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# Impact of Production Changes on Soybean Movements

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Among Selected States  
1982-1983

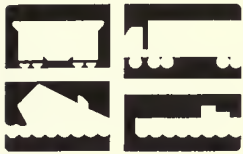
Lowell D. Hill, Albert J. Allen, and Harlon D. Traylor

Southern Cooperative Series Bulletin 346  
University of Illinois Bulletin 797

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







# Impact of Production Changes on Soybean Movements

Among Selected States, 1982-1983

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Southern Cooperative Series Bulletin 346  
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This bulletin is one in a series of North Central and Southern Cooperative bulletins. It represents a contribution to Southern Regional Project S-176, "Interregional Marketing Systems for Grains and Soybeans." The Illinois Agricultural Experiment Station is the publishing station. Requests for copies of this bulletin may be sent to Office of Agricultural Communications and Education, 67 Mumford Hall, 1301 West Gregory Drive, University of Illinois, Urbana, Illinois 61801.

## **Abstract**

In general, changes in the quantity of grain harvested between 1982 and 1983 were offset by changes in inventory. Relatively fixed demands in normally deficit states resulted in an increased volume of receipts and transportation by rail and truck. Percentage changes in volume shipped were less than percentage changes in production in most surplus states. Transportation requirements per bushel of grain produced increased with the reduced quantity harvested in 1983 because deficit states required additional supplies that were transported from more distant sources of supply.

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# Preface

This bulletin reports the results of research conducted by the Southern Regional Research Committee S-176, "Interregional Marketing Systems for Grains and Soybeans." This research, initiated by the S-176 Committee, involved collection of grain flow data in nine states represented by members of the Committee.

This bulletin is one of a series of regional bulletins resulting from the research. Grain flow data were collected for five grains (corn, soybeans, wheat, oats, and sorghum) for 1985 and for three grains (corn, soybeans, and wheat) for the years 1982 and 1983. Each bulletin in the series reports data for one grain. The data were summarized and the survey coordinated under the supervision of Joseph E. Vercimak in the Department of Agricultural Economics, University of Illinois at Urbana-Champaign.

The work in this bulletin was completed under the supervision of a Grain Flow Subcommittee of the S-176 Technical Committee. The members of that subcommittee were Lowell D. Hill and Joseph E. Vercimak, University of Illinois; T. Q. Hutchinson, U.S. Department of Agriculture; Jeffrey E. Jordan, University of Georgia; and Albert J. Allen, Mississippi State University. The success of this project, however, is also due to the cooperation of over 900 grain marketing firms and the efforts of researchers in all participating states.

The research was funded in part by the Federal Railroad Administration under contract No. DTFR 53-84-C-00036; the Agricultural Marketing Service, USDA; the Agricultural Cooperative Service, USDA; the Illinois Department of Agriculture; and the Soo Line Railroad. Administration of the grant funds was coordinated by Joseph E. Vercimak.

## Acknowledgements

The authors wish to acknowledge the contributions of Joe Vercimak for his leadership in collecting and processing the 1982-83 grain flow information. The authors also wish to thank Debra Edinger for typing the numerous revisions of the draft of this and the other grain flow publications. We express special appreciation to the following Research Assistants: Karen Bender, Martin Patterson, Daniel Marriott, Shailendra Pradhan, Brian Anderson, and Jeffrey Austman, who spent many hours checking, reconciling, and correcting the thousands of data entries required for the final tables in this report. Albert Allen, Eric Wailes, and Stephen Ott served as the review committee, as the publications moved through the various revisions.

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# Impact of Production Changes on Soybean Movements

Among Selected States, 1982-1983

## Purpose of the Study

### Introduction

Although there is considerable information available regarding the production and use of soybeans in the United States, there is less information available concerning soybean movement and the importance of each transportation mode. Data on soybean movements by mode of transportation provide crucial input for the decisions made by private industry. Private firms need to know the history of grain flows in order to make sound decisions about investing or dis-investing in grain handling capacity.

Soybeans movement data are also important for government officials, who need to know current patterns of transportation to judge how changes in government policies and regulations could affect various regions of the country. While government policies to reduce total production in the United States have been in operation for many years, their effects on transportation requirements and direction of grain movements are difficult to assess because many other factors also enter into the determination of the marketing channel. Changes in government programs often result in relatively small changes in total production because, in many cases, changes in yield have offset changes in acreage. Changes in production can also be offset by changes in inventories held by government or private firms. As a result, it is difficult to match changes in origins, destinations, and modes of transport with any particular policy.

A drought in 1983 reduced soybean production to the lowest level since 1976. The dramatic change in production between 1982 and 1983 provided an opportunity to evaluate shifts in destinations and mode of transport as the industry adapted to the reduced volume.

Nine states were selected for the comparative analysis using a survey of grain handlers for calendar years 1982 and 1983. States

participating in the survey were Alabama, Arkansas, Georgia, Illinois, Kentucky, Louisiana, Mississippi, Ohio, and Tennessee. Each of these states is a member of the Southern Regional Research Committee S-176, "Interregional Marketing Systems for Grains and Soybeans."

### Objectives

The overall objective of this study was to analyze the transportation of soybeans from origins in selected states to destinations during 1982 and 1983. The specific objectives of this study were to ascertain:

- (1) the volume of soybeans moved between various origins and destinations during 1982 and 1983;
- (2) the market share of each transportation mode employed in moving this soybeans;
- (3) the effect of changes in soybean production and supply on shipment patterns.

## Methodology

For sampling purposes, grain handling firms were categorized according to function. Categories included inland grain elevators, export elevators, river elevators, feed firms, corn processors, corn wet millers, corn dry millers, flour millers, and other firms. For descriptive purposes, elevators were further classified as country, terminal, or subterminal elevators. Feed firms were further classified as feed processors, feed mills, feedlots, or poultry operations.

The population of grain firms included all domestic facilities handling unprocessed grain after leaving the farm gate. The identification of a specific grain flow ended when the grain was processed, fed, or exported. For example, a feed processor was considered as a final destination for grain processed into feed and no attempt was made to identify grain movements after the grain was processed or exported.

---

Listings of firms by size (i.e., storage capacities, processing capacities, etc.) revealed a skewed distribution for various firm categories in most states. In these cases, a relatively small percentage of firms handled a relatively large proportion of the volume. Where the number of firms in a particular firm class was small, the sampling rate was 100 percent. Where the population contained a small group of high volume handlers or processors, the high volume group was sampled at a rate of 100 percent. Sampling rates for the remaining firms in a size category varied from 10 to 25 percent. Each state participant had the flexibility to increase sampling rates as conditions warranted.

### **Sample Expansion**

Estimates of grain movements for each state as a whole were obtained by expanding each sample observation by an appropriate multiplier. A multiplier of 4.0, for example, was used to expand a sample of firms selected at a rate of 25 percent for a particular population strata. Likewise, a multiplier of 1.0 was used where firms in a particular size or geographic group were sampled at a rate of 100 percent.

### **Data Reconciliation Procedures**

After survey data were compiled and tabulated, a procedure for cross-checking grain flows was devised in order to provide consistent estimates of state-to-state flows. Due to errors of sampling, estimation, or expansion, survey data from the shipping state did not always agree with the volume data estimated from the survey in the receiving state. In general, estimates obtained from the shipping state were more accurate since receivers (i.e., processors and exporters) often had less information regarding the origins of their grain. This was especially true where grain was purchased through a broker. For truck movements of grain, researchers reconciled the differences between the quantity shipped and

the quantity received by utilizing survey data from each state and researchers' knowledge about shipping patterns, price relationships, and production-utilization balances.

Secondary sources of information were available for rail and barge movements between states. Estimates of state-to-state grain movements by water were provided by the Army Corps of Engineers. Estimates of state-to-state grain movements by rail were provided by the carload waybill sample drawn by the Interstate Commerce Commission.

The procedure for reconciling barge and rail grain movements involved comparing shipments reported by the Corps of Engineers on inland waterways and waybill sample statistics for railroads, with data received from interviews. In some cases, secondary data provided additional support for survey estimates. In other cases, secondary data provided a useful compromise where survey figures varied widely.

Other important secondary data sources were the estimates of "exportable surpluses" produced in each state. Each state's representative provided information about production, consumption, inventory change, and the remaining surplus or deficit available to be exported or imported by the state. Because much of this information, especially about consumption, was based on estimates, the numbers were not expected to equal those obtained from the survey. The "production/utilization" estimates provided researchers with a comparison of the quantity of grain available to be exported from a state with survey estimates of outbound shipments. Estimates of production and utilization are available from Wailes and Vercimak (Wailes and Vercimak, 1988).

Comparisons among the various data sources increased the confidence in estimates obtained from sampling the population of grain handling firms. The logic and consistency of each flow summarized in this report have been checked by each state representative conducting the survey.

## Soybean Production and Supply

During the 1982-83 period, soybean producers used about 20.4 percent of all cropland from which principal crops were harvested in the United States (66 million acres). The average value of the soybean crop at the farm level was 12.6 billion dollars, representing about 18 percent of the average value of all principal field crops (Wailes and Vercimak, 1989).

The volume of soybeans crushed by domestic processors averaged more than one billion bushels over the 1982-83 period

(Table 1). The volume of soybeans processed into oil and meal varied from year to year, depending upon the availability of soybeans and demands for meal, oil, and exports (Leath, Hill, and Fuller, 1981). Most of the soybean meal produced in the United States was either exported or used as a feed ingredient. Crude soybean oil was exported, used directly, or further processed for human consumption (Allen, et. al., 1980).

The volume of soybeans transported was large because the crop was grown in relatively concentrated production areas but processed in many locations. A large volume

Table 1.  
Soybean Supply and Disappearance in the United States for Marketing Years from 1970 to 1986.

Marketing Year Beginning Sept. 1	Supply			Disappearance			
	Beginning Stocks	Production	Total Supply	Crushing	Seed, Feed Residual	Exports	Total
	<i>millions of bushels</i>						
1970	230	1,127	1,357	760	64	434	1,258
1971	99	1,176	1,275	721	65	417	1,203
1972	72	1,271	1,343	722	82	479	1,283
1973	60	1,547	1,607	821	76	539	1,436
1974	171	1,216	1,387	701	80	421	1,202
1975	185	1,547	1,732	865	68	555	1,488
1976	245	1,288	1,533	790	76	564	1,430
1977	103	1,762	1,864	927	76	701	1,704
1978	161	1,870	2,031	1,018	86	753	1,857
1979	174	2,268	2,442	1,130	97	850	2,077
1980	358	1,798	2,156	1,020	99	724	1,843
1981	313	1,989	2,302	1,030	89	929	2,048
1982	254	2,190	2,444	1,108	86	905	2,099
1983	345	1,636	1,981	983	79	743	1,805
1984	176	1,861	2,037	1,030	93	598	1,721
1985	316	2,099	2,415	1,053	86	740	1,879
1986	536	2,007	2,543	1,130	103	700	1,933

Source: *Fats and Oils Situation*, Economics and Statistics Service, USDA, FOS-300, July, 1980 to July, 1987.



was also channeled to export primarily through Mississippi River and Gulf ports — New Orleans, Baton Rouge, Pascagoula, and Mobile (Leath, Hill, and Fuller, 1981).

