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Sorghum Movements in the United States



Interregional Flow Patterns
and Transportation Requirements in 1977

Mack N. Leath, Lowell D. Hill, and Stephen W. Fuller

North Central Regional Research Bulletin 272
Southern Cooperative Series Bulletin 250
Illinois Bulletin 765

Agricultural Experiment Station
College of Agriculture
University of Illinois at Urbana-Champaign



ABSTRACT

The marketing of sorghum in the U.S. involves complex interregional grain movements. Moving the crop from its highly concentrated production region to points where it is used or exported requires a large transportation capacity. To provide a basis for policy and investment decisions, detailed information on sorghum movements during 1977 was collected from 3,500 grain merchandising, processing, and exporting firms in 41 states. Survey data on receipts and shipments for each state or substate area were expanded to represent total volumes for those areas and were verified by comparison with information from secondary sources. The data, which represent the most comprehensive and accurate information available on sorghum movements, are presented and summarized in this bulletin.

Keywords: Grain flows, grain shipping, grain transportation, interregional analysis, sorghum, sorghum marketing.

Sorghum Movements in the United States



Interregional Flow Patterns and Transportation Requirements in 1977

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North Central Regional Research Bulletin 272
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Preface

The research reported in this bulletin is the first effort ever made to survey grain shippers and receivers nationwide; it is the most comprehensive study of grain movements ever conducted. Members of the technical committees, including representatives of Agricultural Experiment Stations in 25 states, assisted in conducting an industry survey to collect flow data for wheat, corn, soybeans, sorghum, oats, barley, and rye. In addition, surveys were conducted in 16 other states through contracts with 15 universities located in those states. The industry surveys were coordinated by Lowell D. Hill, Department of Agricultural Economics, University of Illinois at Urbana-Champaign. The data were tabulated and summarized under the supervision of Mack N. Leath, Economics and Statistics Service, U.S. Department of Agriculture. The success of this research project is due to the cooperation of thousands of grain marketing firms and the efforts of researchers in the many participating states.

The research was funded in part through contract DACW 72-78-C-0005 with the Institute of Water Resources, U.S. Army Corps of Engineers. Supplemental support was provided by the Federal Railroad Administration of the U.S. Department of Transportation, the Maritime Administration of the U.S. Department of Commerce, and the St. Lawrence Seaway Development Corporation. Administration of grant funds was coordinated by Lowell D. Hill, University of Illinois at Urbana-Champaign.

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Sorghum Movements in the United States

Interregional Flow Patterns and Transportation Requirements in 1977

INTRODUCTION

Information about the origin and destination of grain produced in the United States and about the modes of transportation used to convey it is important for many policy and investment decisions. Although data on the quantities of grains shipped abroad from each port are available and statistics on the amount of grain shipped on the inland waterways are published annually, little information is available that can be used to match origins with destinations and to identify the mode of transportation used.

Through personal interviews with over 3,500 grain merchandisers, processors, and exporters throughout the United States, data on origins, destinations, and transport modes have now been assembled for corn, wheat, soybeans, sorghum, oats, barley, and rye. This publication summarizes the data for sorghum. Other publications in this series provide similar information for the other grains.

Sorghum is the second most important feed grain produced in the United States. Annual production has gen-

erally exceeded 700 million bushels in recent years (Table 1). During the 1970s the amount of sorghum used for human consumption declined from 3 million bushels to 1 million bushels, and the quantity used in alcoholic beverage production averaged about three million bushels annually. The amount used for seed is almost totally a function of the acreage planted; it has accounted for about 2 million bushels annually. The major domestic use of sorghum is for livestock feed. The usage for feed varies greatly from year to year in response to changes in the relative price and supply of sorghum as compared to other feed grains. The annual usage for feed generally exceeded 500 million bushels during the 1970s. The most dramatic growth in the demand for sorghum has been in the export markets. Export shipments of sorghum increased from 123 million bushels in 1971-72 to an estimated 350 million bushels in 1979-80.

Sorghum requires a large volume of transportation because it is grown in a highly concentrated production area and because the very large export demand is focused on only a few ports on the Gulf of Mexico. The production of sorghum is concentrated in the Southern

Table 1. Sorghum Supply and Distribution in the United States for Marketing Years from 1970-71 to 1979-80

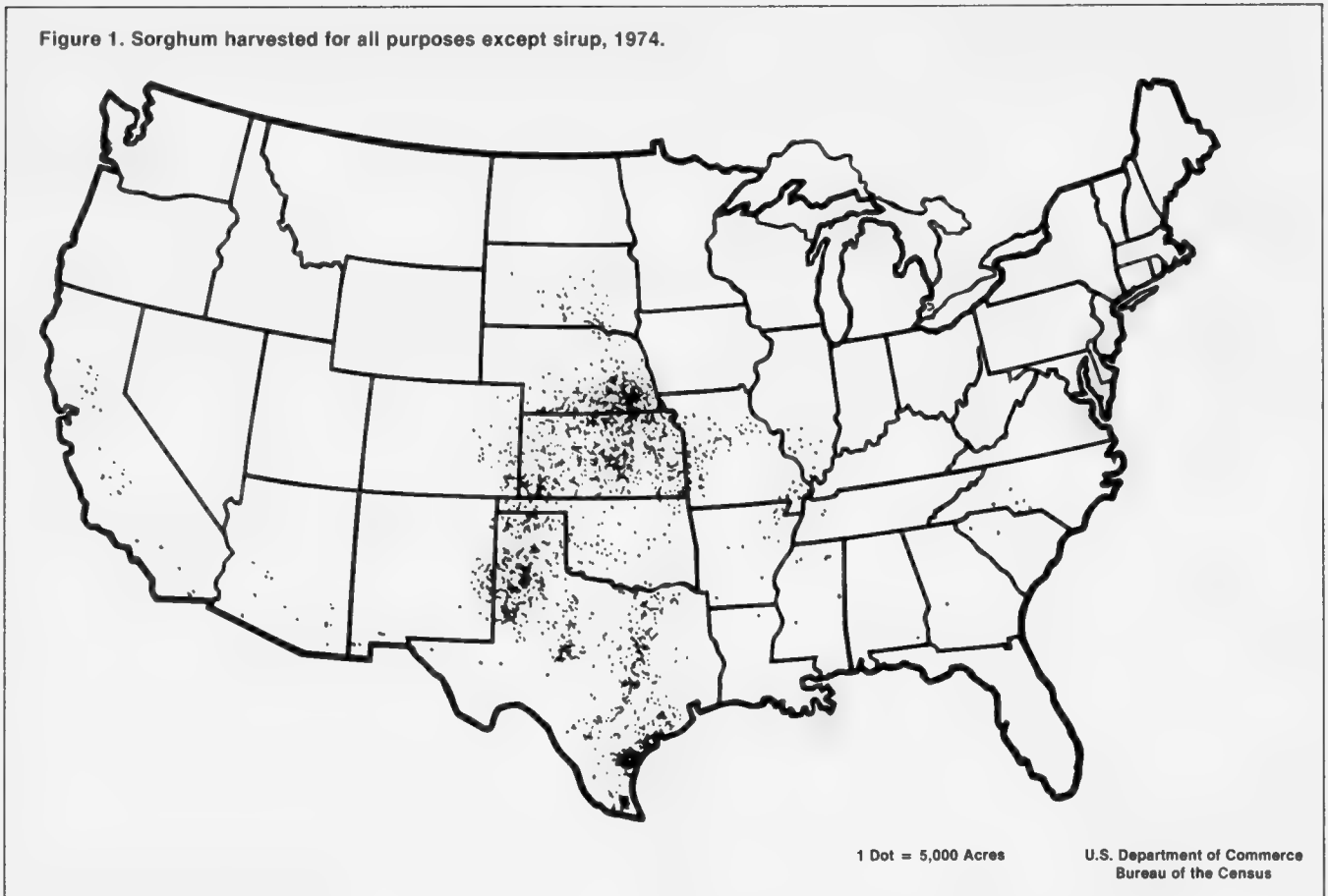
Marketing year ^a	Supply			Disappearance					
	Beginning stocks	Production	Total	Food	Alc. beverages	Seed	Feed and residual	Exports	Total
<i>millions of bushels</i>									
1970-71	244	683	927	3	4	3	683	144	837
1971-72	90	868	958	2	5	2	685	123	816
1972-73	142	801	943	2	2	2	652	212	870
1973-74	73	923	996	2	3	2	694	234	935
1974-75	61	623	684	1	3	2	431	212	649
1975-76	35	753	788	1	3	2	502	229	737
1976-77	51	720	771	1	3	2	428	246	680
1977-78	91	793	884	1	4	2	473	213	693
1978-79	191	748	939	1	3	2	566	207	779
1979-80 ^b	160	814	974	1	4	2	496	325	828

^a Beginning October 1.

^b Estimated as of October, 1980.

Source: *Feed Situation*, Economics and Statistics Service, U.S. Department of Agriculture (various issues).

Figure 1. Sorghum harvested for all purposes except sirup, 1974.



Great Plains where rainfall is usually inadequate for corn and soybean production (Figure 1). The area of concentrated production extends from southern Nebraska to the Texas gulf coast. The leading states in sorghum production are Kansas, Missouri, Nebraska, and Texas (Table 2). In 1977 these four states produced 688 million bushels of sorghum, 87 percent of the total U.S. production. About 32 percent of all the sorghum produced in the nation was used for feed and seed on the farms where it was produced, and about 62 percent was sold from farms.

PURPOSE OF STUDY

Analysis of grain flow patterns can reveal the geographical nature of grain markets and the type of transportation services required by the grain industry. This information is useful to grain firms in identifying additional marketing opportunities and in making decisions about where to locate new handling, storage, and processing facilities. Of equal importance is the value of this information to those who set federal and state transportation policies. The formulation of rational grain transportation policies depends upon knowledge of existing grain flows and associated transportation modes. In many situations, firms or public agencies make deci-

sions affecting the production, storage, and transportation of grain without adequate information about grain distribution patterns and the demands that those decisions will place on the various transportation modes. The objectives of this study were:

1. To determine the volume of sorghum moving between various origins and destinations
2. To determine the extent to which the various transportation modes are employed in the movement of sorghum in the U.S.

METHODOLOGY

For the purposes of this study, the United States was divided into 132 numbered regions and 31 ports, as shown in Figure 2. Data from the 31 ports were aggregated into 13 port areas located in four major export regions. The specific ports included in each port area are listed with their identifying numbers in Table 3. Sorghum flow data were collected for the 1977 calendar year primarily through personal interviews with representatives of grain handling, storage, and processing firms in 41 states. The firms from which data were obtained included country elevators, inland terminal elevators, river terminal elevators, feed manufacturers, export elevators, commercial feedlots, and processing

firms. A representative from each state's Agricultural Experiment Station was responsible for drawing the sample and conducting the interviews.

The sampling of inland grain elevators in the particular state was carried out by listing the elevators in descending order of storage capacity. Starting with the largest, elevators were added to the sample until the total of their storage capacities was equal to at least 25 percent of the inland elevator storage capacity in that state. Not less than 10 percent of the remaining elevators were then selected at random. For river elevators the procedure was simpler: a minimum of 50 percent of the elevators were selected by random sampling.

Feed manufacturing firms in each state were arrayed on the basis of their production capacity. Starting with the largest, feed firms on the list were added to the sample until the total of their production capacities equalled or exceeded 10 percent of the total feed manufacturing capacity in the state. Ten percent more of the remaining firms were then selected at random and included in the sample. All exporters and processors were included in the interviews.* Data based on random samples were expanded in proportion to the sampling rate to convert the data into estimates for the entire region or state.

The same types of information were gathered from all the grain handlers and processors interviewed. Each firm was asked to identify the volume of grain that it received from each region and the volume that moved by each mode of transportation. The firms were also asked to identify each region or port area for which their shipments were destined and the quantity shipped by each mode.

