September	October	November	December		February	March	April	May	June	July	Total
					(000	bushels)			·	******	<u> </u>		
RAIL:													
Vehicles	2	2	1	2	1	1	1	1		•		_	
Bushels	4,188	5,258	3,375	4,167	2,217	1 3,028	2,322	2,932	1,558	1,784	1,612	1,347	15 33,788
TRUCK:													
Vehicles	3	2	2	2	3	2	1			_			4
Bushe1s	2,569	1,894	1,935	1,683	2,285	1,391	901	1,452	2 1,635	3 2,332	3 2,114	2 1,532	27 21,723
CCC:												,	•
Vehicles													
Bushels	<u>271</u>	434	35	6	29	29	117	161	68	 160	123	375	1,808
COTAL:												~ 	
BUSHELS	7,028	7,586	5,345	5,856	4,531	4,448	3,340	4,545	3,261	4,276	3,849	3,254	57,319