Soybean production by region was concentrated in the Corn Belt (Ohio, Illinois, Iowa, Indiana, and Missouri), the Delta (Mississippi, Arkansas, and Louisiana) and the Lake states (Michigan, Minnesota, and Wisconsin). The Corn Belt's share of soybean production was 52 percent in 1982 and 53.6 percent in 1983, while the Delta's share was 12.5 percent in 1982 and 12.1 percent in 1983 (Table 2). The Lake States accounted for 10 percent of the total U.S. soybean production in 1982 and 12.2 percent in 1983.

Soybean production by state was concentrated in Illinois, Iowa, Indiana, Missouri, Ohio, and Minnesota during the 1982-83 period. Combined, these six states accounted for 59.7 percent of total U.S. production in 1982 and 62.8 percent in 1983.

### **Changes in Production**

The reduced production in 1983 due to adverse weather conditions and government supply control programs provided a contrast with 1982. Total U.S. production in 1982 was 2.190 billion bushels, but production dropped 25 percent in 1983 to only 1.636 billion. Although a draw-down of inventory helped offset the lower production, total supplies were reduced, and crush and exports declined dramatically (Table 1).

The decreased production was not uniformly spread throughout the soybean producing states. The decline was most dramatic in the Appalachian region, the Southeastern region, the Delta region, and the Southern plains (Table 2). The percentage change in production was less than the national average in the Northeast states, the Lake states, the Corn Belt, and the Northern plains. However, there were wide variations from state to state even within these regions. For example, Delaware and North Dakota both had signifi-

cant increases in production, while Missouri experienced a nearly 40 percent decline, Kentucky dropped by more than 50 percent, and all but one of the Appalachian states had nearly 50 percent decreases in production.

Within the nine-state region included in the study, Kentucky had the greatest percentage decrease (52.3 percent) followed closely by Tennessee (48.3 percent). Alabama, Georgia, Arkansas, and Mississippi experienced drops in production of more than 33 percent. Production in Illinois and Ohio dropped by more than 20 percent between 1982 and 1983. Illinois and Ohio have usually been surplus states, producing supplies that require transshipment to states such as Alabama, Georgia, Kentucky, and Tennessee. The lack of supplies in these states during the 1982-83 period had an impact upon the shipment patterns.

## **Analysis of Shipments and Receipts**

### **Intrastate Shipments**

The volume of soybeans shipped among firms within the borders of the nine states increased from 208 million bushels in 1982 to 284 million bushels in 1983, despite the decrease in production (Tables 3 and 4). Truck accounted for a larger share in 1983 than in 1982, increasing from 82.3 percent to 85.3 percent. Truck transport volume doubled in Illinois in 1983. More short-distance transport to processors and river elevators was performed by truck, probably because the short supply in 1983 required additional assembly and transport to meet processing requirements.

### **Interstate Receipts**

The volume of soybeans received by the nine states in the study increased 15.2 percent from almost 208 million bushels in 1982



Table 2.  
Soybean Production by Region and State, 1982 and 1983.

Region and State	Production		Percent Change From 1982
	1982	1983	
	<i>thousands of bushels</i>		
<b>Northeast</b>			
Connecticut <sup>1</sup>	---	---	---
Delaware	6,480	7,250	11.9
Maine <sup>1</sup>	---	---	---
Maryland	12,035	10,010	-16.8
Massachusetts <sup>1</sup>	---	---	---
New Hampshire <sup>1</sup>	---	---	---
New Jersey	4,250	3,059	-28.0
New York <sup>1</sup>	---	---	---
Pennsylvania	4,185	3,480	-16.8
Rhode Island <sup>1</sup>	---	---	---
Vermont <sup>1</sup>	---	---	---
Total	26,950 (1.2)	23,799 (1.5)	-11.7
<b>Lake States</b>			
Michigan	35,340	33,800	-4.4
Minnesota	169,050	151,800	-10.2
Wisconsin	13,640	13,825	1.4
Total	218,030 (10.0)	199,425 (12.2)	-8.5
<b>Corn Belt</b>			
Illinois	354,200	266,975	-24.6
Indiana	173,250	122,450	-29.3
Iowa	306,600	278,600	-9.1
Missouri	171,000	103,000	-39.8
Ohio	133,200	104,906	-21.2
Total	1,138,250 (52.0)	875,985 (53.6)	-23.0
<b>Northern Plains</b>			
Kansas	46,280	24,320	-47.5
Nebraska	78,750	58,995	-25.1
North Dakota	8,715	14,310	64.2
South Dakota	24,400	26,103	7.0
Total	158,145 (7.2)	123,728 (7.6)	-21.8

(Continued)

Table 2. — Continued  
**Soybean Production by Region and State, 1982 and 1983.**

Region and State	Production		Percent Change From 1982
	1982	1983	
	<i>thousands of bushels</i>		
<b>Appalachia</b>			
Kentucky	51,345	24,480	-52.3
North Carolina	52,500	33,000	-37.1
Tennessee	60,950	31,520	-48.3
Virginia	19,285	9,760	-49.4
West Virginia <sup>1</sup>	---	---	---
	184,080	98,760	
Total	(8.4)	(6.0)	-46.3
<b>Southeast</b>			
Alabama	50,000	30,000	-40.0
Florida	10,452	7,800	-25.4
Georgia	63,450	42,000	-33.8
South Carolina	39,600	23,595	-40.4
	163,502	103,395	
Total	(7.5)	(6.3)	-36.8
<b>Delta Area</b>			
Arkansas	105,600	70,300	-33.4
Louisiana	75,400	68,120	-9.7
Mississippi	92,300	58,900	-36.2
	273,300	197,320	
Total	(12.5)	(12.1)	-27.8
<b>Southern Plains</b>			
Oklahoma	5,040	3,910	-22.4
Texas	23,000	9,450	-9.7
	28,040	13,360	
Total	(1.3)	(.8)	-52.4
<b>Mountain Region<sup>1</sup></b>	---	---	---
<b>Pacific Coast<sup>1</sup></b>	---	---	---
<b>U.S. Total</b>	2,190,297	1,635,772	-25.3

<sup>1</sup> Little or no soybean production at present and little or no increase is expected.

Note: Numbers in parentheses are regional percentage shares of U.S. production.

Source: *Crop Production*, Statistical Reporting Service, USDA, Washington, D.C., various issues.

Table 3.  
**Intrastate Shipments of Soybeans for Nine Selected States, by Mode of Transport, 1982.<sup>a</sup>**

State	Truck	Rail	Barge	Total
	<i>thousands of bushels</i>			
Alabama	5,108	2,065	4,159	11,332
Arkansas	9,779	3,200	93	13,072
Georgia	7,117	7,690	0	14,807
Illinois	50,000	7,718	2,313	60,031
Kentucky	2,741	132	99	2,972
Louisiana	9,683	631	743	11,057
Mississippi	5,896	588	0	6,484
Ohio	58,965	4,829	0	63,794
Tennessee	22,166	2,519	0	24,685
Total volume	171,455	29,372	7,407	208,234
Modal percentage	82.3	14.1	3.6	100.0

<sup>a</sup> Does not include shipments to port areas.

Table 4.  
**Intrastate Shipments of Soybeans for Nine Selected States, by Mode of Transport, 1983.<sup>a</sup>**

State	Truck	Rail	Barge	Total
	<i>thousands of bushels</i>			
Alabama	6,455	230	1,460	8,145
Arkansas	31,311	2,062	0	33,373
Georgia	6,590	10,640	0	17,230
Illinois	100,071	12,305	2,592	114,968
Kentucky	3,935	1,600	258	5,793
Louisiana	8,357	0	0	8,357
Mississippi	4,760	5,479	261	10,500
Ohio	66,000	3,328	0	69,328
Tennessee	14,907	1,525	94	16,526
Total volume	242,386	37,169	4,665	284,220
Modal percentage	85.3	13.1	1.6	100.0

<sup>a</sup> Does not include shipments to port areas.

to almost 239 million bushels in 1983 (Table 5). One of the main reasons for the increased volume of soybean receipts was the shortfall in production in 1983. Total production in the nine-state region declined 29 percent between 1982 and 1983, from 986 million bushels to 697 million bushels, requiring an increase in soybean receipts from outside the region.

As managers of soybean marketing facilities competed for soybeans to meet current and anticipated processing and export demands, more soybeans entered market channels from storage. The major processing requirements in Illinois and Ohio, and their access to ports through the Mississippi River system and Great Lakes, resulted in an increase in total receipts in those two states between 1982 and 1983 (Table 5).

Ohio and Illinois receipts were up by nearly 30 and 50 percent, respectively. Ohio, which in 1982 was nearly self-sufficient in supplying soybeans for its own consumption and had a large volume of Toledo exports, became a deficit state in 1983. This required Ohio to receive supplies from states with lower processing capacity and from states where production losses were less severe. In Illinois, additional supplies had to be brought in from outside the state to meet the relatively fixed demands of processing plants and inland and river subterminal elevators.

Arkansas also showed over a 46 percent increase in receipts from other states, although operating from a much smaller base than the midwestern region.

### **Receipts by Mode of Transport**

Between 1982 and 1983, the mode of transport bringing in supplies from other states to the nine states shifted away from truck and toward rail and barge (Table 5). In 1982, 57.9 percent (120.3 million bushels) of all interstate receipts in the nine-state area were moved by truck. In 1983, total truck receipts dropped to only 106.4 million bushels,

accounting for 44.5 percent of total receipts by all modes. Receipts by rail increased from 63.9 to 99.5 million bushels between 1982 and 1983. Barge receipts also increased from 23.5 to 33.4 million bushels. Barge gained approximately 2 percentage points in market share (Table 5).

In contrast, Louisiana receipts from other states dropped by 76 percent between 1982 and 1983. However, their production declined by only 10 percent — the smallest of any major producing state. Mississippi also experienced a large decline in receipts, relying on inventories to supply processing and shipment demands.

Overall, the volume of soybean receipts from out-of-state sources moved by barge and rail increased for the nine states between 1982 and 1983 (Table 5). In 1982, 11.3 and 30.8 percent of the soybean receipts were transported by barge and rail, respectively. In 1983, barge's share increased to about 13.9 percent and rail's to 41.6 percent. The increased importance of barge and rail was accompanied by a reduced share supplied by truck. Truck's share declined from 57.9 percent in 1982 to 44.5 percent in 1983.