Experiment Station representatives verified the accuracy of the data collected, expanded the sample data to state totals, and delivered the summary data for each grain and for every substate region to the U.S. Department of Agriculture for processing. As receivers' and shippers' data were tabulated, the Experiment Station representative in each state checked any discrepancies to identify potential data errors and to arrive at a single number for each origin-destination pair. Insofar as possible, the state representatives checked data to ascertain that they were consistent and logical.

VERIFICATION OF DATA

The accuracy of the data on the volume of sorghum shipped between the various origins and destinations by each mode of transportation was verified by several direct and indirect comparisons with data from other sources. One indirect check was made by adding receipts to the surplus or deficit† to obtain the supply

* Only one major processor did not provide data for the study. Data on receipts by that firm were estimated from information furnished by shippers.

† The surplus or deficit for each state was calculated by adding the 1977 production to the stocks in all positions as of January 1, 1977, then subtracting the amount used for livestock, processors, and seed and deducting the stocks in all positions as of January 1, 1978.

Table 2. Production, Farm Use, and Sales of Sorghum by State for the 1977 Crop

State	Production	Used on farms where produced	Sales
<i>thousands of bushels</i>			
Alabama	729	576	153
Arizona	7,200	720	6,480
Arkansas	13,104	2,228	10,876
California	9,636	964	8,672
Colorado	8,153	2,201	5,952
Georgia	672	511	161
Illinois	4,096	2,212	1,884
Indiana	1,170	550	620
Iowa	2,368	1,279	1,089
Kansas	243,000	89,910	153,090
Kentucky	1,824	1,058	766
Louisiana	660	264	396
Mississippi	768	276	492
Missouri	67,890	31,908	35,982
Nebraska	146,970	36,742	110,228
New Mexico	11,760	2,117	9,643
North Carolina	2,664	1,385	1,279
Oklahoma	21,470	8,588	12,882
South Carolina	192	154	38
South Dakota	16,807	7,899	8,908
Tennessee	1,020	816	204
Texas	230,400	57,600	172,800
Virginia	430	387	43
U.S. Total	792,983	250,345	542,638

Source: *Field Crops: Production, Disposition, Value, 1977-1978*, Economics and Statistics Service, U.S. Department of Agriculture, CrPr 1 (79) (April 11, 1979), p. 6.

available for shipment from each state. Exact correspondence between the supply and reported shipments was not expected since the data on sorghum consumption by livestock and processors were based on estimates. Any major discrepancies, however, were investigated to verify that they did not indicate significant errors in the survey data.

A second check on total volume was made by comparing total receipts at each port with official data on inspections for export as published by the Market News Service of the U.S. Department of Agriculture (Table 4). Because there were few opportunities for either set of data to miss significant volumes, these numbers compared very closely. Discrepancies between receipts and exports at some of the port areas were explained by shipments to domestic destinations from export elevators, shipments to processing plants located in the port area, and changes in inventory.

Supplemental information about grain shipments on inland waterways was provided by the U.S. Army Corps

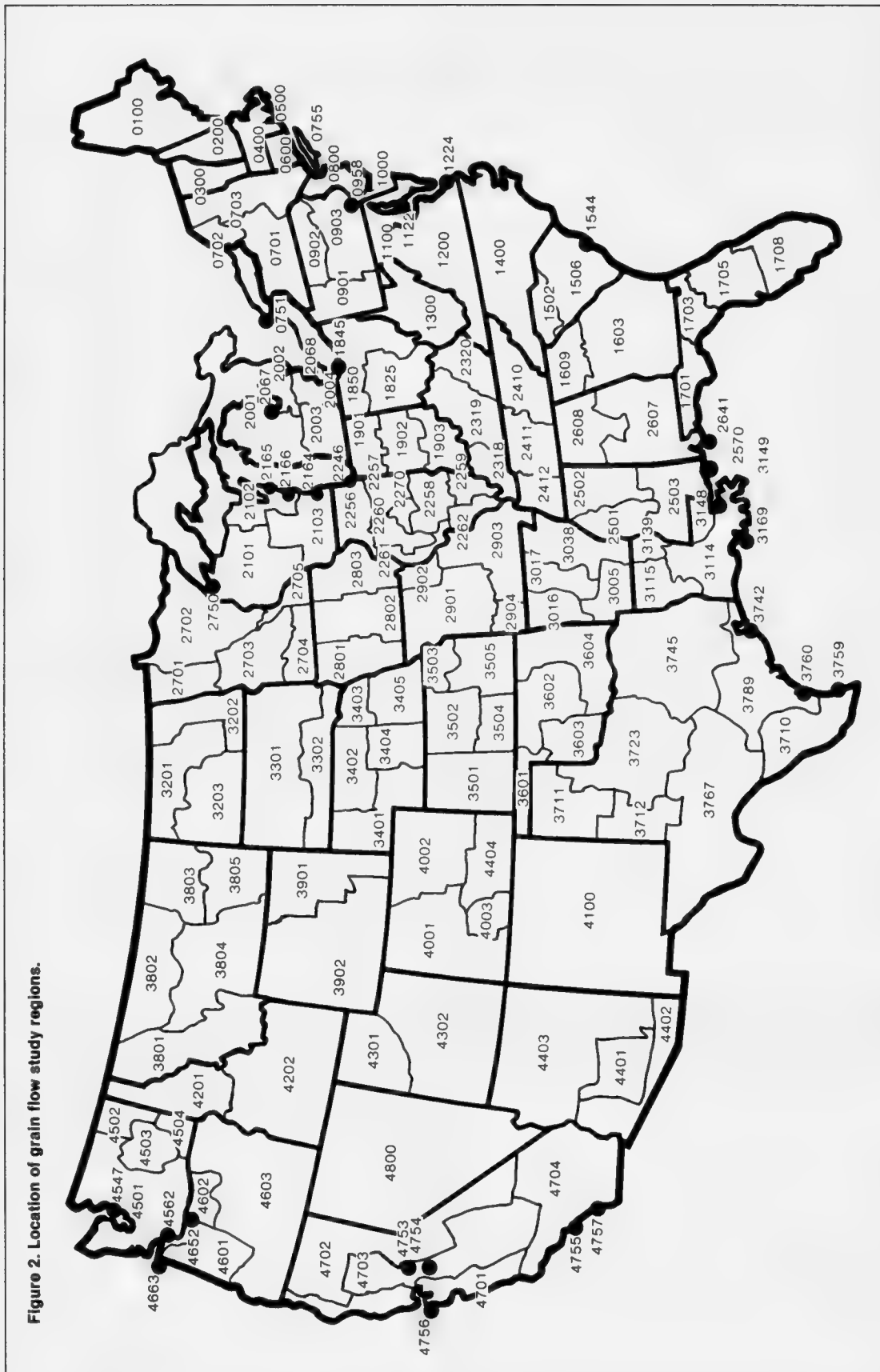


Table 3. Export Regions, Port Areas, and the Ports Included in Each Area

Export region and port area ^a		Ports included in the general area	
Area number	Export area	Port number	Port city
Great Lakes Region			
7101	Duluth-Superior	2750	Duluth, MN Superior, WI
7102	Chicago	2164 2165 2166 2246	Milwaukee, WI Manitowoc, WI Racine, WI Chicago, IL
7103	Toledo	1845 0751	Toledo, OH Huron, OH Erie, PA Buffalo, NY
7104	Saginaw	2067 2068	Carrollton, MI Saginaw, MI Zilwaukee, MI Detroit, MI
Atlantic Region			
7201	North Atlantic	0101 0755 0958	Portland, ME Albany, NY Philadelphia, PA
7202	South Atlantic	1122 1224 1544	Baltimore, MD Norfolk, VA North Charleston, SC
Gulf Region			
7301	East Gulf	2570 2641	Pascagoula, MS Mobile, AL
7302	Louisiana Gulf	3149 3169	Mississippi River Lake Charles, LA
7303	North Texas Gulf	3742	Beaumont, TX Port Arthur, TX Houston, TX Galveston, TX
7304	South Texas Gulf	3759 3760	Brownsville, TX Corpus Christi, TX
Pacific Region			
7401	Columbia River	4562 4652 4663	Kalama, WA Longview, WA Vancouver, WA Portland, OR Astoria, OR
7402	Puget Sound	4547	Seattle, WA Tacoma, WA
7403	California Ports	4753 4754 4755 4756 4757	Sacramento, CA Stockton, CA Long Beach, CA San Francisco, CA San Diego, CA

^a These port areas will be used in this report to avoid disclosure of data from individual firms.

of Engineers. Since these data were based on the actual bill of lading for each shipment they were, in principle, a complete census of all barge shipments. As Table 5 shows, the survey data and the Corps data on state-to-state shipments on inland waterways correspond closely. Differences between the two sets of data can be explained by (1) a significant number of shipments for which the origins and destinations are noted as "unknown" in the Corps data, (2) changes in the destination of a barge after it left the loading dock, (3) incomplete reporting of loadings to the Corps of Engineers, and (4) reporting errors by survey respondents. The sizeable shipments from Minnesota in the Corps data suggest that errors may be present in recording the type of grain being shipped since sorghum is not produced in that state.

The last method of validation provides important insight into data available from the U.S. Department of Transportation that are based on a 1 percent sample of all rail bills of lading. These data were expanded to develop estimates of annual shipments and receipts in each state and then compared with the rail shipments reported by survey respondents (Table 6). There are many similarities, but there are also a few major differences. In Nebraska, for example, intrastate shipments were seriously understated in the 1 percent waybill sample.

Table 4. Comparison of 1977 Sorghum Receipts, Shipments, and Inspections for Export at Various Port Areas

Port area ^a	Quantities determined by survey		Inspections for export ^b
	Receipts	Exports	
	<i>thousands of bushels</i>		
Great Lakes Region	0	0	0
Atlantic Region	0	0	0
Gulf Region			
East Gulf	0	0	0
Louisiana Gulf	11,126	7,854	5,526
North Texas Gulf	135,425	132,010	127,062
South Texas Gulf	93,300	91,100	91,173
Subtotal	239,851	230,964	223,761
Pacific Region			
Columbia River	15	15	0
Puget Sound	2,196	1,641	1,378
California	2,093	1,919	1,869
Subtotal	4,304	3,575	3,247
Total	244,155	234,539	227,008

^a See Table 3 for a list of ports.

^b Inspections for export under the U.S. Grain Standards Act and reported in *Grain Market News*, Agricultural Marketing Service, U.S. Department of Agriculture, Vol. 26, No. 2 (January 13, 1978), p. 18.

The comparisons between various data sources increase the confidence in the accuracy of estimates derived from sampling a less than perfectly identified population. The logic of each flow reported in these tables has been checked by the university person that organized the survey in each state. Where internal inconsistencies were found, the data and the sampling rates were adjusted with assistance from grain specialists and industry personnel in the state. The flow esti-

Table 5. Comparison of 1977 Waterway Movements of Sorghum in the U.S. as Reported by Survey Respondents and the U.S. Army Corps of Engineers

Originating state	Destination state	Survey results	Corps of Engineers data
		<i>thousands of bushels</i>	
Arkansas	Louisiana	2,010	723
	Texas	0	200
	Subtotal	2,010	923
Florida	Louisiana	246	66
	Texas	0	224
	Subtotal	246	290
Illinois	Louisiana	100	616
	Texas	989	153
	Other	0	88
	Subtotal	1,089	857
Iowa	Texas	0	38
Kansas	Louisiana	552	214
Kentucky	Louisiana	0	46
	Texas	0	98
	Subtotal	0	144
Louisiana	Louisiana	160	174
	Texas	0	196
	Subtotal	160	370
Minnesota	Louisiana	0	1,381
	Missouri	0	351
	Subtotal	0	2,732
Mississippi	Louisiana	0	48
Missouri	Louisiana	2,966	2,566
	Texas	1,024	1,510
	Subtotal	3,990	4,076
Oklahoma	Louisiana	0	71
	Texas	0	54
	Subtotal	0	125
Tennessee	Louisiana	815	816
	Texas	0	210
	Subtotal	815	1,026
Texas	Texas	0	1,266
U.S. Total		8,862	12,061

mates presented in the following sections represent the best information available on the actual volume of sorghum transported between the regions of the United States.