The shifts among modes of transport between 1982 and 1983 were not uniform among states. For Alabama, the decrease in receipts from out-of-state sources was distributed among all three transport modes. Truck receipts decreased from 13.4 million bushels in 1982 to almost 11.1 million bushels in 1983. Rail and barge receipts decreased from 8.8 and 8.7 million bushels to 6.2 and 5.6 million bushels, respectively.

In contrast, Illinois' receipts from other states by barge and rail increased substantially, from 29.8 million bushels (rail) and 4.7 million bushels (barge) in 1982 to 56.8 million bushels (rail) and 5.9 million bushels (barge) in 1983. The volume of truck receipts also rose, from 27.2 million bushels in 1982 to 29.6 million bushels in 1983, an increase of 8.8 percent.

Table 5.  
Interstate Receipts of Soybeans at Selected Destination States, by Mode of Transport, 1982 and 1983.<sup>a</sup>

Selected Destination State	Truck			Rail			Barge			Total		
	1982	1983	Percent Change	1982	1983	Percent Change	1982	1983	Percent Change	1982	1983	Percent Change
<i>thousands of bushels</i>												
Alabama	13,362 (11.1)	11,052 (10.4)	-17.3	8,768 (13.7)	6,168 (6.2)	-29.7	8,709 (37.1)	5,596 (16.8)	-35.7	30,839 (14.9)	22,816 (9.5)	-26.0
Arkansas	3,586 (3.0)	2,681 (2.5)	-25.2	5,104 (8.0)	4,700 (4.7)	-7.9	1,691 (7.2)	7,844 (23.5)	363.9	10,381 (5.0)	15,225 (6.4)	46.7
Georgia	6,725 (5.6)	5,735 (5.4)	-14.7	6,245 (9.8)	5,934 (6.0)	-5.0	0 (0.0)	0 (0.0)	---	12,970 (6.2)	11,669 (4.9)	-10.0
Illinois	27,160 (22.6)	29,554 (27.8)	8.8	29,834 (46.7)	56,848 (57.1)	90.6	4,685 (20.0)	5,892 (17.7)	25.8	61,679 (29.7)	92,294 (38.6)	49.6
Kentucky	10,445 (8.7)	8,938 (8.4)	-14.4	1,516 (2.4)	2,750 (2.8)	81.4	47 (0.2)	154 (0.5)	227.7	2,008 (5.8)	11,842 (4.9)	-1.4
Louisiana	1,592 (1.3)	261 (0.2)	-83.6	1,666 (2.6)	509 (0.5)	-69.5	0 (0.0)	0 (0.0)	---	3,258 (1.6)	770 (0.3)	-76.4
Mississippi	6,834 (5.7)	465 (0.4)	-93.2	2,293 (3.6)	3,098 (3.1)	35.1	844 (3.6)	57 (0.2)	-93.2	9,971 (4.8)	3,620 (1.5)	-63.7
Ohio	30,667 (25.5)	28,302 (26.6)	-7.7	204 (0.3)	11,854 (11.9)	5,710.8	93 (0.4)	47 (0.1)	-49.5	30,964 (14.9)	40,203 (16.8)	29.8
Tennessee	19,928 (16.6)	19,397 (18.2)	-2.7	8,238 (12.9)	7,617 (7.7)	-7.5	7,382 (31.5)	13,783 (41.3)	86.7	35,548 (17.1)	40,797 (17.1)	14.8
Total receipts	120,299 (100.0)	106,385 (100.0)	-11.6	63,868 (100.0)	99,478 (100.0)	55.8	23,451 (100.0)	33,373 (100.0)	42.3	207,618 (100.0)	239,236 (100.0)	15.2
Modal percent of total receipts	57.9	44.5	-23.3	30.8	41.6	35.2	11.3	13.9	23.5	100.0	100.0	

Note: Numbers in parentheses are state shares of the nine-state region receipts. They may not add to 100 due to rounding.

<sup>a</sup> Does not include port area receipts.



Truck receipts for Georgia, Kentucky, and Louisiana decreased between 1982 and 1983 — from 6.7 to 5.7 million bushels for Georgia; from 10.4 to 8.9 million bushels for Kentucky; and from 1.6 to .2 million bushels for Louisiana. Rail receipts also declined for Georgia (from 6.2 to 5.9 million bushels) and Louisiana (from 1.7 to .5 million bushels). For Mississippi, the state with the largest decline in both truck and barge usage, soybean receipts by both barge and truck decreased by 93.2 percent.

### **Interstate Shipments**

Interstate shipments included shipments by the nine states to all other states and port areas. Therefore, total shipments exceeded total receipts (Table 6). While total receipts for the nine states increased between 1982 and 1983, total shipments from these states declined from 561.5 million bushels in 1982 to 489.6 million bushels in 1983. There was a dramatic drop in shipments to ports. Much of the decline in shipments resulted from a loss of truck shipments from states to the ports located in Alabama and Louisiana.

Rail shipments also declined because of the decreased volume of shipments to ports. The volume shipped by barge remained virtually unchanged. This left barge with an increase in modal share, truck with a decrease, and rail with only a slight decline from 15.7 percent to 15.5 percent (Table 6).

All states in the study except Georgia and Mississippi decreased the volume of soybeans shipped in 1983. The largest loss was in Illinois and Ohio (about 18 million bushels each). Both states experienced production decreases of more than 20 percent, which were offset by increases in receipts. Kentucky reported the largest percentage decline in shipments because of a 52.3 percent drop in production. Kentucky receipts also declined, although by only 1.4 percent.

### **Port Receipts**

Receipts at ports are incomplete because only the nine states in the survey provided information on shipments to ports. However, partial data about origins from non-participating states were gathered using secondary data and information provided by the ports within the survey area.

Inspections for export showed a significant drop in volume of soybeans exported between 1982 and 1983. The largest absolute decline occurred at the Gulf ports while the largest percentage decline was experienced by the Great Lakes. Only the Pacific ports increased in volume and market share (Table 7).

The volume of soybeans inspected for export from the Louisiana Gulf region was approximately the same in 1983 as in 1982. However, the decline in inspections in the Great Lakes and Atlantic regions helped to boost the Gulf's share of exports from 81.9 percent to 84.1 percent. Despite the slight increase in export share, the Gulf's total volume declined from almost 762 million bushels in 1982 to 700.2 million bushels in 1983 due to the production shortfall in 1983.

The Pacific was the only port region that showed an increase in the volume of soybeans purchased by foreign countries during 1982-83, from 25.9 million bushels in 1982 to 28.7 million bushels in 1983. Its share of total U.S. soybean exports increased by one-fourth, from 2.8 percent in 1982 to 3.4 percent in 1983.

Some important changes occurred between 1982 and 1983 as a result of decreased supplies in states that normally provided soybeans to port regions. The total volume of soybeans received at the port areas from the nine-state region decreased from 449.9 million bushels in 1982 to 389.7 million bushels in 1983 — a reduction of 13.4 percent (Table 8). While all port regions shared in the decreased volume, the largest drop was in the Texas Gulf region and the smallest was in the North Atlantic region.

Table 6.  
Interstate Shipments of Soybeans from Selected Origin States, by Mode of Transport, 1982 and 1983.<sup>a</sup>

Selected Origin State	Truck			Rail			Barge			Total		
	1982	1983	Percent Change	1982	1983	Percent Change	1982	1983	Percent Change	1982	1983	Percent Change
<i>thousands of bushels</i>												
Alabama	4,364 (3.5)	2,499 (2.7)	-42.7	6,380 (7.2)	7,022 (9.3)	10.1	12,045 (3.5)	8,586 (2.7)	-28.7	22,789 (4.1)	18,107 (3.7)	-20.5
Arkansas	16,893 (13.5)	12,286 (13.4)	-27.3	1,143 (1.3)	960 (1.3)	-16.0	42,605 (12.2)	33,949 (10.5)	-20.3	60,641 (10.8)	47,195 (9.6)	-22.2
Georgia	8,462 (6.7)	6,541 (7.2)	-22.7	11,645 (13.2)	14,370 (19.0)	23.4	0 (0.0)	1,256 (0.4)	—	20,107 (3.6)	22,167 (4.5)	10.2
Illinois	18,762 (14.9)	9,560 (10.5)	-49.1	10,622 (12.1)	5,328 (7.0)	-49.8	148,503 (42.7)	145,720 (45.2)	-1.9	177,887 (31.7)	160,608 (32.8)	-9.7
Kentucky	4,543 (3.6)	3,404 (3.7)	-25.1	8,498 (9.6)	2,774 (3.7)	-67.4	28,977 (8.3)	23,643 (7.3)	-18.4	42,018 (7.5)	29,821 (6.1)	-29.0
Louisiana	16,950 (13.5)	11,139 (12.2)	-34.3	291 (0.3)	128 (0.2)	-56.0	23,497 (6.8)	24,345 (7.6)	3.6	40,738 (7.2)	35,612 (7.3)	-12.6
Mississippi	10,933 (8.7)	16,102 (17.6)	47.3	4,371 (5.0)	6,487 (8.6)	48.4	34,464 (9.9)	28,570 (8.9)	-17.1	49,768 (8.9)	51,159 (10.4)	2.8
Ohio	34,604 (27.6)	23,126 (25.3)	-33.2	39,489 (44.8)	31,944 (42.0)	-19.1	25,085 (7.2)	26,118 (8.1)	4.1	99,178 (17.7)	81,188 (16.6)	-18.1
Tennessee	10,087 (8.0)	6,804 (7.4)	-32.5	5,667 (6.4)	6,808 (9.0)	20.1	32,629 (9.4)	30,141 (9.4)	-7.6	48,383 (8.6)	43,753 (8.9)	-9.6
Total shipments	125,598 (100.0)	91,461 (100.0)	-27.2	88,106 (100.0)	75,821 (100.0)	-13.9	347,805 (100.0)	322,328 (100.0)	-7.3	561,509 (100.0)	489,610 (100.0)	-12.8
Modal percent of total shipments	22.4	18.7	-16.5	15.7	15.5	-1.3	61.9	65.8	6.3	100.0	100.0	

Note: Numbers in parentheses are state shares of shipments from the nine-state region. They may not add to 100 due to rounding.

<sup>a</sup> Includes shipments to port areas.

Table 7.  
Soybeans Inspected for Export by Region and Port Area, 1982 and 1983.