Table 6. Comparison of 1977 Rail Movements of Sorghum as Reported by Survey Respondents and as Estimated from the 1 Percent Waybill Sample in Selected States

Originating state	Destination state	Survey results	Waybill data
<i>thousands of bushels</i>			
Colorado	California	3,979	4,120
	Texas	1,604	1,078
	Other	178	692
	Subtotal	5,761	5,890
Kansas	Arkansas	5,007	1,349
	Arizona	4,955	2,442
	California	8,420	8,968
	Colorado	768	2,856
	Kansas	31,316	30,424
	Louisiana	802	0
	Missouri	7,229	3,952
	Oklahoma	2,785	2,967
	Texas	49,622	51,772
	Other	324	468
Subtotal	111,228	105,197	
Missouri	Arkansas	1,635	1,164
	California	2,075	0
	Kansas	1,966	1,496
	Louisiana	17	668
	Missouri	8,313	3,184
	Texas	14,607	14,430
	Washington	172	428
	Other	99	0
Subtotal	28,893	21,370	
Nebraska	Arizona	1,295	1,699
	California	4,373	4,455
	Colorado	1,890	1,710
	Kansas	11,147	12,374
	Missouri	574	4,109
	Nebraska	52,194	6,087
	Texas	58,374	60,412
	Other	1,341	7,511
Subtotal	131,287	98,357	
Oklahoma	Oklahoma	215	1,653
	Texas	3,538	2,463
	Other	725	361
Subtotal	4,478	4,477	
Texas	Arizona	2,850	4,152
	California	11,082	9,639
	Texas	61,706	50,737
	Other	3,358	0
Subtotal	78,996	64,528	

OVERVIEW OF MOVEMENTS

This section summarizes selected data and presents a general overview of sorghum movement patterns. Detailed data on receipts and shipments for each region are presented in the last section of this bulletin.

Shipments and Receipts by State

In 1977, grain marketing firms in the United States reported shipping about 671 million bushels of sorghum. About 60 percent of the amount shipped moved to destinations within the state in which it originated. Much of the total amount, of course, is accounted for by the same grain being shipped in sequence by several firms. Intrastate shipments for each state and mode of transportation are summarized in Table 7. Trucks were the predominant mode of transportation, accounting for about 58 percent of the total intrastate shipments. Rail shipments accounted for 38 percent of the total amount shipped, and 4 percent moved to local farmers. A sizeable portion of the intrastate movements consisted of shipments from country elevators to terminal elevators for storage and reshipment. Movements within the state of Texas accounted for more than one-half of the total volume of intrastate movements in the United States. Sizeable movements also occurred within the states of Kansas and Nebraska.

In contrast to intrastate movements, the predominant mode of transportation used for interstate shipments was the railroad, which carried 217 million bushels or 83 percent of the total volume (Table 8). Almost three-fourths of the volume moving by railroads originated in Kansas and Nebraska. Kansas, Texas, and California were the principal destinations for shipments originating in Nebraska. Texas and California were the principal destinations for Kansas's rail shipments, and Arkansas, Missouri, and Arizona were also important destinations. Over 5 million bushels moved by rail from Kansas to each of these states.

Interstate truck movements originating in Kansas accounted for almost one-half of the volume shipped across state lines by truck. Most of these shipments moved short distances to the neighboring states of Missouri, Oklahoma, and Texas, where some of the grain was used by feed processors and the balance was stored and later reshipped to port areas.

Barges carried only 3.3 percent of the sorghum shipped across state lines, and Arkansas, Illinois, and Missouri originated 81.5 percent of the total volume shipped in the U.S. by barge. All sorghum shipped by barge, regardless of the state in which it originated, was destined for Gulf Ports.

The volume of sorghum received in each state from other states is shown in Table 9. Texas port areas were the predominant destinations. Arizona and California were the most important domestic markets in the West while Arkansas and Louisiana were important domestic markets in the South. The domestic flow pattern for sorghum is illustrated in Figure 3.

Table 7. 1977 Intrastate Shipments of Sorghum for Each State and Mode of Transportation

Originating state	Mode of transportation				Total
	Rail	Truck	Barge	Farm truck ^a	
<i>thousands of bushels</i>					
Alabama	10	47	0	0	57
Arizona	583	8,065	0	4,109	12,757
Arkansas	0	10,521	0	78	10,599
California	1,543	2,316	0	0	3,859
Florida	0	76	0	0	76
Georgia	0	52	0	2	54
Illinois	0	226	0	150	376
Iowa	0	183	0	0	183
Kansas	31,316	17,097	0	0	48,413
Louisiana	0	623	160	0	783
Mississippi	0	82	0	0	82
Missouri	8,313	5,943	0	0	14,256
Nebraska	52,194	31,269	0	7,553	91,016
New Mexico	0	0	0	5,447	5,447
North Carolina	32	32	0	0	64
Oklahoma	215	215	0	0	430
Texas	61,706	158,400	0	0	220,106
Total volume	155,912	235,147	160	17,339	408,558
Percentage of total volume	38.2	57.6	0	4.2	100.0

^a This column reports sales by elevators to farmers within the state. Not all states included farm sales in their survey responses, so these data are incomplete and underestimate total shipments to farmers.

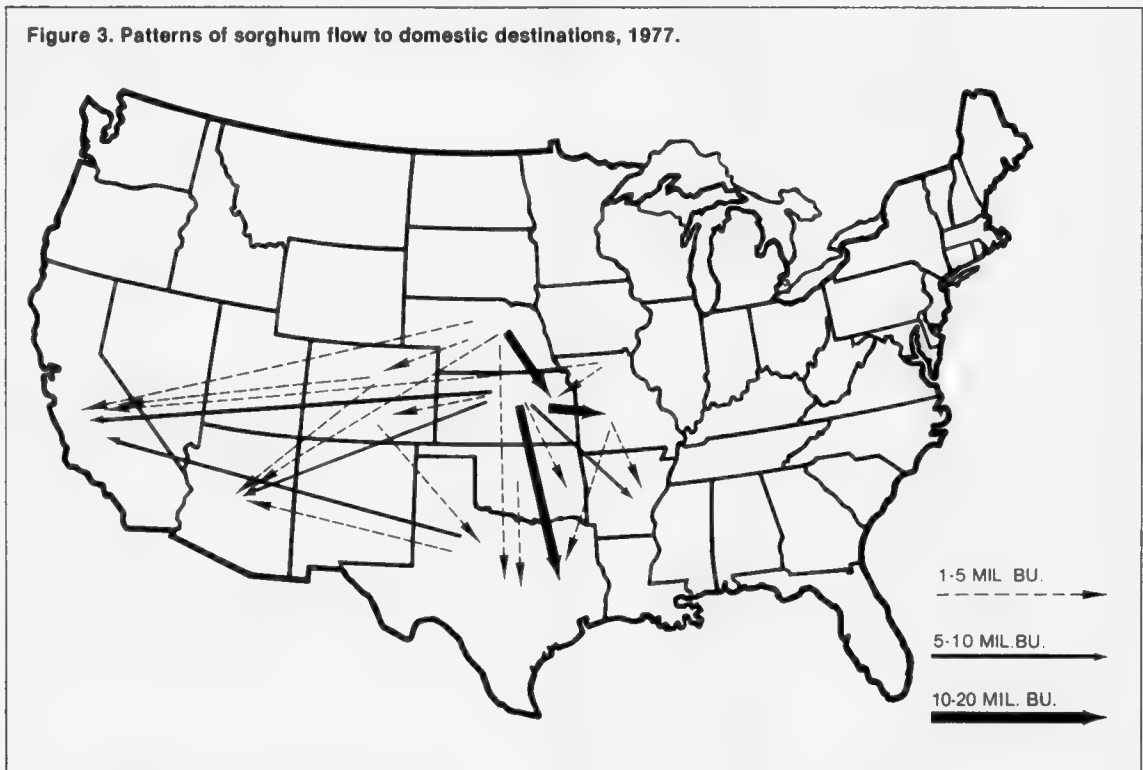


Table 8. 1977 Interstate Shipments of Sorghum for Each State and Mode of Transportation

Originating state	Mode of transportation				Total
	Rail	Truck	Barge	Farm truck ^a	
	<i>thousands of bushels</i>				
Arizona	94	71	0	0	165
Arkansas	5,838	2,429	2,010	0	10,277
Colorado	5,761	927	0	0	6,688
Florida	0	0	246	0	246
Illinois	1,938	284	1,089	0	3,311
Iowa	2,054	258	0	0	2,312
Kansas	79,912	16,448	552	171	97,083
Kentucky	0	32	0	0	32
Louisiana	12	51	0	0	63
Missouri	20,580	3,080	3,990	0	27,650
Nebraska	78,994	3,974	0	1,796	84,764
New Mexico	484	3,724	0	0	4,208
Oklahoma	4,263	1,535	0	0	5,798
South Dakota	98	28	0	0	126
Tennessee	0	32	815	0	847
Texas	17,290 ^b	1,700	0	0	18,990
Total volume	217,318	34,573	8,702	1,967	262,560
Percentage of total volume	82.8	13.2	3.3	0.7	100.0

^a This column reports sales by elevators to farmers in other states. Not all states included farm sales in their survey responses, so these data are incomplete and underestimate total shipments to farmers.

^b Includes 2,780,000 bushels shipped by rail to Mexico.

Movements to Ports

Table 10 shows the amount of sorghum that moved to port locations from each of the originating states by the various modes of transportation. Almost one-half of the volume of sorghum that moved to ports originated in Texas, and the Gulf region accounted for 98.5 percent of the total amount received by all ports. Over 64 percent of the sorghum shipped to ports went by rail. Nebraska, Kansas, and Texas were the states that shipped the largest volume of sorghum by rail for export, accounting for over 85 percent of the total amount of sorghum shipped to the port regions. Missouri shipped a significant amount by rail and ranked fourth among all states that originated sorghum rail shipments to port regions. Thirty-two percent of the sorghum shipped to port regions went by truck. Texas was the state that shipped the largest amount by truck, accounting for almost 94 percent of the 79 million bushels that moved by truck to ports. Less than 9 million bushels were shipped by barge to port regions, and over one-half of this volume originated in Missouri. These movements are illustrated in Figure 4.

Each state's share of the total volume of sorghum shipped to port regions is shown in Figure 5. Texas was

the state that shipped the greatest amount of sorghum for export, accounting for 48.6 percent of the total amount shipped. Nebraska and Kansas shipped significant volumes, ranking second and third, respectively, among all states that originated sorghum shipments to port locations. Combined, these two states accounted for almost two-fifths of the total volume moving to port locations.

The estimated amount of sorghum received at all port areas in 1977 totaled 243 million bushels, of which 227 million bushels were inspected for export (Table 11). The remainder was either processed or represented increases in sorghum stocks at port elevators during 1977. Over 98 percent of sorghum exports were handled by Gulf port elevators, and the North Texas Gulf was the predominant port area, accounting for 56 percent of the total volume exported. The South Texas Gulf area ranked second on the basis of volume, and over 91 million bushels were handled through those facilities in 1977.

Foreign Destinations for U.S. Exports

Sorghum shipped from the various origins to a specific port area is blended and stored on a commingled basis. Thus it is not possible to trace the movement of

sorghum from a particular state through the port system to its final destination, and therefore no attempt was made to determine whether a particular ocean vessel was loaded with, for example, Kansas sorghum or Texas sorghum. It is nonetheless of interest to examine one more link in the market chain that connects U.S. farmers with foreign feeders and processors.

The destination countries for sorghum exported from the major port regions of the United States are shown in Table 12. In 1977 Japan was the leading buyer of U.S.

sorghum, accounting for 89 million bushels or 39 percent of the total volume exported. Israel, Mexico, Portugal, and Spain were the next most important destinations and in combination purchased about the same quantity as Japan. Venezuela and Columbia were major destinations in South America, and sizeable quantities were shipped to European countries.

Data on receipts and shipments for individual state and substate areas delineated in the survey are presented in the following section.