Port Region	1982		1983		Percent Change
	Total Volume	Percent Share	Total Volume	Percent Share	
	(,000 bu.)		(,000 bu.)		
<b>Great Lakes</b>					
Chicago Area	5,309	0.57	1,164	0.14	-78.07
Toledo Area	37,960	4.08	588	0.07	-98.45
Saginaw Area	2,340	0.25	19,422	2.33	730.00
Subtotal	45,609	4.90	21,174	2.54	-53.57
<b>Atlantic</b>					
North	14,155	1.52	13,925	1.67	-1.62
South	80,957	8.70	60,662	7.29	-25.07
Subtotal	95,112	10.22	74,587	8.96	-21.58
<b>Gulf</b>					
Louisiana Gulf	648,056	69.66	653,434	78.52	0.83
Eastern Gulf	48,305	5.19	22,919	2.75	-52.55
Texas Gulf	65,608	7.05	23,827	2.86	-63.68
Subtotal	761,969	81.90	700,180	84.14	-8.11
<b>Pacific</b>					
Columbia River	1,239	0.13	1,522	0.18	22.84
Puget Sound	14,262	1.53	15,963	1.92	11.93
California Ports	10,388	1.12	11,179	1.34	7.61
Subtotal	25,889	2.78	28,664	3.44	10.72
<b>Interior<sup>1</sup></b>					
	1,783	0.19	7,573	0.91	324.73
Subtotal	1,783	0.19	7,573	0.91	324.73
Total	930,362	100.00	832,178	100.00	-10.55

<sup>1</sup> Includes direct shipments to Canada or Mexico.

**Source:** *Grain and Feed Market News*, Agricultural Marketing Service, USDA, Washington, D.C., various issues

The Louisiana Gulf received about 75 percent of the total shipments to ports by the nine states in 1982 and 80.6 percent in 1983. The South Atlantic export area ranked a distant second in both 1982 and 1983, with receipts in 1982 of 48.4 million bushels, and in 1983 of 32.5 million bushels.

Truck shipments decreased for all port regions except the Louisiana Gulf. Rail shipments increased for all port regions except the Atlantic ports. Barge volume to the Gulf declined by 10.6 percent (Table 8).

The port destinations varied among the nine states. Although the Gulf ports provided the primary outlet for all nine states, Illinois and Ohio originated the largest volume for the Gulf ports as well as supplying the Lake and Atlantic ports (Table 9).

Alabama's relative contribution to port receipts declined from 2.4 percent in 1982 to 1.86 percent in 1983 (Table 10). The state experienced a major drop in shipments, especially to Mobile. Arkansas shipments to

ports also decreased, from 42.8 million bushels in 1982 to 34.9 million bushels in 1983 (Table 10), primarily because of a reduction in barge shipments to the Louisiana Gulf ports (Table 9).

Georgia's shipments to ports remained virtually unchanged. Illinois had a slight decline, primarily as a result of a drop in barge movements to the Louisiana Gulf. Kentucky's share of the export market dropped from 3.1 percent to 2.5 percent (Table 10). The primary reason was a loss in volume of rail shipments from Kentucky to the Louisiana Gulf. Louisiana, Mississippi, and Tennessee all maintained nearly constant shares of shipments to port areas in 1982 and 1983, even though total volume declined. Mississippi was one of the few states to show an increase, with 37.4 million bushels shipped to ports in 1982 and 39.6 million bushels shipped in 1983. Ohio's shipments to port areas decreased by over 23 million bushels between 1982 and 1983, primarily because of

Table 8.  
Receipts of Soybeans at Port Areas from the Nine-State Region by Mode of Transport, 1982-83.

Export Region	Truck			Rail			Barge			Total		
	1982	1983	Change	1982	1983	Change	1982	1983	Change	1982	1983	Change
	<i>thousands of bushels</i>		<i>percent</i>	<i>thousands of bushels</i>		<i>percent</i>	<i>thousands of bushels</i>		<i>percent</i>	<i>thousands of bushels</i>		<i>percent</i>
South Atlantic	6,000	2,700	-55.0	42,399	29,812	-29.7	0	0	---	48,399	32,512	-32.8
Eastern Gulf	3,292	2,050	-37.7	5,985	8,462	41.4	12,047	6,274	-47.9	21,324	16,786	-21.3
Louisiana Gulf	11,401	15,500	36.0	2,462	5,020	103.9	323,524	293,695	-9.2	337,387	314,215	-6.9
Texas Gulf	3,000	0	-100.0	811	960	18.4	0	0	---	3,811	960	-74.8
Chicago/Duluth	1,000	221	-77.9	655	718	9.6	65	92	41.5	1,720	1,031	-40.1
North Atlantic	0	0	---	6,249	6,092	-2.5	0	0	---	6,249	6,092	-2.5
Toledo	30,000	16,566	-44.8	1,000	1,500	50.0	0	0	---	31,000	18,066	-41.7
Total receipts	54,693	37,037	-32.3	59,561	52,564	-11.7	335,636	300,061	-10.6	449,890	389,662	-13.4
Modal percent of total	12.2	9.5	-21.8	13.2	13.5	1.9	74.6	77.0	3.2	100.0	100.0	



Table 9.  
Soybean Receipts at Port Regions from Selected States by State and Mode of Transport, 1982 and 1983.

Origin State and Export Region	Truck			Rail			Barge			Total		
	1982	1983	Percent Change	1982	1983	Percent Change	1982	1983	Percent Change	1982	1983	Percent Change
<i>thousands of bushels</i>												
<b>Alabama</b>												
South Atlantic	0	0	---	4,191	4,000	-4.6	0	0	---	4,191	4,000	-4.6
Eastern Gulf	2,292	50	-97.8	2,000	1,750	-12.5	10,000	4,314	-56.9	14,292	6,114	-57.2
Louisiana Gulf	0	0	---	0	0	---	1,892	3,710	96.1	1,892	3,710	96.1
Subtotal	2,292	50	-97.8	6,191	5,750	-7.1	11,892	8,024	-32.5	20,375	13,824	-32.2
<b>Arkansas</b>												
Louisiana Gulf	0	0	---	240	0	-100.0	42,009	33,949	-19.2	42,249	33,949	-19.6
Texas Gulf	0	0	---	520	960	84.6	0	0	---	520	960	84.6
Subtotal	0	0	---	760	960	26.3	42,009	33,949	-19.2	42,769	34,909	-18.4
<b>Georgia</b>												
South Atlantic	6,000	2,700	-55.0	8,128	10,556	29.9	0	0	---	14,128	13,256	-6.2
Eastern Gulf	0	0	---	1,000	858	-14.2	0	460	---	1,000	1,318	31.8
Louisiana Gulf	0	0	---	0	92	---	0	796	---	0	888	---
Subtotal	6,000	2,700	-55.0	9,128	11,506	26.1	0	1,256	---	15,128	15,462	2.2
<b>Illinois</b>												
Chicago/Duluth	1,000	221	-77.9	655	718	9.6	65	92	41.5	1,720	1,031	-40.1
South Atlantic	0	0	---	3,231	256	-92.1	0	0	---	3,321	256	-92.1
Eastern Gulf	0	0	---	0	500	---	2,000	1,500	-25.0	2,000	2,000	0.0
Louisiana Gulf	0	0	---	1,500	800	-46.7	140,665	130,239	-7.4	142,165	131,039	-7.9
Subtotal	1,000	221	-77.9	5,386	2,274	-57.8	142,730	131,831	-7.6	149,116	134,326	-9.9
<b>Kentucky</b>												
South Atlantic	0	0	---	1,602	0	-100.0	0	0	---	1,602	0	-100.0
Louisiana Gulf	0	0	---	0	0	---	25,078	18,871	-24.8	25,078	18,871	-24.8
Subtotal	0	0	---	1,602	0	-100.0	25,078	18,871	-24.8	26,680	18,871	-29.3

(Continued)



Table 9. — Continued

**Soybean Receipts at Port Regions from Selected States by State and Mode of Transport, 1982 and 1983.**

Origin State and Export Region	Truck			Rail			Barge			Total		
	1982	1983	Percent Change	1982	1983	Percent Change	1982	1983	Percent Change	1982	1983	Percent Change
<i>thousands of bushels</i>												
<b>Louisiana</b>												
Eastern Gulf	1,000	0	-100.0	0	0	---	0	0	---	1,000	0	-100.0
Louisiana Gulf	10,000	10,500	5.0	0	128	0	23,000	24,294	5.6	33,000	34,922	5.8
Texas Gulf	3,000	0	-100.0	291	0	-100.0	0	0	—	3,291	0	-100.0
Subtotal	14,000	10,500	-25	291	128	-56.0	23,000	24,294	5.6	37,291	34,922	-6.4
<b>Mississippi</b>												
Eastern Gulf	0	2,000	---	985	0	-100.0	47	0	-100.0	1,032	2,000	93.8
Louisiana Gulf	1,401	5,000	256.9	722	4,000	454.0	34,270	28,570	-16.6	36,393	37,570	3.2
Subtotal	1,401	7,000	396.6	1,707	4,000	134.3	34,317	28,570	-16.7	37,425	39,570	5.7
<b>Ohio</b>												
Toledo	30,000	16,566	-44.8	1,000	1,500	500.0	0	0	---	31,000	18,066	-41.7
North Atlantic	0	0	---	6,249	6,092	-2.5	0	0	---	6,249	6,092	-2.5
South Atlantic	0	0	---	24,175	15,000	-38.0	0	0	---	24,175	15,000	-38.0
Louisiana Gulf	0	0	---	0	0	---	24,215	23,125	-4.5	24,215	23,125	-4.5
Subtotal	30,000	16,566	-44.8	31,424	22,592	-28.1	24,215	23,125	-4.5	85,639	62,283	-27.3
<b>Tennessee</b>												
South Atlantic	0	0	---	1,072	0	-100.0	0	0	---	1,072	0	-100.0
Eastern Gulf	0	0	---	2,000	5,354	167.7	0	0	---	2,000	5,354	167.7
Louisiana Gulf	0	0	---	0	0	—	32,395	30,141	-7.0	32,395	30,141	-7.0
Subtotal	0	0	---	3,072	5,354	74.3	32,395	30,141	-7.0	35,467	35,495	1.0
Total receipts	54,693	37,037	-32.3	59,561	52,564	-11.7	335,636	---	-10.6	449,890	389,622	-13.4
Modal percent of total receipts	12.2	9.5	-21.8	13.2	13.5	1.9	74.6	77.0	3.2	100.0	100.0	

Table 10.  
**State Shares of Port Receipts of Soybeans, 1982 and 1983.**

Selected Origin States	1982		1983		Percent Change
	Total Volume	Percent Share	Total Volume	Percent Share	
	(,000 bu.)		(,000 bu.)		
Alabama	20,375	2.40	13,824	1.86	-32.15
Arkansas	42,769	5.04	34,909	4.69	-18.38
Georgia	15,128	1.78	15,462	2.08	2.21
Illinois	149,116	17.58	134,326	18.04	-9.92
Kentucky	26,680	3.15	18,871	2.53	-29.27
Louisiana	37,291	4.40	34,922	4.69	-6.35
Mississippi	37,425	4.41	39,570	5.32	5.73
Ohio	85,639	10.10	62,283	8.37	-27.27
Tennessee	35,467	4.18	35,495	4.77	0.08
Subtotal	449,890	53.04	389,622	52.35	-13.4
Other Origin States <sup>a</sup>					
Delaware	185	0.02	0	0.00	-100.00
Florida	113	0.01	1,200	0.16	961.95
Indiana	77,226	9.10	39,320	5.28	-49.08
Iowa	95,325	11.24	96,394	12.95	1.12
Kansas	6,960	0.82	1,322	0.18	-81.01
Michigan	4,138	0.49	6,903	0.93	66.82
Minnesota	71,418	8.42	100,660	13.52	40.94
Missouri	86,488	10.20	67,777	9.10	-21.63
Nebraska	30,632	3.61	16,953	2.28	-44.66
North Carolina	6,686	0.79	2,599	0.35	-61.13
North Dakota	708	0.08	0	0.00	-100.00
Oklahoma	3,399	0.40	2,122	0.29	-37.57
Pennsylvania	50	0.01	0	0.00	-100.00
South Carolina	1,200	0.14	1,225	0.16	2.08
Texas	3,836	0.45	2,238	0.30	-41.66
Virginia	1,820	0.21	1,306	0.18	-28.24
Wisconsin	8,136	0.96	14,789	1.99	81.77
Total	848,210	100.00	744,470	100.00	-12.23

<sup>a</sup> Includes secondary data only; no truck data were provided by these states.

a reduction in rail shipments to the Atlantic coast (Table 10).