Table 9. 1977 Interstate Receipts of Sorghum for Each State and Mode of Transportation

Destination state	Mode of transportation				Total
	Rail	Truck	Barge	Farm truck ^a	
<i>thousands of bushels</i>					
Alabama	233	80	0	0	313
Arizona	9,624	2,934	0	0	12,558
Arkansas	6,894	1,551	0	0	8,445
California	30,431	243	0	0	30,674
Colorado	2,658	876	0	0	3,534
Connecticut	167	0	0	0	167
Illinois	83	214	0	0	297
Iowa	133	96	0	0	229
Kansas	13,362	4,002	0	0	17,364
Kentucky	86	0	0	0	86
Louisiana	6,036	52	6,689	0	12,777
Minnesota	203	28	0	0	231
Mississippi	303	368	0	0	671
Missouri	7,929	4,595	0	946	13,470
Nebraska	14	23	0	288	325
Nevada	3	0	0	0	3
New Mexico	0	12	0	0	12
Ohio	125	0	0	0	125
Oklahoma	2,922	1,898	0	0	4,820
Oregon	15	0	0	0	15
Tennessee	675	160	0	48	883
Texas	132,022	15,576	2,013	0	149,611
Utah	289	0	0	0	289
Washington	331	1,865	0	0	2,196
Total volume	214,538	34,573	8,702	1,282	259,095
Percentage of total volume	82.8	13.3	3.4	0.5	100.0

^a This column shows elevator receipts in each state from farmers located in all other states as reported by elevators in the receiving states.

Figure 4. Patterns of sorghum flow to port areas, 1977.

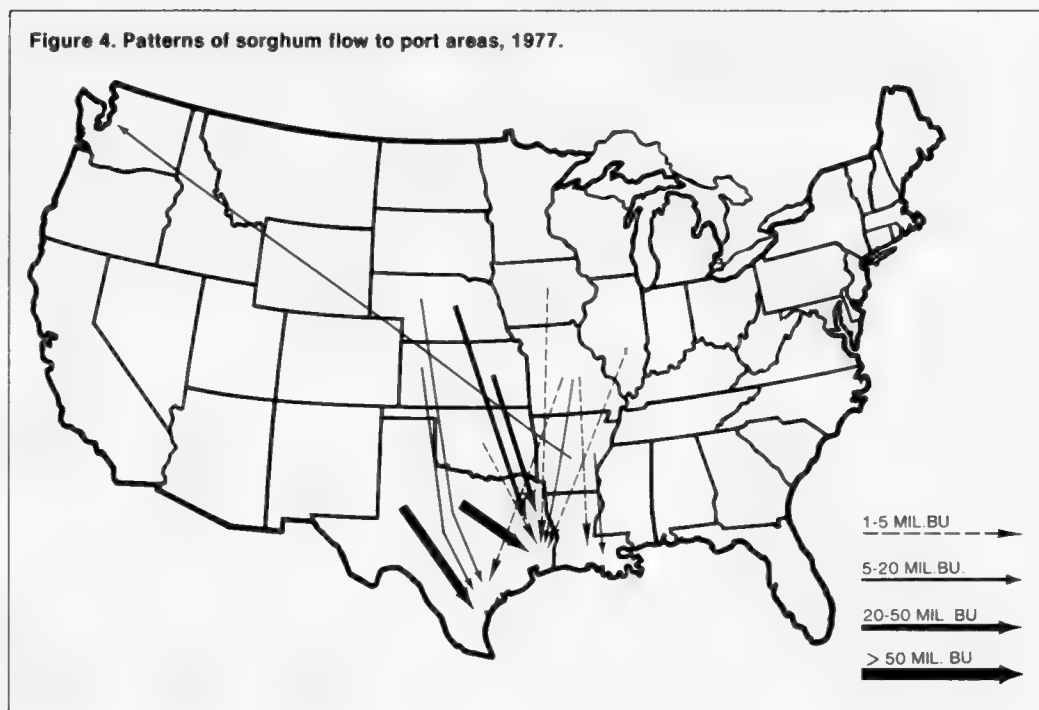


Table 10. 1977 Movements of Sorghum to Points of Export for Each Originating State by Three Modes of Transportation

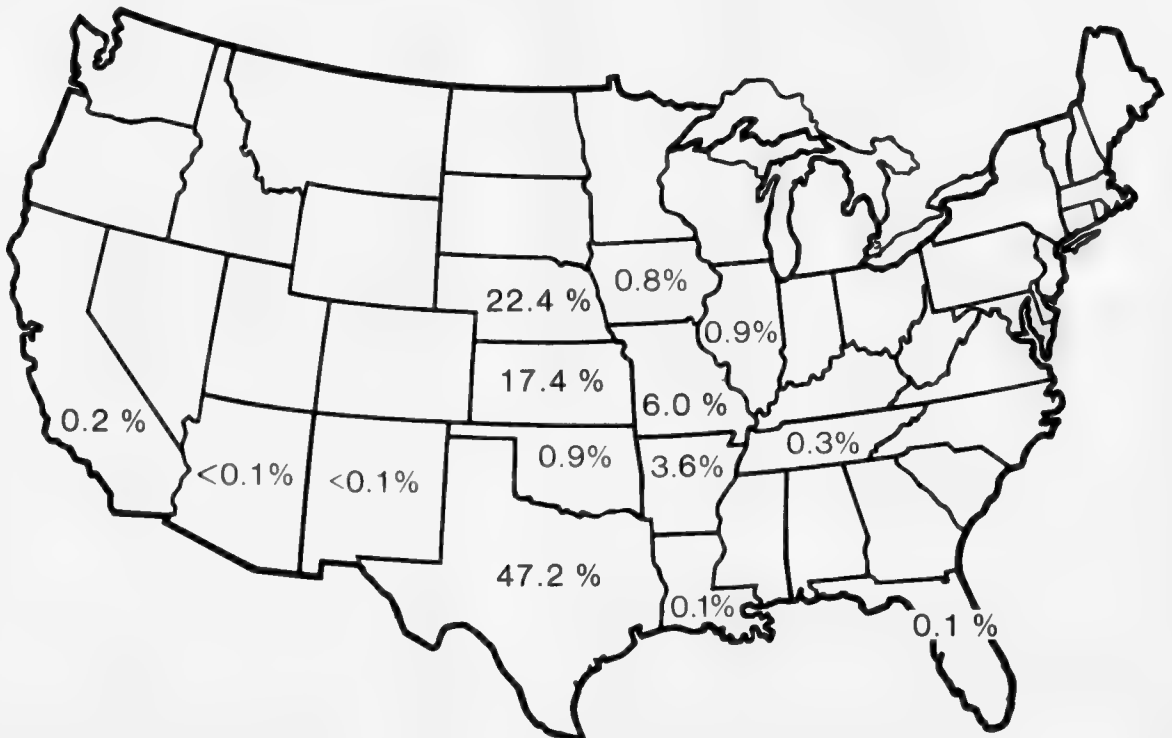
Originating state	Export region	Mode of transportation			Total
		Rail	Truck	Barge	
<i>thousands of bushels</i>					
Arizona	Gulf	94	0	0	94
Arkansas	Gulf	4,865	0	2,010	6,875
	Pacific	0	1,865	0	1,865
Florida	Gulf	0	0	246	246
Illinois	Gulf	1,128	0	1,089	2,217
Iowa	Gulf	1,941	0	0	1,941
Kansas	Gulf	38,949	3,114	552	42,615
	Pacific	241	0	0	241
Louisiana	Gulf	12	22	160	194
Missouri	Gulf	10,514	13	3,990	14,517
	Pacific	172	0	0	172
Nebraska	Gulf	53,779	45	0	53,824
	Pacific	1,285	0	0	1,285
New Mexico	Gulf	122	0	0	122
Oklahoma	Gulf	2,186	0	0	2,186
Tennessee	Gulf	0	0	815	815
Texas	Gulf	39,045	74,160	0	113,205
	Pacific	187	0	0	187
	Mexico	2,780	0	0	2,780
All states	Gulf	152,635	77,354	8,862	238,851
	Pacific	1,885	1,865	0	3,750
	Mexico	2,780	0	0	2,780
Total volume		157,300	79,219	8,862	245,381
Percentage of total volume		64.1	32.3	3.6	100.0

Table 11. 1977 Receipts of Sorghum at Port Areas by Each Mode of Transportation

Export region and port area	Mode of transportation				Total receipts	Inspections for export
	Rail	Truck	Barge	Farm truck ^a		
<i>thousands of bushels</i>						
Great Lakes Region	0	0	0	0	0	0
Atlantic Region	0	0	0	0	0	0
Gulf Region						
Louisiana Gulf	4,255	22	6,849	0	11,126	5,526
North Texas Gulf	97,546	34,866	2,013	0	134,425	127,062
South Texas Gulf	50,834	42,466	0	0	93,300	91,173
Subtotal	152,635	77,354	8,862	0	238,851	223,761
Pacific Region						
Columbia River	15	0	0	0	15	0
Puget Sound	331	1,865	0	0	2,196	1,378
California	1,539	0	0	626	2,165	1,869
Subtotal	1,885	1,865	0	626	4,376	3,247
Total receipts	154,520	79,219	8,862	626	243,227	227,008
Percentage of total receipts	63.5	32.6	3.6	0.3	100.0	

^a This column reports receipts at elevators in each port area delivered directly from farmers.

Figure 5. Proportion of 1977 sorghum movements to export regions from each originating state.



RECEIPTS AND SHIPMENTS BY AREA

Estimates of the flow of sorghum by each mode of transportation and for every area are presented in Tables 13-115. These estimates represent the most comprehensive and best data available on the volume of sorghum transported between each of the regions of the United States.

A detailed study of the flows will likely lead some readers to the conclusion that there are inefficiencies in the shipment of grain among states. Shipping sorghum in both directions between two states is one example of an apparent inefficiency in the marketing pattern. However, most of the shipments reported in this study reflect sellers' attempts to take advantage of profitable marketing opportunities that occur at a particular moment. It is not possible to provide a rationale for all of the movements without complete knowledge of daily price and transportation relationships. Local supply and demand vary throughout the marketing year, and buyers constantly seek the most economical supply source. Changes in supplies, demands, and transportation costs result in frequent changes in the most profitable shipping pattern.

The availability of storage space at harvest time is also an important factor in determining sorghum shipments. If local storage facilities are filled with wheat when sorghum moves from the farms, country elevators may be forced to ship sorghum to various terminal locations such as Kansas City for storage. If these movements are by rail under transit rates, then this grain is committed to moving to domestic and export points beyond the terminal location. Later in the year, available supplies in the local region may be exhausted, and feed mills and livestock feeders in that area will begin purchasing sorghum from outside sources, reversing the earlier outbound flow. Many other factors, such as the availability of transportation, have a substantial impact on sorghum movements. An inadequate supply of rail cars during periods of peak movement may force sorghum to flow in a pattern that would not otherwise be the most economical. A detailed analysis of the influence of these factors is beyond the scope of this publication. Readers interested in more detailed information about the type of firms involved in sorghum movements and the seasonality of these movements should contact Agri-

cultural Experiment Station representatives in the participating states.

Table 12. 1977 Exports of U.S. Sorghum by Export Region and Destination

Destination	Export region ^a		Total
	Gulf	Pacific	
<i>thousands of bushels</i>			
Belgium	8,267	0	8,267
Colombia	3,792	0	3,792
Cyprus	550	0	550
Ecuador	83	0	83
Egypt	993	0	993
El Salvador	1,173	0	1,173
Gambia	130	0	130
Guatemala	165	0	165
Honduras	442	0	442
Iran	1,042	0	1,042
Israel	26,612	0	26,612
Italy	730	0	730
Ivory Coast	197	0	197
Jamaica	286	0	286
Japan	85,356	3,247	88,603
Lebanon	173	0	173
Mexico	24,615	0	24,615
Netherlands	5,288	0	5,288
Nicaragua	231	0	231
Norway	4,708	0	4,708
Peru	2,041	0	2,041
Poland	5,786	0	5,786
Portugal	18,890	0	18,890
Romania	2,545	0	2,545
Senegal	1,985	0	1,985
Spain	18,080	0	18,080
United Kingdom ..	1,590	0	1,590
Venezuela	8,071	0	8,071
Total	223,761	3,247	227,008

Source: *Grain Market News*, Agricultural Marketing Service, U.S. Department of Agriculture, Vol. 26, No. 5 (February 3, 1978), pp. 11-15.