Barge carried 74.6 percent of the soybean shipments to export ports from the nine states in 1982 and 77 percent in 1983. Rail shipments accounted for 13.2 percent in 1982 and 13.5 percent in 1983, while truck accounted for 12.2 percent in 1982 and 9.5 percent in 1983 (Table 9).

When rail and barge data for non-participating states (truck data from these states were not available) were included with the survey data from the nine states, total receipts at ports declined between 1982 and 1983 by 12.23 percent: from 848.2 million bushels in 1982 to 744.5 million bushels in 1983 (Table 10). The percentage decrease for all states was only slightly less than for the nine-state region alone.

The states with the largest port shares in 1982 were Illinois, Iowa, Missouri, and Ohio. In 1983, Illinois had the largest share, Minnesota had the second largest, and Iowa, Missouri, and Ohio held the third, fourth, and fifth spots (Table 10). The largest absolute increase in shipments to ports was Minnesota's (an increase of 29 million bushels and 40.9 percent between 1982 and 1983). Minnesota experienced only a 10 percent drop in production (Table 2) and was therefore better able to supply ports than were Illinois and Iowa.

### **Foreign Destinations for U.S. Soybean Exports**

In 1982, the Netherlands received 200.5 million bushels, or 21.6 percent of the total volume of soybeans exported, making that nation the most important destination for U.S. soybeans (Table 11). However, it should be noted that Rotterdam, Netherlands, is a transshipment port for the rest of the European Community. Japan ranked second in 1982 with 153 million bushels, or 16.5 percent of the volume of soybeans exported in that year.

These two countries' rankings were reversed in 1983, with Japan purchasing 167

million bushels and the Netherlands 160.8 million bushels. Spain ranked third both years, averaging 96.7 million bushels for the period. The Federal Republic of Germany (West) ranked fourth in 1982 with 66.9 percent, and Belgium ranked fifth with 49.1 percent. In 1983, the Republic of China (Taiwan), accounted for 47 million bushels of soybeans and replaced the Federal Republic of Germany (West) as the fourth leading purchaser of U.S. soybeans. Belgium remained in fifth place.

The Netherlands, Japan, and Spain were the major purchasers of soybeans from the Gulf Region during 1982-83. The average volume of soybeans bought by the Netherlands from Gulf ports accounted for about 24.3 percent of the total. Japan averaged about 18 percent and Spain about 9.8 percent.

### **State Origins and Destinations**

Analysis of detailed data in the Appendix tables reveals interesting patterns of change in mode and destination. For example, as a result of a 33.4 percent reduction in production (Table 2), Arkansas' interstate shipments decreased from 60.6 million in 1982 to 47.2 million bushels in 1983 (Table 6). Appendix Tables A-2 and A-11 show that barge receipts by Arkansas increased almost four-fold primarily due to increased volume from Illinois origins. Likewise, Arkansas' intrastate truck shipments increased by over 200 percent (21.5 million bushels). These data indicate that Arkansas' increased demand for interstate supplies was filled by Illinois' surplus diverted from Gulf ports to Arkansas River terminals. These soybeans were then transported (mostly by truck) to processing plants that in 1983 had been served by local supplies or by rail from Kansas.

Overall, the modal share in the nine-state region changed very little. However, each of the Appendix tables reveals important shifts in origins, destinations, and the primary modes of transport. At state and substate lev-

Table 11.  
Exports of U.S. Soybeans from Canada and the United States, by Port Region and Destination, 1982 and 1983.

Destination	Canada		Great Lakes		Atlantic		Gulf		Pacific		Total	
	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983
<i>thousands of bushels</i>												
Australia	0	0		0	0	0	243	1,788	0	0	243	1,788
Belgium	0	0	936	0	1,855	0	46,277	45,460	0	0	49,068	45,460
Brazil	0	0	0	0	0	0	8,026	0	0	0	8,026	0
Canada	0	0	11,106	5,671	0	0	0	0	0	0	11,106	5,671
China, Main	0	0	0	0	0	0	9,001	586	0	0	9,001	586
China, Taiwan	0	0	0	0	5,059	4,167	34,203	33,120	5,195	9,754	44,457	47,041
Columbia	0	0	0	0	0	0	3,700	4,201	0	0	3,700	4,201
Denmark	0	0	0	0	2,049	506	3,217	4,733	0	0	5,266	5,239
Dominican Republic	0	0	0	0	0	0	1,044	704	0	0	1,044	704
Ecuador	0	0	0	0	0	0	593	1,289	0	0	593	1,289
Egypt	0	356	565	0	1,102	578	1,386	1,161	0	0	3,053	2,095
France	0	1,782	2,610	0	8,161	2,364	22,787	14,553	0	0	33,558	18,699
Germany Fr. (W)	0	0	0	0	0	0	66,871	37,345	0	0	66,871	37,345
Greece	0	0	0	0	531	2,145	5,866	8,616	0	0	6,397	10,761
Guatemala	0	0	0	0	0	0	0	141	0	0	0	141
Haiti	0	0	0	0	0	0	2,717	1,700	0	0	2,717	1,700
Indonesia	265	0	0	0	926	768	6,203	6,119	6,109	6,195	13,503	13,082
Israel	1,231	1,477	0	0	6,746	3,301	10,213	12,113	0	0	18,190	16,891
Italy	0	0	0	3,546	2,156	0	44,168	34,375	0	0	46,324	37,921
Jamaica	0	0	0	0	0	0	2,128	2,661	0	0	2,128	2,661
Japan	1,933	897	2,192	0	15,307	19,474	121,844	141,217	11,782	5,391	153,058	166,979
Korea Rep.	0	0	0	0	0	0	20,016	22,166	1,679	3,379	21,695	25,545
Kuwait	0	0	0	0	0	332	533	827	0	0	533	1,159
Lebanon	0	0	280	0	0	86	1,170	650	0	0	1,450	736

(Continued)

Table 11. — Continued

## Exports of U.S. Soybeans from Canada and the United States, by Port Region and Destination, 1982 and 1983.

Destination	Canada		Great Lakes		Atlantic		Gulf		Pacific		Total	
	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983
	<i>thousands of bushels</i>											
Malaysia	0	0	0	0	768	0	3,187	1,313	352	1,619	4,307	2,932
Mexico	0	0	0	0	0	0	6,083	22,741	772	1,563	6,855	24,304
Morocco	0	0	303	0	0	266	393	0	0	0	696	266
Netherlands	1,418	0	606	0	2,047	1,402	196,468	159,389	0	0	200,539	160,791
Nicaragua	0	0	0	0	0	0	492	617	0	0	492	617
Niger	0	0	0	0	0	0	0	18	0	0	0	18
Norway	0	0	0	0	1,756	0	10,909	9,864	0	0	12,665	9,864
Panama	0	0	0	0	0	0	0	420	0	0	0	420
Peru	0	0	0	0	0	0	26	309	0	0	26	309
Philippines	0	0	0	0	0	0	606	1,122	0	0	606	1,123
Poland	254	0	574	0	1,109	1,113	1,728	5,987	0	0	3,665	7,100
Portugal	0	0	0	1,164	9,336	8,492	6,812	14,952	0	0	16,150	24,608
Rep. S. Africa	0	0	0	0	88	0	110	110	0	0	198	110
Romania	1,253	0	638	0	4,355	3,053	3,966	8,169	0	0	10,212	11,222
Sierra Leone	0	0	0	0	0	0	0	118	0	0	0	118
Singapore	0	0	0	0	0	0	721	0	0	0	721	0
South Pacific Is.	0	0	0	0	0	0	0	365	0	0	0	365
Spain	8,885	709	8,239	1,874	17,337	12,942	79,771	63,673	0	0	114,232	79,198
Sweden	0	0	0	0	0	0	0	239	0	0	0	239
Switzerland	0	0	0	0	0	0	0	924	0	0	0	924
United Kingdom	401	871	1,920	1,952	13,022	9,591	8,318	7,658	0	0	23,661	20,072
USSR	0	287	0	588	699	4,007	21,020	16,483	0	763	21,719	22,128
Venezuela	0	0	0	0	626	0	2,270	2,003	0	0	2,896	2,003
Yugoslavia	0	0	0	0	77	0	6,881	8,180	0	0	6,958	8,180
Total	15,640	6,379	29,969	14,795	95,112	74,587	761,969	700,180	25,889	28,664	928,579	824,605

Source: Grain and Feed Market News, Agricultural Marketing Service, USDA, Washington, D.C., various issues.



els, these shifts had far-reaching consequences for transportation policies and rates. The impact of reduced production regardless of the cause (weather, government programs, or prices) had significant impacts on transportation demands and rates.

## Supplemental Analysis of Non-Participating States

Although only nine states were included in the survey of grain handling firms, other data sources provided information on volumes shipped by rail and barge. These data sources were: for rail, the ICC Waybill Sample, 1982 and 1983, and for barge, source data from the U.S. Army Corps of Engineers, Waterborne Commerce of the United States, 1982 and 1983.

Without survey data, no adjustments to data from secondary sources were possible and no information on trade volumes was available. However, even the rail and barge data for the two years reveal useful relationships and changes over time. Therefore, these numbers have been included in Appendix B (1982 data) and Appendix C (1983 data) for all states. These tables include all adjustments for participating states presented in Appendix A as well as unadjusted data for non-participating states for 1982 and 1983.