^a Sorghum was not shipped from the Great Lakes and Atlantic regions during 1977.

TABLE 13. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 2600, ALABAMA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2200 ILLINOIS	203	0	0	0	203
2300 KENTUCKY	0	32	0	0	32
2400 TENNESSEE	0	32	0	0	32
2600 ALABAMA	10	47	0	35	92
3505 KANSAS	30	16	0	0	46
TOTAL VOLUME	243	127	0	35	405

TABLE 14. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 2600, ALABAMA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2600 ALABAMA	10	47	0	0	57
TOTAL VOLUME	10	47	0	0	57

TABLE 15. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4401, ARIZONA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2900 MISSOURI	82	0	0	0	82
3404 NEBRASKA	438	0	0	0	438
3405 NEBRASKA	487	308	0	0	795
3501 KANSAS	173	0	0	0	173
3504 KANSAS	3449	173	0	0	3622
3505 KANSAS	132	67	0	0	199
3711 TEXAS	2050	4	0	0	2054
3712 TEXAS	0	1256	0	0	1256
3745 TEXAS	68	0	0	0	68
4000 COLORADO	152	881	0	0	1033
4100 NEW MEXICO	0	180	0	0	180
4401 ARIZONA	583	5360	0	2033	7976
4402 ARIZONA	0	1720	0	591	2311
TOTAL VOLUME	7614	9949	0	2624	20187

TABLE 16. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 4401, ARIZONA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
4401 ARIZONA	583	5360	0	4109	10052
4402 ARIZONA	0	450	0	0	450
4704 CALIFORNIA	0	71	0	0	71
7304 SO. TEXAS GULF	94	0	0	0	94
TOTAL VOLUME	677	5881	0	4109	10667

TABLE 17. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4402, ARIZONA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3405 NEBRASKA	370	0	0	0	370
3505 KANSAS	1003	0	0	0	1003
3711 TEXAS	450	0	0	0	450
3712 TEXAS	0	52	0	0	52
4401 ARIZONA	0	450	0	0	450
4402 ARIZONA	0	425	0	1291	1716
TOTAL VOLUME	1823	927	0	1291	4041

TABLE 18. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 4402, ARIZONA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
4401 ARIZONA	0	1720	0	0	1720
4402 ARIZONA	0	425	0	0	425
4403 ARIZONA	0	110	0	0	110
TOTAL VOLUME	0	2255	0	0	2255

TABLE 19. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4403, ARIZONA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3505 KANSAS	198	0	0	0	198
3711 TEXAS	256	0	0	0	256
3712 TEXAS	14	3	0	0	17
3745 TEXAS	12	0	0	0	12
4100 NEW MEXICO	290	10	0	0	300
4402 ARIZONA	0	110	0	261	371
4403 ARIZONA	0	0	0	350	350
TOTAL VOLUME	770	123	0	611	1504

TABLE 20. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3005, ARKANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2200 ILLINOIS	146	0	0	0	146
2900 MISSOURI	812	27	0	0	839
3005 ARKANSAS	0	0	0	12	12
3038 ARKANSAS	0	1297	0	378	1675
3405 NEBRASKA	0	27	0	0	27
3503 KANSAS	688	0	0	0	688
3505 KANSAS	137	0	0	0	137
TOTAL VOLUME	1783	1351	0	390	3524

TABLE 21. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3016, ARKANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2900 MISSOURI	123	950	0	0	1073
3016 ARKANSAS	0	0	0	165	165
3405 NEBRASKA	35	256	0	0	291
3503 KANSAS	3422	0	0	0	3422
3505 KANSAS	406	0	0	0	406
TOTAL VOLUME	3986	1206	0	165	5357

TABLE 22. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3017, ARKANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2800 IOWA	71	0	0	0	71
2900 MISSOURI	700	0	0	0	700
3038 ARKANSAS	0	672	0	0	672
3505 KANSAS	221	0	0	0	221
TOTAL VOLUME	992	672	0	0	1664

TABLE 23. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3038, ARKANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2900 MISSOURI	0	291	0	0	291
3038 ARKANSAS	0	8552	0	10876	19428
3505 KANSAS	133	0	0	0	133
TOTAL VOLUME	133	8843	0	10876	19852

TABLE 24. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3038, ARKANSAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2400 TENNESSEE	675	160	0	0	835
2500 MISSISSIPPI	0	97	0	0	97
2900 MISSOURI	0	127	0	0	127
3005 ARKANSAS	0	1297	0	0	1297
3017 ARKANSAS	0	672	0	18	690
3038 ARKANSAS	0	8552	0	60	8612
3100 LOUISIANA	0	2	0	0	2
3745 TEXAS	298	178	0	0	476
7302 LOUISIANA GULF	3965	0	2010	0	5975
7303 NO. TEXAS GULF	900	0	0	0	900
7402 PUGET SOUND	0	1865	0	0	1865
TOTAL VOLUME	5838	12950	2010	78	20876

TABLE 25. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4701, CALIFORNIA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3404 NEBRASKA	1626	0	0	0	1626
3502 KANSAS	475	0	0	0	475
3504 KANSAS	206	0	0	0	206
3602 OKLAHOMA	54	0	0	0	54
3723 TEXAS	212	0	0	0	212
3745 TEXAS	261	0	0	0	261
4703 CALIFORNIA	0	1880	0	755	2635
TOTAL VOLUME	2834	1880	0	755	5469

TABLE 26. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4703, CALIFORNIA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3405 NEBRASKA	637	8	0	0	645
3502 KANSAS	0	147	0	0	147
3504 KANSAS	23	0	0	0	23
3712 TEXAS	0	8	0	0	8
3745 TEXAS	15	0	0	0	15
4703 CALIFORNIA	0	310	0	5093	5403
TOTAL VOLUME	675	473	0	5093	6241

TABLE 27. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 4703, CALIFORNIA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
4701 CALIFORNIA	0	1880	0	0	1880
4703 CALIFORNIA	0	310	0	0	310
4704 CALIFORNIA	1543	126	0	0	1669
TOTAL VOLUME	1543	2316	0	0	3859

TABLE 28. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4704, CALIFORNIA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2900 MISSOURI	2075	0	0	0	2075
3404 NEBRASKA	68	0	0	0	68
3405 NEBRASKA	931	0	0	0	931
3501 KANSAS	3855	0	0	0	3855
3502 KANSAS	899	0	0	0	899
3503 KANSAS	512	0	0	0	512
3504 KANSAS	1224	0	0	0	1224
3505 KANSAS	985	0	0	0	985
3602 OKLAHOMA	448	0	0	0	448
3711 TEXAS	9813	0	0	0	9813
3712 TEXAS	572	9	0	0	581
3745 TEXAS	22	0	0	0	22
4000 COLORADO	3979	0	0	0	3979
4401 ARIZONA	0	71	0	0	71
4700 CALIFORNIA	0	0	0	643	643
4704 CALIFORNIA	1543	126	0	0	1669
TOTAL VOLUME	26926	206	0	643	27775

TABLE 29. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4000, COLORADO

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3401 NEBRASKA	60	97	0	0	157
3403 NEBRASKA	7	0	0	0	7
3404 NEBRASKA	981	0	0	0	981
3405 NEBRASKA	842	157	0	0	999
3501 KANSAS	95	622	0	0	717
3505 KANSAS	673	0	0	0	673
4000 COLORADO	0	0	0	3650	3650
TOTAL VOLUME	2658	876	0	3650	7184

TABLE 30. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 4000, COLORADO

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELLS)					
3502 KANSAS	18	0	0	0	18
3503 KANSAS	8	18	0	0	26
3711 TEXAS	1355	28	0	0	1383
3712 TEXAS	244	0	0	0	244
3745 TEXAS	5	0	0	0	5
4401 ARIZONA	152	881	0	0	1033
4704 CALIFORNIA	3979	0	0	0	3979
TOTAL VOLUME	5761	927	0	0	6688

TABLE 31. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 600, CONNECTICUT

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELLS)					
2200 ILLINOIS	167	0	0	0	167
TOTAL VOLUME	167	0	0	0	167

TABLE 32. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 1700, FLORIDA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELLS)					
1700 FLORIDA	0	76	0	179	255
TOTAL VOLUME	0	76	0	179	255

TABLE 33. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 1700, FLORIDA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
1700 FLORIDA	0	76	0	0	76
7302 LOUISIANA GULF	0	0	246	0	246
TOTAL VOLUME	0	76	246	0	322

TABLE 34. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 1600, GEORGIA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
1600 GEORGIA	0	52	0	61	113
TOTAL VOLUME	0	52	0	61	113

TABLE 35. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 1600, GEORGIA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
1600 GEORGIA	0	52	0	2	54
TOTAL VOLUME	0	52	0	2	54

TABLE 36. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 2200, ILLINOIS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2200 ILLINOIS	0	226	0	1525	1751
2300 KENTUCKY	0	0	0	735	735
2900 MISSOURI	0	0	0	392	392
3405 NEBRASKA	0	214	0	0	214
3503 KANSAS	83	0	0	0	83
TOTAL VOLUME	83	440	0	2652	3175

TABLE 37. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 2200, ILLINOIS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
600 CONNECTICUT	167	0	0	0	167
2200 ILLINOIS	0	226	0	150	376
2500 MISSISSIPPI	294	0	0	0	294
2600 ALABAMA	203	0	0	0	203
2900 MISSOURI	0	284	0	0	284
3005 ARKANSAS	146	0	0	0	146
7302 LOUISIANA GULF	196	0	100	0	296
7303 NO. TEXAS GULF	583	0	989	0	1572
7304 SO. TEXAS GULF	349	0	0	0	349
TOTAL VOLUME	1938	510	1089	150	3687

TABLE 38. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 2800, IOWA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2800 IOWA	0	183	0	162	345
3403 NEBRASKA	64	16	0	0	80
3405 NEBRASKA	69	80	0	0	149
TOTAL VOLUME	133	279	0	162	574

TABLE 39. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 2800, IOWA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2500 MISSISSIPPI	0	220	0	0	220
2800 IOWA	0	183	0	0	183
2900 MISSOURI	28	0	0	0	28
3017 ARKANSAS	71	0	0	0	71
3405 NEBRASKA	14	19	0	0	33
3503 KANSAS	0	19	0	0	19
7302 LOUISIANA GULF	94	0	0	0	94
7303 NO. TEXAS GULF	1644	0	0	0	1644
7304 SO. TEXAS GULF	203	0	0	0	203
TOTAL VOLUME	2054	441	0	0	2495

TABLE 40. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3500, KANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3501 KANSAS	0	457	0	0	457
3502 KANSAS	0	1422	0	0	1422
3503 KANSAS	0	687	0	0	687
3504 KANSAS	460	112	0	0	572
3505 KANSAS	0	667	0	0	667
TOTAL VOLUME	460	3345	0	0	3805

TABLE 41. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3501, KANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3501 KANSAS	0	398	0	47297	47695
TOTAL VOLUME	0	398	0	47297	47695

TABLE 42. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3501, KANSAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2900 MISSOURI	246	2706	0	0	2952
3500 KANSAS	0	457	0	0	457
3501 KANSAS	0	398	0	0	398
3502 KANSAS	2473	21	0	0	2494
3503 KANSAS	139	183	0	0	322
3504 KANSAS	1921	216	0	0	2137
3505 KANSAS	365	0	0	0	365
3711 TEXAS	0	2220	0	0	2220
3712 TEXAS	1231	0	0	0	1231
3723 TEXAS	191	277	0	0	468
3745 TEXAS	50	79	0	0	129
4000 COLORADO	95	622	0	0	717
4401 ARIZONA	173	0	0	0	173
4704 CALIFORNIA	3855	0	0	0	3855
7303 NO. TEXAS GULF	26	0	0	0	26
TOTAL VOLUME	10765	7179	0	0	17944