## Conclusion

The primary objective of this study was to analyze the effect of a major change in production of soybeans between 1982 and 1983 on shipment patterns in selected states. The combined production in the nine states decreased from 986 million bushels in 1982 to only 697 million bushels in 1983. The decreased production of soybeans in 1983 lowered total exports, shifted origin-destination patterns, increased transportation requirements for all modes combined, and decreased short-haul truck movements as compared to long-haul barge movements.

Production and supplies available for crushing declined in all of the nine states. Lower volumes of supplies in states that are usually net importers required increased shipments into these states. Surplus states found their surpluses reduced and the destinations of their surpluses shifted from export to domestic processors.

The total volume of soybeans received by the nine selected states from other states increased from almost 208 million bushels in 1982 to 239.2 million bushels in 1983, an increase of 15.2 percent. This increase in interstate receipts can be attributed to the large decrease in production in 1983 and the associated reduction of inventories to meet domestic and export demands.

This reduction of production in states with large processing capacities resulted in increased transportation volumes in 1983 as managers and owners competed to compensate for the shortfall in local production. The market share of rail and barge receipts from other states increased between 1982 and 1983. Rail's share of the soybean receipts from other states increased 35.2 percent, while barge's share increased 23.5 percent.

The volume of truck shipments decreased in almost all of the states surveyed with the exception of Mississippi. Rail shipments from Illinois, Kentucky, and Louisiana declined in

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1983. Barge shipments in the nine states declined slightly with the largest change coming from Arkansas (a decrease of 8.7 million bushels).

The total volume of soybeans shipped to other states decreased from 562 million bushels in 1982 to 490 million bushels in 1983. Illinois ranked first in terms of the total volume of soybeans shipped, with about 178 million bushels in 1982 and 160.6 million bushels in 1983. The major market outlet for Illinois soybeans was the Louisiana Gulf, which accounted for about 79.9 percent of the total volume of soybeans shipped from Illinois to other states in 1982 and 81.7 percent in 1983. Between 1982 and 1983, Gulf and Pacific port regions increased their share of total exports; Lakes and Atlantic port regions lost shares. The largest absolute increase in export volume was at the Louisiana Gulf; the largest decreases were at the Texas Gulf and Toledo ports.



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# Appendix Tables

## Receipts and Shipments of Soybeans by State, 1982 and 1983

### Appendix A

1982 and 1983 Receipts and Shipments  
by State for the 9 States

**Table A-1. Alabama, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
	<i>thousands of bushels</i>			
Arkansas	0	0	542	542
Florida	0	744	0	744
Georgia	2,168	1,841	0	4,009
Illinois	0	1,749	1,279	3,028
Indiana	77	127	542	746
Iowa	0	1,000	786	1,786
Kansas	0	0	180	180
Kentucky	1,651	191	2,181	4,023
Louisiana	2,000	0	0	2,000
Minnesota	0	0	1,302	1,302
Mississippi	513	1,002	147	1,662
Missouri	385	681	1,181	2,247
Nebraska	0	1,101	219	1,320
Ohio	0	76	104	180
South Carolina	2,042	0	0	2,042
Tennessee	4,526	256	144	4,926
Wisconsin	0	0	102	102
Total interstate	13,362	8,768	8,709	30,839

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
	<i>thousands of bushels</i>			
Georgia	1,131	145	0	1,277
Tennessee	940	0	153	1,093
Virginia	0	44	0	44
South Atlantic	0	4,191	0	4,191
Eastern Gulf	2,292	2,000	10,000	14,292
Louisiana Gulf	0	0	1,892	1,892
Total interstate	4,364	6,380	12,045	22,789
Intrastate	5,108	2,065	4,159	11,332
Total	9,472	8,445	16,204	34,121

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-2. Arkansas, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Illinois	0	0	1,081	1,081
Indiana	0	0	166	166
Iowa	0	233	150	383
Kansas	0	2,342	0	2,342
Louisiana	662	0	52	714
Mississippi	1,000	0	0	1,000
Missouri	50	1,573	47	1,670
Nebraska	0	906	0	906
Ohio	0	0	152	152
Oklahoma	500	0	0	500
Tennessee	662	0	43	705
Texas	712	50	0	762
Total interstate	3,586	5,104	1,691	10,381

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	0	0	542	542
Arizona	0	383	0	383
Louisiana	191	0	0	191
Mississippi	5,022	0	54	5,076
Missouri	1,122	0	0	1,122
Tennessee	10,558	0	0	10,558
Louisiana Gulf	0	240	42,009	42,249
Texas Gulf	0	520	0	520
Total interstate	16,893	1,143	42,605	60,641
Intrastate	9,779	3,200	93	13,072
Total	26,672	4,343	42,698	73,713

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-3. Georgia, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	1,132	145	0	1,277
Florida	2,446	1,958	0	4,404
Kentucky	0	2,100	0	2,100
Mississippi	0	604	0	604
Ohio	0	80	0	80
South Carolina	3,031	1,358	0	4,389
Tennessee	116	0	0	166
Total interstate	6,725	6,245	0	12,970

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	2,168	1,841	0	4,009
Florida	23	28	0	51
Kentucky	0	109	0	109
Mississippi	0	55	0	55
North Carolina	0	116	0	116
South Carolina	271	0	0	271
Tennessee	0	368	0	368
South Atlantic	6,000	8,128	0	14,128
Eastern Gulf	0	1,000	0	1,000
Total interstate	8,462	11,645	0	20,107
Intrastate	7,117	7,690	0	14,807
Total	15,579	19,335	0	34,914

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-4. Illinois, 1982**
**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Indiana	4,953	3,282	256	8,491
Iowa	8,808	15,588	976	25,372
Kentucky	691	782	856	2,329
Michigan	26	0	0	26
Minnesota	0	0	88	88
Missouri	11,100	10,182	2,148	23,430
Ohio	0	0	204	204
Wisconsin	1,582	0	157	1,739
Total interstate	27,160	29,834	4,685	61,679

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	0	1,749	1,279	3,028
Arkansas	0	0	1,081	1,081
Indiana	7,120	992	0	8,112
Iowa	1,068	0	95	1,163
Kentucky	606	225	0	831
Louisiana	0	516	0	516
Minnesota	0	0	51	51
Mississippi	0	228	200	428
Missouri	8,968	0	0	8,968
North Carolina	0	464	0	464
Tennessee	0	1,062	3,067	4,129
Chicago/Duluth	1,000	655	65	1,720
South Atlantic	0	3,231	0	3,231
Eastern Gulf	0	0	2,000	2,000
Louisiana Gulf	0	1,500	140,665	142,165
Total interstate	18,762	10,622	148,503	177,887
Intrastate	50,000	7,718	2,313	60,031
Total	68,762	18,340	150,816	237,918

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-5. Kentucky, 1982**
**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Georgia	0	109	0	109
Illinois	606	225	0	831
Indiana	4,880	1,047	0	5,927
Louisiana	0	0	47	47
Ohio	1,700	0	0	1,700
Tennessee	3,259	135	0	3,394
Total interstate	10,445	1,516	47	12,008

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	1,651	191	2,181	4,023
Georgia	0	2,100	0	2,100
Illinois	691	782	856	2,329
Indiana	125	128	0	253
Mississippi	0	0	52	52
North Carolina	0	1,200	0	1,200
Ohio	264	0	0	264
Tennessee	1,812	2,495	810	5,117
South Atlantic	0	1,602	0	1,602
Louisiana Gulf	0	0	25,078	25,078
Total interstate	4,543	8,498	28,977	42,018
Intrastate	2,741	132	99	2,972
Total	7,284	8,630	29,076	44,990

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-6. Louisiana, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Arkansas	191	0	0	191
Illinois	0	516	0	516
Mississippi	1,401	721	0	2,122
Missouri	0	429	0	429
Total interstate	1,592	1,666	0	3,258

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	2,000	0	0	2,000
Arkansas	662	0	52	714
Iowa	0	0	98	98
Kentucky	0	0	47	47
Minnesota	0	0	52	52
Mississippi	288	0	102	390
Ohio	0	0	93	93
Wisconsin	0	0	53	53
Eastern Gulf	1,000	0	0	1,000
Louisiana Gulf	10,000	0	23,000	33,000
Texas Gulf	3,000	291	0	3,291
Total interstate	16,950	291	23,497	40,738
Intrastate	9,683	631	743	11,057
Total	26,633	922	24,240	51,795

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-7. Mississippi, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Arkansas	5,022	0	54	5,076
Georgia	0	55	0	55
Illinois	0	228	200	428
Iowa	0	0	50	50
Kentucky	0	0	52	52
Louisiana	288	0	102	390
Missouri	0	0	295	295
Ohio	0	0	44	44
Tennessee	1,524	2,010	47	3,581
Total interstate	6,834	2,293	844	9,971

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	513	1,002	147	1,662
Arkansas	1,000	0	0	1,000
Georgia	0	604	0	604
Louisiana	1,401	721	0	2,122
Tennessee	6,618	337	0	6,955
Eastern Gulf	0	985	47	1,032
Louisiana Gulf	1,401	722	34,270	36,393
Total interstate	10,933	4,371	34,464	49,768
Intrastate	5,896	588	0	6,484
Total	16,829	4,959	34,464	56,252

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.



## Table A-8. Ohio, 1982

### Soybean Receipts<sup>a</sup> from Various Origins

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Indiana	13,381	0	0	13,381
Kentucky	264	0	0	264
Louisiana	0	0	93	93
Michigan	16,610	204	0	16,814
Pennsylvania	412	0	0	412
Total interstate	30,667	204	93	30,964

### Soybean Shipments<sup>b</sup> to Various Destinations

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	0	76	104	180
Arkansas	0	0	152	152
Florida	0	76	0	76
Georgia	0	80	0	80
Illinois	0	0	204	204
Indiana	2,904	0	0	2,904
Kentucky	1,700	0	0	1,700
Maryland	0	900	0	900
Mississippi	0	0	44	44
North Carolina	0	4,933	0	4,933
Pennsylvania	0	2,000	0	2,000
Tennessee	0	0	366	366
Toledo	30,000	1,000	0	31,000
North Atlantic	0	6,249	0	6,249
South Atlantic	0	24,175	0	24,175
Louisiana Gulf	0	0	24,215	24,215
Total interstate	34,604	39,489	25,085	99,178
Intrastate	58,965	4,289	0	63,794
Total	96,569	44,318	25,085	162,972

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

## Table A-9. Tennessee, 1982

### Soybean Receipts<sup>a</sup> from Various Origins

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	940	0	153	1,093
Arkansas	10,558	0	0	10,558
Georgia	0	368	0	368
Illinois	0	1,062	3,067	4,129
Indiana	0	3,976	1,308	5,284
Iowa	0	0	582	582
Kentucky	1,812	2,495	810	5,117
Minnesota	0	0	475	475
Mississippi	6,618	337	0	6,955
Missouri	0	0	621	621
Ohio	0	0	366	366
Total interstate	19,928	8,238	7,382	35,548

### Soybean Shipments<sup>b</sup> to Various Destinations

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	4,526	256	144	4,926
Arkansas	662	0	43	705
Georgia	116	0	0	116
Indiana	0	194	0	194
Kentucky	3,259	135	0	3,394
Mississippi	1,524	2,010	47	3,581
South Atlantic	0	1,072	0	1,072
Eastern Gulf	0	2,000	0	2,000
Louisiana Gulf	0	0	32,395	32,395
Total interstate	10,087	5,667	32,629	48,383
Intrastate	22,166	2,519	0	24,685
Total	32,253	8,186	32,629	73,068

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.