TABLE 43. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3502, KANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2900 MISSOURI	73	0	0	0	73
3401 NEBRASKA	123	0	0	0	123
3402 NEBRASKA	194	0	0	0	194
3404 NEBRASKA	117	32	0	171	320
3405 NEBRASKA	1303	202	0	0	1505
3501 KANSAS	2473	21	0	0	2494
3502 KANSAS	2451	3101	0	50941	56493
3503 KANSAS	1644	105	0	0	1749
3504 KANSAS	146	0	0	0	146
3505 KANSAS	1261	12	0	0	1273
3602 OKLAHOMA	71	0	0	0	71
4000 COLORADO	18	0	0	0	18
TOTAL VOLUME	9874	3473	0	51112	64459

TABLE 44. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3502, KANSAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2900 MISSOURI	1609	271	0	0	1880
3404 NEBRASKA	0	0	0	171	171
3500 KANSAS	0	1422	0	0	1422
3502 KANSAS	2451	3101	0	0	5552
3503 KANSAS	3826	302	0	0	4128
3504 KANSAS	2467	698	0	0	3165
3505 KANSAS	1642	52	0	0	1694
3602 OKLAHOMA	0	554	0	0	554
3711 TEXAS	0	1110	0	0	1110
3723 TEXAS	0	128	0	0	128
3745 TEXAS	0	697	0	0	697
4701 CALIFORNIA	475	0	0	0	475
4703 CALIFORNIA	0	147	0	0	147
4704 CALIFORNIA	899	0	0	0	899
7303 NO. TEXAS GULF	6520	412	0	0	6932
7304 SO. TEXAS GULF	987	0	0	0	987
7403 CALIFORNIA	68	0	0	0	68
TOTAL VOLUME	20944	8894	0	171	30009

TABLE 45. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3503, KANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2800 IOWA	0	19	0	0	19
2900 MISSOURI	1627	1372	0	0	2999
3404 NEBRASKA	1625	0	0	0	1625
3405 NEBRASKA	2814	2198	0	0	5012
3501 KANSAS	139	183	0	0	322
3502 KANSAS	3826	302	0	0	4128
3503 KANSAS	1805	1546	0	23252	26603
3504 KANSAS	100	0	0	0	100
3505 KANSAS	1819	1229	0	0	3048
3604 OKLAHOMA	59	0	0	0	59
4000 COLORADO	8	18	0	0	26
TOTAL VOLUME	13822	6867	0	23252	43941

TABLE 46. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3503, KANSAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2200 ILLINOIS	83	0	0	0	83
2900 MISSOURI	3822	173	0	0	3995
3005 ARKANSAS	688	0	0	0	688
3016 ARKANSAS	3422	0	0	0	3422
3100 LOUISIANA	688	0	0	0	688
3500 KANSAS	0	687	0	0	687
3502 KANSAS	1644	105	0	0	1749
3503 KANSAS	1805	1546	0	0	3351
3504 KANSAS	238	0	0	0	238
3505 KANSAS	3105	2090	0	0	5195
3602 OKLAHOMA	1181	0	0	0	1181
3604 OKLAHOMA	342	0	0	0	342
3711 TEXAS	285	0	0	0	285
3745 TEXAS	3382	0	0	0	3382
4704 CALIFORNIA	512	0	0	0	512
7302 LOUISIANA GULF	0	0	552	0	552
7303 NO. TEXAS GULF	11621	1330	0	0	12951
7304 SO. TEXAS GULF	7468	21	0	0	7489
TOTAL VOLUME	40286	5952	552	0	46790

TABLE 47. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3504, KANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3401 NEBRASKA	108	0	0	0	108
3404 NEBRASKA	60	0	0	0	60
3405 NEBRASKA	330	4	0	0	334
3501 KANSAS	1921	216	0	0	2137
3502 KANSAS	2467	698	0	0	3165
3503 KANSAS	238	0	0	0	238
3504 KANSAS	2877	1438	0	18120	22435
3505 KANSAS	664	754	0	0	1418
3601 OKLAHOMA	93	28	0	0	121
TOTAL VOLUME	8758	3138	0	18120	30016

TABLE 48. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3504, KANSAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2900 MISSOURI	0	731	0	0	731
3500 KANSAS	460	112	0	0	572
3502 KANSAS	146	0	0	0	146
3503 KANSAS	100	0	0	0	100
3504 KANSAS	2877	1438	0	0	4315
3505 KANSAS	108	0	0	0	108
3602 OKLAHOMA	1216	457	0	0	1673
3711 TEXAS	1274	1110	0	0	2384
3723 TEXAS	320	162	0	0	482
3745 TEXAS	0	696	0	0	696
3789 TEXAS	151	138	0	0	289
4401 ARIZONA	3449	173	0	0	3622
4701 CALIFORNIA	206	0	0	0	206
4703 CALIFORNIA	23	0	0	0	23
4704 CALIFORNIA	1224	0	0	0	1224
7303 NO. TEXAS GULF	2220	0	0	0	2220
7304 SO. TEXAS GULF	1577	0	0	0	1577
7403 CALIFORNIA	24	0	0	0	24
TOTAL VOLUME	15375	5017	0	0	20392

TABLE 49. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3505, KANSAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2900 MISSOURI	266	0	0	0	266
3404 NEBRASKA	1108	0	0	0	1108
3405 NEBRASKA	3365	129	0	0	3494
3501 KANSAS	365	0	0	0	365
3502 KANSAS	1642	52	0	0	1694
3503 KANSAS	3105	2090	0	0	5195
3504 KANSAS	108	0	0	0	108
3505 KANSAS	1805	1607	0	32986	36398
TOTAL VOLUME	11764	3878	0	32986	48628

TABLE 50. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3505, KANSAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
1825 OHIO	125	0	0	0	125
2300 KENTUCKY	86	0	0	0	86
2600 ALABAMA	30	16	0	0	46
2900 MISSOURI	1552	303	0	0	1855
3005 ARKANSAS	137	0	0	0	137
3016 ARKANSAS	406	0	0	0	406
3017 ARKANSAS	221	0	0	0	221
3038 ARKANSAS	133	0	0	0	133
3100 LOUISIANA	114	0	0	0	114
3500 KANSAS	0	667	0	0	667
3502 KANSAS	1261	12	0	0	1273
3503 KANSAS	1819	1229	0	0	3048
3504 KANSAS	664	754	0	0	1418
3505 KANSAS	1805	1607	0	0	3412
3602 OKLAHOMA	46	0	0	0	46
3604 OKLAHOMA	0	497	0	0	497
3711 TEXAS	933	0	0	0	933
3723 TEXAS	311	0	0	0	311
3745 TEXAS	2386	0	0	0	2386
3789 TEXAS	159	0	0	0	159
4000 COLORADO	673	0	0	0	673
4401 ARIZONA	132	67	0	0	199
4402 ARIZONA	1003	0	0	0	1003
4403 ARIZONA	198	0	0	0	198
4704 CALIFORNIA	985	0	0	0	985
7303 NO. TEXAS GULF	5860	1330	0	0	7190
7304 SO. TEXAS GULF	2670	21	0	0	2691
7403 CALIFORNIA	149	0	0	0	149
TOTAL VOLUME	23858	6503	0	0	30361

TABLE 51. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 2300, KENTUCKY

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3505 KANSAS	86	0	0	0	86
TOTAL VOLUME	86	0	0	0	86

TABLE 52. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 2300, KENTUCKY

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2600 ALABAMA	0	32	0	0	32
TOTAL VOLUME	0	32	0	0	32

TABLE 53. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3100, LOUISIANA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2900 MISSOURI	17	0	0	0	17
3038 ARKANSAS	0	2	0	0	2
3100 LOUISIANA	0	579	0	475	1054
3405 NEBRASKA	673	0	0	0	673
3503 KANSAS	688	0	0	0	688
3505 KANSAS	114	0	0	0	114
3745 TEXAS	289	50	0	0	339
7302 LOUISIANA GULF	0	22	0	0	22
TOTAL VOLUME	1781	653	0	475	2909

TABLE 54. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3100, LOUISIANA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2500 MISSISSIPPI	0	51	0	0	51
3100 LOUISIANA	0	579	0	0	579
7302 LOUISIANA GULF	0	22	160	0	182
7303 NO. TEXAS GULF	12	0	0	0	12
TOTAL VOLUME	12	652	160	0	824

TABLE 55. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 2700, MINNESOTA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2700 MINNESOTA	35	0	0	37	72
3302 SOUTH DAKOTA	0	28	0	0	28
3404 NEBRASKA	32	0	0	0	32
3405 NEBRASKA	171	0	0	0	171
TOTAL VOLUME	238	28	0	37	303

TABLE 56. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 2700, MINNESOTA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2700 MINNESOTA	35	0	0	0	35
TOTAL VOLUME	35	0	0	0	35

TABLE 57. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 2500, MISSISSIPPI

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2200 ILLINOIS	294	0	0	0	294
2500 MISSISSIPPI	0	82	0	0	82
2800 IOWA	0	220	0	0	220
2900 MISSOURI	9	0	0	0	9
3038 ARKANSAS	0	97	0	0	97
3100 LOUISIANA	0	51	0	0	51
TOTAL VOLUME	303	450	0	0	753

TABLE 58. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 2500, MISSISSIPPI

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2500 MISSISSIPPI	0	82	0	0	82
TOTAL VOLUME	0	82	0	0	82

TABLE 59. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 2900, MISSOURI

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2200 ILLINOIS	0	284	0	0	284
2800 IOWA	28	0	0	946	974
2900 MISSOURI	8313	5943	0	22816	37072
3038 ARKANSAS	0	127	0	0	127
3302 SOUTH DAKOTA	98	0	0	0	98
3403 NEBRASKA	11	0	0	0	11
3404 NEBRASKA	98	0	0	0	98
3405 NEBRASKA	465	0	0	0	465
3501 KANSAS	246	2706	0	0	2952
3502 KANSAS	1609	271	0	0	1880
3503 KANSAS	3822	173	0	0	3995
3504 KANSAS	0	731	0	0	731
3505 KANSAS	1552	303	0	0	1855
TOTAL VOLUME	16242	10538	0	23762	50542

TABLE 60. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 2900, MISSOURI

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2500 MISSISSIPPI	9	0	0	0	9
2900 MISSOURI	8313	5943	0	0	14256
3005 ARKANSAS	812	27	0	0	839
3016 ARKANSAS	123	950	0	0	1073
3017 ARKANSAS	700	0	0	0	700
3038 ARKANSAS	0	291	0	0	291
3100 LOUISIANA	17	0	0	0	17
3405 NEBRASKA	0	4	0	0	4
3502 KANSAS	73	0	0	0	73
3503 KANSAS	1627	1372	0	0	2999
3505 KANSAS	266	0	0	0	266
3604 OKLAHOMA	17	0	0	0	17
3711 TEXAS	14	0	0	0	14
3712 TEXAS	0	36	0	0	36
3723 TEXAS	1873	387	0	0	2260
3745 TEXAS	2206	0	0	0	2206
4401 ARIZONA	82	0	0	0	82
4704 CALIFORNIA	2075	0	0	0	2075
7302 LOUISIANA GULF	0	0	2966	0	2966
7303 NO. TEXAS GULF	6178	0	1024	0	7202
7304 SO. TEXAS GULF	4336	13	0	0	4349
7402 PUGET SOUND	172	0	0	0	172
TOTAL VOLUME	28893	9023	3990	0	41906

TABLE 61. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3401, NEBRASKA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3401 NEBRASKA	0	13	0	325	338
3403 NEBRASKA	0	20	0	0	20
3404 NEBRASKA	0	26	0	0	26
TOTAL VOLUME	0	59	0	325	384

TABLE 62. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3401, NEBRASKA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3401 NEBRASKA	0	13	0	86	99
3404 NEBRASKA	44	11	0	0	55
3405 NEBRASKA	28	0	0	0	28
3502 KANSAS	123	0	0	0	123
3504 KANSAS	108	0	0	0	108
4000 COLORADO	60	97	0	64	221
TOTAL VOLUME	363	121	0	150	634

TABLE 63. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3402, NEBRASKA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3402 NEBRASKA	0	58	0	0	58
TOTAL VOLUME	0	58	0	0	58

TABLE 64. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3402, NEBRASKA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3402 NEBRASKA	0	58	0	0	58
3502 KANSAS	194	0	0	0	194
TOTAL VOLUME	194	58	0	0	252

TABLE 65. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3403, NEBRASKA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3302 SOUTH DAKOTA	0	0	0	42	42
3403 NEBRASKA	0	950	0	2876	3826
3405 NEBRASKA	29	176	0	43	248
TOTAL VOLUME	29	1126	0	2961	4116

TABLE 66. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3403, NEBRASKA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2800 IOWA	64	16	0	0	80
2900 MISSOURI	11	0	0	0	11
3401 NEBRASKA	0	20	0	28	48
3402 NEBRASKA	0	0	0	28	28
3403 NEBRASKA	0	950	0	181	1131
3404 NEBRASKA	50	761	0	28	839
3405 NEBRASKA	380	870	0	28	1278
4000 COLORADO	7	0	0	0	7
7303 NO. TEXAS GULF	18	16	0	0	34
TOTAL VOLUME	530	2633	0	293	3456

TABLE 67. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3404, NEBRASKA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3401 NEBRASKA	44	11	0	0	55
3403 NEBRASKA	50	761	0	0	811
3404 NEBRASKA	5424	5180	0	21281	31885
3405 NEBRASKA	1925	1108	0	102	3135
3502 KANSAS	0	0	0	171	171
TOTAL VOLUME	7443	7060	0	21554	36057

TABLE 68. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3404, NEBRASKA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2700 MINNESOTA	32	0	0	0	32
2900 MISSOURI	98	0	0	0	98
3401 NEBRASKA	0	26	0	0	26
3404 NEBRASKA	5424	5180	0	3626	14230
3405 NEBRASKA	1019	299	0	0	1318
3502 KANSAS	117	32	0	0	149
3503 KANSAS	1625	0	0	0	1625
3504 KANSAS	60	0	0	0	60
3505 KANSAS	1108	0	0	0	1108
3602 OKLAHOMA	9	48	0	0	57
3711 TEXAS	264	0	0	0	264
3712 TEXAS	128	0	0	0	128
3745 TEXAS	636	0	0	0	636
4000 COLORADO	981	0	0	1267	2248
4401 ARIZONA	438	0	0	0	438
4701 CALIFORNIA	1626	0	0	0	1626
4704 CALIFORNIA	68	0	0	0	68
4800 NEVADA	3	0	0	0	3
7303 NO. TEXAS GULF	8299	0	0	0	8299
7304 SO. TEXAS GULF	1679	0	0	0	1679
7402 PUGET SOUND	89	0	0	0	89
7403 CALIFORNIA	65	0	0	0	65
TOTAL VOLUME	23768	5585	0	4893	34246

TABLE 69. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3405, NEBRASKA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2800 IOWA	14	19	0	9	42
2900 MISSOURI	0	4	0	66	70
3401 NEBRASKA	28	0	0	0	28
3403 NEBRASKA	380	870	0	0	1250
3404 NEBRASKA	1019	299	0	521	1839
3405 NEBRASKA	43295	21797	0	95937	161029
TOTAL VOLUME	44736	22989	0	96533	164258

TABLE 70. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3405, NEBRASKA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2200 ILLINOIS	0	214	0	0	214
2700 MINNESOTA	171	0	0	0	171
2800 IOWA	69	80	0	0	149
2900 MISSOURI	465	0	0	0	465
3005 ARKANSAS	0	27	0	0	27
3016 ARKANSAS	35	256	0	465	756
3100 LOUISIANA	673	0	0	0	673
3401 NEBRASKA	0	0	0	1	1
3403 NEBRASKA	29	176	0	351	556
3404 NEBRASKA	1925	1108	0	29	3062
3405 NEBRASKA	43295	21797	0	3167	68259
3502 KANSAS	1303	202	0	0	1505
3503 KANSAS	2814	2198	0	0	5012
3504 KANSAS	330	4	0	0	334
3505 KANSAS	3365	129	0	0	3494
3602 OKLAHOMA	51	0	0	0	51
3604 OKLAHOMA	60	36	0	4	100
3711 TEXAS	1312	0	0	0	1312
3712 TEXAS	548	108	0	0	656
3745 TEXAS	1707	9	0	0	1716
4000 COLORADO	842	157	0	0	999
4401 ARIZONA	487	308	0	0	795
4402 ARIZONA	370	0	0	0	370
4703 CALIFORNIA	637	8	0	0	645
4704 CALIFORNIA	931	0	0	0	931
7303 NO. TEXAS GULF	28882	29	0	0	28911
7304 SO. TEXAS GULF	14901	0	0	0	14901
7401 COLUMBIA RIVER	15	0	0	0	15
7402 PUGET SOUND	70	0	0	0	70
7403 CALIFORNIA	1046	0	0	0	1046
TOTAL VOLUME	106333	26846	0	4017	137196

TABLE 71. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4800, NEVADA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
3404 NEBRASKA	3	0	0	0	3
TOTAL VOLUME	3	0	0	0	3

TABLE 72. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4100, NEW MEXICO

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
3712 TEXAS	0	12	0	0	12
4100 NEW MEXICO	0	0	0	9643	9643
TOTAL VOLUME	0	12	0	9643	9655

TABLE 73. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 4100, NEW MEXICO

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
3711 TEXAS	72	1844	0	0	1916
3712 TEXAS	0	1590	0	0	1590
3767 TEXAS	0	100	0	0	100
4401 ARIZONA	0	180	0	0	180
4403 ARIZONA	290	10	0	0	300
7304 SO. TEXAS GULF	122	0	0	0	122
TOTAL VOLUME	484	3724	0	0	4208

TABLE 74. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 1400, NORTH CAROLINA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
1400 NORTH CAROLINA	32	32	0	1414	1478
TOTAL VOLUME	32	32	0	1414	1478

TABLE 75. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 1400, NORTH CAROLINA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
1400 NORTH CAROLINA	32	32	0	0	64
TOTAL VOLUME	32	32	0	0	64

TABLE 76. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 1825, OHIO

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3505 KANSAS	125	0	0	0	125
TOTAL VOLUME	125	0	0	0	125

TABLE 77. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3601, OKLAHOMA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3601 OKLAHOMA	0	0	0	10664	10664
TOTAL VOLUME	0	0	0	10664	10664

TABLE 78. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3601, OKLAHOMA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3504 KANSAS	93	28	0	0	121
3711 TEXAS	1187	1255	0	0	2442
3712 TEXAS	161	0	0	0	161
3745 TEXAS	4	0	0	0	4
7303 NO. TEXAS GULF	791	0	0	0	791
7304 SO. TEXAS GULF	289	0	0	0	289
TOTAL VOLUME	2525	1283	0	0	3808

TABLE 79. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3602, OKLAHOMA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3404 NEBRASKA	9	48	0	0	57
3405 NEBRASKA	51	0	0	0	51
3502 KANSAS	0	554	0	0	554
3503 KANSAS	1181	0	0	0	1181
3504 KANSAS	1216	457	0	0	1673
3505 KANSAS	46	0	0	0	46
3602 OKLAHOMA	78	78	0	2577	2733
TOTAL VOLUME	2581	1137	0	2577	6295

TABLE 80. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3602, OKLAHOMA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3502 KANSAS	71	0	0	0	71
3602 OKLAHOMA	78	78	0	0	156
4701 CALIFORNIA	54	0	0	0	54
4704 CALIFORNIA	448	0	0	0	448
TOTAL VOLUME	651	78	0	0	729

TABLE 81. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3603, OKLAHOMA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3603 OKLAHOMA	137	137	0	3364	3638
3712 TEXAS	0	306	0	0	306
TOTAL VOLUME	137	443	0	3364	3944

TABLE 82. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3603, OKLAHOMA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3603 OKLAHOMA	137	137	0	0	274
3723 TEXAS	0	252	0	0	252
7303 NO. TEXAS GULF	508	0	0	0	508
TOTAL VOLUME	645	389	0	0	1034

TABLE 83. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3604, OKLAHOMA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2900 MISSOURI	17	0	0	0	17
3405 NEBRASKA	60	36	0	0	96
3503 KANSAS	342	0	0	0	342
3505 KANSAS	0	497	0	0	497
3604 OKLAHOMA	0	0	0	2719	2719
TOTAL VOLUME	419	533	0	2719	3671

TABLE 84. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3604, OKLAHOMA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3503 KANSAS	59	0	0	0	59
7303 NO. TEXAS GULF	598	0	0	0	598
TOTAL VOLUME	657	0	0	0	657

TABLE 85. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3302, SOUTH DAKOTA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3302 SOUTH DAKOTA	0	0	0	126	126
TOTAL VOLUME	0	0	0	126	126

TABLE 86. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3302, SOUTH DAKOTA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2700 MINNESOTA	0	28	0	0	28
2900 MISSOURI	98	0	0	0	98
TOTAL VOLUME	98	28	0	0	126

TABLE 87. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 2400, TENNESSEE

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3038 ARKANSAS	675	160	0	48	883
TOTAL VOLUME	675	160	0	48	883

TABLE 88. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 2400, TENNESSEE

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2600 ALABAMA	0	32	0	0	32
7302 LOUISIANA GULF	0	0	815	0	815
TOTAL VOLUME	0	32	815	0	847

TABLE 89. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3710, TEXAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3710 TEXAS	1867	2660	0	27265	31792
3711 TEXAS	658	2292	0	0	2950
3712 TEXAS	50	0	0	0	50
3723 TEXAS	400	0	0	0	400
3745 TEXAS	14	16	0	0	30
3767 TEXAS	0	100	0	0	100
3789 TEXAS	0	252	0	0	252
TOTAL VOLUME	2989	5320	0	27265	35574

TABLE 90. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3710, TEXAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3710 TEXAS	1867	2660	0	0	4527
3767 TEXAS	0	50	0	0	50
3789 TEXAS	0	600	0	0	600
7304 SO. TEXAS GULF	5811	5704	0	0	11515
9000 EXPORT	1884	0	0	0	1884
TOTAL VOLUME	9562	9014	0	0	18576

TABLE 91. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3711, TEXAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2900 MISSOURI	14	0	0	0	14
3404 NEBRASKA	264	0	0	0	264
3405 NEBRASKA	1312	0	0	0	1312
3501 KANSAS	0	2220	0	0	2220
3502 KANSAS	0	1110	0	0	1110
3503 KANSAS	285	0	0	0	285
3504 KANSAS	1274	1110	0	0	2384
3505 KANSAS	933	0	0	0	933
3601 OKLAHOMA	1187	1255	0	0	2442
3711 TEXAS	2358	37443	0	61169	100970
3712 TEXAS	127	3835	0	0	3962
3723 TEXAS	0	400	0	0	400
4000 COLORADO	1355	28	0	0	1383
4100 NEW MEXICO	72	1844	0	0	1916
TOTAL VOLUME	9181	49245	0	61169	119595

TABLE 92. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3711, TEXAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3710 TEXAS	658	2292	0	0	2950
3711 TEXAS	2358	37443	0	0	39801
3712 TEXAS	3495	755	0	0	4250
3723 TEXAS	181	2119	0	0	2300
3745 TEXAS	2460	340	0	0	2800
3767 TEXAS	8	1002	0	0	1010
3789 TEXAS	247	3	0	0	250
4300 UTAH	289	0	0	0	289
4401 ARIZONA	2050	4	0	0	2054
4402 ARIZONA	450	0	0	0	450
4403 ARIZONA	256	0	0	0	256
4704 CALIFORNIA	9813	0	0	0	9813
7303 NO. TEXAS GULF	4116	83	0	0	4199
7304 SO. TEXAS GULF	4465	739	0	0	5204
TOTAL VOLUME	30846	44780	0	0	75626