**Table A-10. Alabama, 1983****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Georgia	2,168	1,611	0	3,779
Illinois	154	649	532	1,220
Indiana	77	942	532	1,551
Iowa	0	0	1,000	1,000
Kentucky	1,651	420	1,918	3,989
Minnesota	0	0	560	560
Mississippi	1,513	1,379	0	2,892
Missouri	0	0	178	178
Nebraska	0	0	47	47
Ohio	0	167	895	1,062
South Carolina	42	0	0	42
Tennessee	4,405	1,000	0	5,405
Virginia	1,042	0	0	1,042
Wisconsin	0	0	49	49
Total interstate	11,052	6,168	5,596	22,816

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Georgia	1,575	418	0	1,993
Illinois	0	0	50	50
Mississippi	0	810	0	810
Tennessee	874	0	512	1,386
Virginia	0	44	0	44
South Atlantic	0	4,000	0	4,000
Eastern Gulf	50	1,750	4,314	6,114
Louisiana Gulf	0	0	3,710	3,710
Total interstate	2,499	7,022	8,586	18,107
Intrastate	6,455	230	1,460	8,145
Total	8,954	7,252	10,046	26,252

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-11. Arkansas, 1983****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Illinois	0	0	5,891	5,891
Indiana	0	0	748	748
Iowa	0	390	567	957
Kansas	15	820	0	835
Louisiana	463	0	0	463
Minnesota	0	0	49	49
Mississippi	1,000	0	0	1,000
Missouri	540	1,740	238	2,518
Nebraska	0	1,610	103	1,713
Ohio	0	0	192	192
Oklahoma	523	0	0	523
Texas	140	140	0	280
Wisconsin	0	0	56	56
Total interstate	2,681	4,700	7,844	15,225

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Louisiana	173	0	0	173
Mississippi	265	0	0	265
Missouri	1,852	0	0	1,852
Tennessee	9,996	0	0	9,996
Louisiana Gulf	0	0	33,949	33,949
Texas Gulf	0	960	0	960
Total interstate	12,286	960	33,949	47,195
Intrastate	31,311	2,062	0	33,373
Total	43,597	3,022	33,949	80,568

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-12. Georgia, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	1,575	418	0	1,993
Florida	4,000	1,082	0	5,082
Illinois	0	143	0	143
Indiana	0	2,572	0	2,572
Kentucky	0	553	0	553
Mississippi	0	194	0	194
Ohio	0	399	0	399
South Carolina	44	119	0	163
Tennessee	116	454	0	570
Total interstate	5,735	5,934	0	11,669

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	2,168	1,611	0	3,779
Florida	21	4	0	25
South Carolina	902	556	0	1,458
Tennessee	750	693	0	1,443
South Atlantic	2,700	10,556	0	13,256
Eastern Gulf	0	858	460	1,318
Louisiana Gulf	0	92	796	888
Total interstate	6,541	14,370	1,256	22,167
Intrastate	6,590	10,640	0	17,230
Total	13,131	25,010	1,256	39,397

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-13. Illinois, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	0	0	50	50
Indiana	6,135	11,089	47	17,271
Iowa	8,167	27,386	1,882	37,435
Kansas	0	0	140	140
Kentucky	561	0	1,738	2,299
Michigan	26	0	0	26
Minnesota	0	2,846	635	3,481
Missouri	10,700	11,767	753	23,220
Nebraska	0	700	0	700
North Dakota	0	702	0	702
Ohio	3,019	0	542	3,561
South Dakota	0	1,917	0	1,917
Wisconsin	946	441	105	1,492
Total interstate	29,554	56,848	5,892	92,294

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	154	649	417	1,220
Arkansas	0	0	5,891	5,891
Georgia	0	143	0	143
Indiana	408	760	0	1,168
Iowa	49	0	0	49
Kentucky	486	113	0	599
Mississippi	0	469	57	526
Missouri	8,242	0	571	8,813
Ohio	0	88	0	88
Tennessee	0	745	6,953	7,698
Wisconsin	0	87	0	87
Chicago/Duluth	221	718	92	1,031
South Atlantic	0	256	0	256
Eastern Gulf	0	500	1,500	2,000
Louisiana Gulf	0	800	130,239	131,039
Total interstate	9,560	5,328	145,720	160,608
Intrastate	100,071	12,305	2,592	114,968
Total	109,631	17,633	148,312	275,576

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-14. Kentucky, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Illinois	486	113	0	599
Indiana	5,000	1,832	0	6,832
Minnesota	0	805	0	805
North Carolina	1,000	0	0	1,000
Ohio	369	0	154	523
Tennessee	2,083	0	0	2,083
Total interstate	8,938	2,750	154	11,842

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	1,651	420	1,918	3,989
Georgia	0	553	0	553
Illinois	561	0	1,738	2,299
Indiana	0	234	0	234
Iowa	0	0	115	115
North Carolina	0	364	0	364
Ohio	196	0	0	196
Tennessee	996	1,203	1,001	3,200
Louisiana Gulf	0	0	18,871	18,871
Total interstate	3,404	2,774	23,643	29,821
Intrastate	3,935	1,600	258	5,793
Total	7,339	4,374	23,901	35,614

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-15. Louisiana, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Arkansas	173	0	0	173
Mississippi	88	509	0	597
Total interstate	261	509	0	770

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Arkansas	463	0	0	463
Tennessee	0	0	51	51
Texas	176	0	0	176
Louisiana Gulf	10,500	128	24,294	34,922
Total interstate	11,139	128	24,345	35,612
Intrastate	8,357	0	0	8,357
Total	19,496	128	24,345	43,969

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-16. Mississippi, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	0	810	0	810
Arkansas	265	0	0	265
Illinois	0	469	57	526
Iowa	0	1,819	0	1,819
Tennessee	200	0	0	200
Total interstate	465	3,098	57	3,620

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	1,513	1,379	0	2,892
Arkansas	1,000	0	0	1,000
Georgia	0	194	0	194
Louisiana	88	509	0	597
Tennessee	6,501	405	0	6,906
Eastern Gulf	2,000	0	0	2,000
Louisiana Gulf	5,000	4,000	28,570	37,570
Total interstate	16,102	6,487	28,570	51,159
Intrastate	4,760	5,479	261	10,500
Total	20,862	11,966	28,831	61,659

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table A-17. Ohio, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Illinois	0	88	0	88
Indiana	12,037	11,116	0	23,153
Kentucky	196	0	0	196
Michigan	15,972	650	0	16,622
Missouri	0	0	47	47
New York	44	0	0	44
Pennsylvania	53	0	0	53
Total interstate	28,302	11,854	47	40,203

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	0	167	895	1,062
Arkansas	0	0	192	192
Florida	0	167	0	167
Georgia	0	399	0	399
Illinois	3,019	0	542	3,561
Indiana	457	0	0	457
Kentucky	369	0	154	523
New York	0	1,662	0	1,662
North Carolina	1,217	4,176	0	5,393
Pennsylvania	0	240	0	240
South Carolina	1,218	946	0	2,164
Tennessee	280	930	1,210	2,420
Virginia	0	665	0	665
Toledo	16,566	1,500	0	18,066
North Atlantic	0	6,092	0	6,092
South Atlantic	0	15,000	0	15,000
Louisiana Gulf	0	0	23,125	23,125
Total interstate	23,126	31,944	26,188	81,188
Intrastate	66,000	3,328	0	69,328
Total	89,126	35,272	26,118	150,516

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.



**Table A-18. Tennessee, 1983****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	874	0	512	1,386
Arkansas	9,996	0	0	9,996
Georgia	750	693	0	1,443
Illinois	0	745	6,953	7,698
Indiana	0	2,460	1,335	3,795
Iowa	0	1,181	1,366	2,547
Kentucky	996	1,203	1,001	3,200
Louisiana	0	0	51	51
Minnesota	0	0	788	788
Mississippi	6,501	405	0	6,906
Missouri	0	0	414	414
Nebraska	0	0	51	51
Ohio	280	930	1,210	2,420
Wisconsin	0	0	102	102
Total interstate	19,397	7,617	13,783	40,797

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation			Total
	Truck	Rail	Barge	
<i>thousands of bushels</i>				
Alabama	4,405	1,000	0	5,405
Georgia	116	454	0	570
Kentucky	2,083	0	0	2,083
Mississippi	200	0	0	200
Eastern Gulf	0	5,354	0	5,354
Louisiana Gulf	0	0	30,141	30,141
Total interstate	6,804	6,808	30,141	43,753
Intrastate	14,907	1,525	94	16,526
Total	21,711	8,333	30,235	60,279

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.



## Appendix B

### 1982 Receipts and Shipments of Soybeans by State for All States (Rail and Barge only)

## Table B-1. Alabama, 1982

### Soybean Receipts<sup>a</sup> from Various Origins

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Arkansas	0	542	542
Florida	744	0	744
Georgia	1,841	0	1,841
Illinois	1,749	1,279	3,028
Indiana	127	542	669
Iowa	1,000	786	1,786
Kansas	0	180	180
Kentucky	191	2,181	2,372
Minnesota	0	1,302	1,302
Mississippi	1,002	147	1,149
Missouri	681	1,181	1,862
Nebraska	1,101	219	1,320
Ohio	76	104	180
Tennessee	256	144	400
Wisconsin	0	102	102
Total interstate	8,768	8,709	17,477

### Soybean Shipments<sup>b</sup> to Various Destinations

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Georgia	145	0	145
Tennessee	0	153	153
Virginia	44	0	44
South Atlantic	4,191	0	4,191
Eastern Gulf	2,000	10,000	12,000
Louisiana Gulf	0	1,892	1,892
Total interstate	6,380	12,045	18,425
Intrastate	2,065	4,159	6,224
Total	8,445	16,204	24,649

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-2. Arizona, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Arkansas	383	0	383
Total interstate	383	0	383

<sup>a</sup> Receipts at ports are not included.