TABLE 93. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3712, TEXAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2900 MISSOURI	0	36	0	0	36
3404 NEBRASKA	128	0	0	0	128
3405 NEBRASKA	548	108	0	0	656
3501 KANSAS	1231	0	0	0	1231
3601 OKLAHOMA	161	0	0	0	161
3711 TEXAS	3495	755	0	0	4250
3712 TEXAS	2439	3071	0	16165	21675
3723 TEXAS	1700	0	0	0	1700
4000 COLORADO	244	0	0	0	244
4100 NEW MEXICO	0	1590	0	0	1590
TOTAL VOLUME	9946	5560	0	16165	31671

TABLE 94. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3712, TEXAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3603 OKLAHOMA	0	306	0	0	306
3710 TEXAS	50	0	0	0	50
3711 TEXAS	127	3835	0	0	3962
3712 TEXAS	2439	3071	0	0	5510
3723 TEXAS	3620	1080	0	0	4700
3745 TEXAS	288	312	0	0	600
3767 TEXAS	345	7355	0	0	7700
4100 NEW MEXICO	0	12	0	0	12
4401 ARIZONA	0	1256	0	0	1256
4402 ARIZONA	0	52	0	0	52
4403 ARIZONA	14	3	0	0	17
4703 CALIFORNIA	0	8	0	0	8
4704 CALIFORNIA	572	9	0	0	581
7303 NO. TEXAS GULF	4421	57	0	0	4478
7304 SO. TEXAS GULF	722	126	0	0	848
TOTAL VOLUME	12598	17482	0	0	30080

TABLE 95. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3723, TEXAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
2900 MISSOURI	1873	387	0	0	2260
3501 KANSAS	191	277	0	0	468
3502 KANSAS	0	128	0	0	128
3504 KANSAS	320	162	0	0	482
3505 KANSAS	311	0	0	0	311
3603 OKLAHOMA	0	252	0	0	252
3711 TEXAS	181	2119	0	0	2300
3712 TEXAS	3620	1080	0	0	4700
3723 TEXAS	154	7896	0	10530	18580
3745 TEXAS	0	105	0	0	105
3767 TEXAS	0	54	0	0	54
TOTAL VOLUME	6650	12460	0	10530	29640

TABLE 96. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3723, TEXAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3710 TEXAS	400	0	0	0	400
3711 TEXAS	0	400	0	0	400
3712 TEXAS	1700	0	0	0	1700
3723 TEXAS	154	7896	0	0	8050
3745 TEXAS	40	460	0	0	500
3767 TEXAS	0	100	0	0	100
3789 TEXAS	0	150	0	0	150
4701 CALIFORNIA	212	0	0	0	212
7303 NO. TEXAS GULF	1200	279	0	0	1479
TOTAL VOLUME	3706	9285	0	0	12991

TABLE 97. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3745, TEXAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2900 MISSOURI	2206	0	0	0	2206
3038 ARKANSAS	298	178	0	0	476
3404 NEBRASKA	636	0	0	0	636
3405 NEBRASKA	1707	9	0	0	1716
3501 KANSAS	50	79	0	0	129
3502 KANSAS	0	697	0	0	697
3503 KANSAS	3382	0	0	0	3382
3504 KANSAS	0	696	0	0	696
3505 KANSAS	2386	0	0	0	2386
3601 OKLAHOMA	4	0	0	0	4
3711 TEXAS	2460	340	0	37873	40673
3712 TEXAS	288	312	0	0	600
3723 TEXAS	40	460	0	0	500
3745 TEXAS	1980	4770	0	0	6750
3789 TEXAS	0	300	0	0	300
4000 COLORADO	5	0	0	0	5
TOTAL VOLUME	15442	7841	0	37873	61156

TABLE 98. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3745, TEXAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3100 LOUISIANA	289	50	0	0	339
3710 TEXAS	14	16	0	0	30
3723 TEXAS	0	105	0	0	105
3745 TEXAS	1980	4770	0	0	6750
3767 TEXAS	0	60	0	0	60
3789 TEXAS	230	150	0	0	380
4401 ARIZONA	68	0	0	0	68
4403 ARIZONA	12	0	0	0	12
4701 CALIFORNIA	261	0	0	0	261
4703 CALIFORNIA	15	0	0	0	15
4704 CALIFORNIA	22	0	0	0	22
7303 NO. TEXAS GULF	11919	19585	0	0	31504
7304 SO. TEXAS GULF	440	6927	0	0	7367
7403 CALIFORNIA	187	0	0	0	187
9000 EXPORT	896	0	0	0	896
TOTAL VOLUME	16333	31663	0	0	47996

TABLE 99. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3767, TEXAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3710 TEXAS	0	50	0	0	50
3711 TEXAS	8	1002	0	0	1010
3712 TEXAS	345	7355	0	0	7700
3723 TEXAS	0	100	0	0	100
3745 TEXAS	0	60	0	0	60
3767 TEXAS	0	1100	0	6392	7492
3789 TEXAS	0	50	0	0	50
4100 NEW MEXICO	0	100	0	0	100
TOTAL VOLUME	353	9817	0	6392	16562

TABLE 100. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3767, TEXAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3710 TEXAS	0	100	0	0	100
3723 TEXAS	0	54	0	0	54
3767 TEXAS	0	1100	0	0	1100
3789 TEXAS	0	110	0	0	110
7304 SO. TEXAS GULF	0	44	0	0	44
TOTAL VOLUME	0	1408	0	0	1408

TABLE 101. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 3789, TEXAS

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3504 KANSAS	151	138	0	0	289
3505 KANSAS	159	0	0	0	159
3710 TEXAS	0	600	0	0	600
3711 TEXAS	247	3	0	0	250
3723 TEXAS	0	150	0	0	150
3745 TEXAS	230	150	0	0	380
3767 TEXAS	0	110	0	0	110
3789 TEXAS	0	5250	0	71458	76708
TOTAL VOLUME	787	6401	0	71458	78646

TABLE 102. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 3789, TEXAS

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3710 TEXAS	0	252	0	0	252
3745 TEXAS	0	300	0	0	300
3767 TEXAS	0	50	0	0	50
3789 TEXAS	0	5250	0	0	5250
7303 NO. TEXAS GULF	1230	11745	0	0	12975
7304 SO. TEXAS GULF	4721	28871	0	0	33592
TOTAL VOLUME	5951	46468	0	0	52419

TABLE 103. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 4300, UTAH

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3711 TEXAS	289	0	0	0	289
TOTAL VOLUME	289	0	0	0	289

TABLE 104. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 7302, LOUISIANA GULF

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
1700 FLORIDA	0	0	246	0	246
2200 ILLINOIS	196	0	100	0	296
2400 TENNESSEE	0	0	815	0	815
2800 IOWA	94	0	0	0	94
2900 MISSOURI	0	0	2966	0	2966
3038 ARKANSAS	3965	0	2010	0	5975
3100 LOUISIANA	0	22	160	0	182
3503 KANSAS	0	0	552	0	552
TOTAL VOLUME	4255	22	6849	0	11126

TABLE 105. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 7302, LOUISIANA GULF

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3100 LOUISIANA	0	22	0	0	22
9000 EXPORT	0	0	7854	0	7854
TOTAL VOLUME	0	22	7854	0	7876

TABLE 106. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 7303, NO. TEXAS GULF

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2200 ILLINOIS	583	0	989	0	1572
2800 IOWA	1644	0	0	0	1644
2900 MISSOURI	6178	0	1024	0	7202
3038 ARKANSAS	900	0	0	0	900
3100 LOUISIANA	12	0	0	0	12
3403 NEBRASKA	18	16	0	0	34
3404 NEBRASKA	8299	0	0	0	8299
3405 NEBRASKA	28882	29	0	0	28911
3501 KANSAS	26	0	0	0	26
3502 KANSAS	6520	412	0	0	6932
3503 KANSAS	11621	1330	0	0	12951
3504 KANSAS	2220	0	0	0	2220
3505 KANSAS	5860	1330	0	0	7190
3601 OKLAHOMA	791	0	0	0	791
3603 OKLAHOMA	508	0	0	0	508
3604 OKLAHOMA	598	0	0	0	598
3711 TEXAS	4116	83	0	0	4199
3712 TEXAS	4421	57	0	0	4478
3723 TEXAS	1200	279	0	0	1479
3745 TEXAS	11919	19585	0	0	31504
3789 TEXAS	1230	11745	0	0	12975
TOTAL VOLUME	97546	34866	2013	0	134425

TABLE 107. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 7303, NO. TEXAS GULF

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
9000 EXPORT	0	0	132010	0	132010
TOTAL VOLUME	0	0	132010	0	132010

TABLE 108. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 7304, SO. TEXAS GULF

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2200 ILLINOIS	349	0	0	0	349
2800 IOWA	203	0	0	0	203
2900 MISSOURI	4336	13	0	0	4349
3404 NEBRASKA	1679	0	0	0	1679
3405 NEBRASKA	14901	0	0	0	14901
3502 KANSAS	987	0	0	0	987
3503 KANSAS	7468	21	0	0	7489
3504 KANSAS	1577	0	0	0	1577
3505 KANSAS	2670	21	0	0	2691
3601 OKLAHOMA	289	0	0	0	289
3710 TEXAS	5811	5704	0	0	11515
3711 TEXAS	4465	739	0	0	5204
3712 TEXAS	722	126	0	0	848
3745 TEXAS	440	6927	0	0	7367
3767 TEXAS	0	44	0	0	44
3789 TEXAS	4721	28871	0	0	33592
4100 NEW MEXICO	122	0	0	0	122
4401 ARIZONA	94	0	0	0	94
TOTAL VOLUME	50834	42466	0	0	93300

TABLE 109. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 7304, SO. TEXAS GULF

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
9000 EXPORT	0	0	91100	0	91100
TOTAL VOLUME	0	0	91100	0	91100

TABLE 110. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 7401, COLUMBIA RIVER

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
3405 NEBRASKA	15	0	0	0	15
TOTAL VOLUME	15	0	0	0	15

TABLE 111. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 7401, COLUMBIA RIVER

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
9000 EXPORT	0	0	15	0	15
TOTAL VOLUME	0	0	15	0	15

TABLE 112. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 7402, PUGET SOUND

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHEL)					
2900 MISSOURI	172	0	0	0	172
3038 ARKANSAS	0	1865	0	0	1865
3404 NEBRASKA	89	0	0	0	89
3405 NEBRASKA	70	0	0	0	70
TOTAL VOLUME	331	1865	0	0	2196

TABLE 113. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 7402, PUGET SOUND

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
9000 EXPORT	0	0	1641	0	1641
TOTAL VOLUME	0	0	1641	0	1641

TABLE 114. 1977 SORGHUM RECEIPTS FROM VARIOUS ORIGINS BY FIRMS IN AREA 7403, CALIFORNIA

ORIGINATING STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
3404 NEBRASKA	65	0	0	0	65
3405 NEBRASKA	1046	0	0	0	1046
3502 KANSAS	68	0	0	0	68
3504 KANSAS	24	0	0	0	24
3505 KANSAS	149	0	0	0	149
3745 TEXAS	187	0	0	0	187
4703 CALIFORNIA	0	0	0	626	626
TOTAL VOLUME	1539	0	0	626	2165

TABLE 115. 1977 SORGHUM SHIPMENTS TO VARIOUS DESTINATIONS BY FIRMS IN AREA 7403, CALIFORNIA

DESTINATION STATE OR PORT AREA	MODE OF TRANSPORTATION				TOTAL
	RAIL	TRUCK	BARGE	FARM TRUCK	
(THOUSANDS OF BUSHELS)					
9000 EXPORT	0	0	1919	0	1919
TOTAL VOLUME	0	0	1919	0	1919







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