**Table B-3. Arkansas, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	0	1,081	1,081
Indiana	0	166	166
Iowa	233	150	383
Kansas	2,342	0	2,342
Louisiana	0	52	52
Missouri	1,573	47	1,620
Nebraska	906	0	906
Ohio	0	152	152
Tennessee	0	43	43
Texas	50	0	50
Total interstate	5,104	1,691	6,795

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	542	542
Arizona	383	0	383
Mississippi	0	54	54
Louisiana Gulf	240	42,009	42,249
Texas Gulf	520	0	520
Total interstate	1,143	42,605	43,748
Intrastate	3,200	93	3,293
Total	4,343	42,698	47,041

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-4. California, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Nebraska	4,514	0	4,514
Total interstate	4,514	0	4,514

<sup>a</sup> Receipts at ports are not included.

**Table B-5. Delaware, 1982****Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
South Atlantic	0	185	185
Total interstate	0	185	185
Total	0	185	185

<sup>a</sup> Shipments to ports are treated as separate destinations.

**Table B-6. Florida, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Georgia	28	0	28
Ohio	76	0	76
Total interstate	104	0	104

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	744	0	744
Georgia	1,958	0	1,958
South Atlantic	113	0	113
Total interstate	2,815	0	2,815
Total	2,815	0	2,815

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-7. Georgia, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	145	0	145
Florida	1,958	0	1,958
Kentucky	2,100	0	2,100
Mississippi	604	0	604
Ohio	80	0	80
South Carolina	1,358	0	1,358
Total interstate	6,245	0	6,245

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	1,841	0	1,841
Florida	28	0	28
Kentucky	109	0	109
Mississippi	55	0	55
North Carolina	116	0	116
Tennessee	368	0	368
South Atlantic	8,128	0	8,128
Eastern Gulf	1,000	0	1,000
Total interstate	11,645	0	11,645
Intrastate	7,690	0	7,690
Total	19,335	0	19,335

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-8. Illinois, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	3,282	256	3,538
Iowa	15,588	976	16,564
Kentucky	782	856	1,638
Minnesota	0	88	88
Missouri	10,182	2,148	12,330
Ohio	0	204	204
Wisconsin	0	157	157
Total interstate	29,834	4,685	34,519

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	1,749	1,279	3,028
Arkansas	0	1,081	1,081
Indiana	992	0	992
Iowa	0	95	95
Kentucky	225	0	225
Louisiana	516	0	516
Minnesota	0	51	51
Mississippi	228	200	428
North Carolina	464	0	464
Tennessee	1,062	3,067	4,129
Chicago/Duluth	655	65	720
South Atlantic	3,231	0	3,231
Eastern Gulf	0	2,000	2,000
Louisiana Gulf	1,500	140,665	142,165
Total interstate	10,622	148,503	159,125
Intrastate	7,718	2,313	10,031
Total	18,340	150,816	169,156

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-9. Indiana, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	992	0	992
Kentucky	128	0	128
Tennessee	194	0	194
Total interstate	1,314	0	1,314

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	127	542	669
Arkansas	0	166	166
Illinois	3,282	256	3,538
Kentucky	1,047	0	1,047
Maryland	456	0	456
North Carolina	1,480	0	1,480
Pennsylvania	2,000	0	2,000
Tennessee	3,976	1308	5,284
Chicago/Duluth	1,500	0	1,500
Toledo	918	0	918
North Atlantic	6,276	0	6,276
South Atlantic	23,849	0	23,849
Eastern Gulf	5,311	0	5,311
Louisiana Gulf	0	36,622	36,622
Total interstate	50,222	38,894	89,116
Intrastate	2,613	0	2,613
Total	52,835	38,894	91,729

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-10. Iowa, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	0	95	95
Louisiana	0	98	98
Nebraska	127	0	127
Total interstate	127	193	320

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	1,000	786	1,786
Arkansas	233	150	383
Illinois	15,588	976	16,564
Kansas	588	0	588
Mississippi	0	50	50
Missouri	1,424	100	1,524
Tennessee	0	582	582
Washington	3,565	0	3,565
South Atlantic	725	0	725
Eastern Gulf	431	0	431
Texas Gulf	14,440	0	14,440
Pacific N.W.	3,565	0	3,565
California Ports	733	0	733
Total interstate	45,292	75,075	120,367
Intrastate	32,880	45	32,925
Total	78,172	75,120	153,292

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.



**Table B-11. Kansas, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	588	0	588
Missouri	193	0	193
Nebraska	1,853	0	1,853
Total interstate	2,634	0	2,634

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	180	180
Arkansas	2,342	0	2,342
Missouri	1,058	44	1,102
Washington	332	0	332
Louisiana Gulf	0	2,701	2,701
Texas Gulf	3,927	0	3,927
Pacific N.W.	332	0	332
Total interstate	7,991	2,925	10,916
Intrastate	1,246	0	1,246
Total	9,237	2,925	12,162

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-12. Kentucky, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Georgia	109	0	109
Illinois	225	0	225
Indiana	1,047	0	1,047
Louisiana	0	47	47
Tennessee	135	0	135
Total interstate	1,516	47	1,563

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	191	2,181	2,372
Georgia	2,100	0	2,100
Illinois	782	856	1,638
Indiana	128	0	128
Mississippi	0	52	52
North Carolina	1,200	0	1,200
Tennessee	2,495	810	3,305
South Atlantic	1,602	0	1,602
Louisiana Gulf	0	25,078	25,078
Total interstate	8,498	28,977	37,475
Intrastate	132	99	231
Total	8,630	29,076	37,706

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-13. Louisiana, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	516	0	516
Mississippi	721	0	721
Missouri	429	0	429
Total interstate	1,666	0	1,666

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Arizona	0	52	52
Iowa	0	98	98
Kentucky	0	47	47
Minnesota	0	52	52
Mississippi	0	102	102
Ohio	0	93	93
Wisconsin	0	53	53
Louisiana Gulf	0	23,000	23,000
Texas Gulf	291	0	291
Total interstate	291	23,497	23,788
Intrastate	631	743	1,374
Total	922	24,240	25,162

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-14. Maryland, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	456	0	456
Ohio	900	0	900
Total interstate	1,356	0	1,356

<sup>a</sup> Receipts at ports are not included.

**Table B-15. Michigan, 1982**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Ohio	204	0	204
Toledo	1,000	0	1,000
South Atlantic	2,138	0	2,138
Total interstate	3,342	0	3,342
Total	3,342	0	3,342

<sup>a</sup> Shipments to ports are treated as separate destinations.

**Table B-16. Minnesota, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	0	51	51
Louisiana	0	52	52
North Dakota	1,115	0	1,115
South Dakota	560	0	560
Total interstate	1,675	103	1,778

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	1,302	1,302
Illinois	0	88	88
Missouri	0	99	99
Tennessee	0	475	475
Washington	2,776	0	2,776
Louisiana Gulf	0	68,589	68,589
Texas Gulf	0	53	53
Pacific N.W.	2,776	0	2,776
Total interstate	5,552	70,606	76,158
Intrastate	17,106	46	17,152
Total	22,658	70,652	93,310

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-17. Mississippi, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Arkansas	0	54	54
Georgia	55	0	55
Illinois	228	200	428
Iowa	0	50	50
Kentucky	0	52	52
Louisiana	0	102	102
Missouri	0	295	295
Ohio	0	44	44
Tennessee	2,010	47	2,057
Total interstate	2,293	844	3,137

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	1,002	147	1,149
Georgia	604	0	604
Louisiana	721	0	721
Tennessee	337	0	337
Eastern Gulf	985	47	1,032
Louisiana	722	34,270	34,992
Total interstate	4,371	34,464	38,835
Intrastate	588	0	588
Total	4,959	34,464	39,423

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-18. Missouri, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	1,424	100	1,524
Kansas	1,058	44	1,102
Minnesota	0	99	99
Nebraska	2,454	0	2,454
Total interstate	4,936	243	5,179

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	681	1,181	1,862
Arkansas	1,573	47	1,620
Illinois	10,182	2,148	12,330
Kansas	193	0	193
Louisiana	429	0	429
Mississippi	0	295	295
Tennessee	0	621	621
Eastern Gulf	2,000	0	2,000
Louisiana Gulf	2,000	77,538	79,538
Texas Gulf	4,950	0	4,950
Total interstate	22,008	81,830	103,838
Intrastate	13,110	80	13,190
Total	35,118	81,910	117,028

<sup>a</sup> Receipts at ports are not included.<sup>b</sup> Shipments to ports are treated as separate destinations.**Table B-19. Nebraska, 1982****Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	1,101	219	1,320
Arkansas	906	0	906
California	4,514	0	4,514
Iowa	127	0	127
Kansas	1,853	0	1,853
Missouri	2,454	0	2,454
Washington	7,503	0	7,503
Louisiana Gulf	798	2,178	2,976
Texas Gulf	12,153	0	12,153
Pacific N.W.	7,503	0	7,503
California Ports	8,000	0	8,000
Total interstate	46,912	2,397	49,309
Intrastate	1,177	0	1,777
Total	48,089	2,397	50,486

<sup>a</sup> Shipments to ports are treated as separate destinations.

**Table B-20. North Carolina, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Georgia	116	0	116
Illinois	464	0	464
Indiana	1,480	0	1,480
Kentucky	1,200	0	1,200
Ohio	4,933	0	4,933
South Carolina	1,029	0	1,029
Virginia	473	0	473
Total interstate	9,695	0	9,695

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
South Atlantic	4,873	1,813	6,686
Total interstate	4,873	1,813	6,686
Intrastate	4,773	0	4,773
Total	9,646	1,813	11,459

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-21. North Dakota, 1982**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Minnesota	1,115	0	1,115
Washington	708	0	708
Pacific N.W.	708	0	708
Total interstate	2,531	0	2,531
Intrastate	0	0	0
Total	2,531	0	2,531

<sup>a</sup> Shipments to ports are treated as separate destinations.



**Table B-22. Ohio, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Louisiana	0	93	93
Michigan	204	0	204
Total interstate	204	93	297

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	76	104	180
Arkansas	0	152	152
Florida	76	0	76
Georgia	80	0	80
Illinois	0	204	204
Maryland	900	0	900
Mississippi	0	44	44
North Carolina	4,933	0	4,933
Pennsylvania	2,000	0	2,000
Tennessee	0	366	366
Toledo	1,000	0	1,000
North Atlantic	6,249	0	6,249
South Atlantic	24,175	0	24,175
Louisiana Gulf	0	2,422	2,422
Total interstate	39,489	3,292	42,781
Intrastate	6,297	0	6,297
Total	45,786	3,292	49,078

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-23. Oklahoma, 1982**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Louisiana Gulf	0	2,318	2,318
Texas Gulf	1,081	0	1,081
Total interstate	1,081	2,318	3,399
Intrastate	0	0	0
Total	1,081	2,318	3,399

<sup>a</sup> Shipments to ports are treated as separate destinations.

**Table B-24. Pennsylvania, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	2,000	0	2,000
Ohio	2,000	0	2,000
Total interstate	4,000	0	4,000

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Louisiana Gulf	0	50	50
Total interstate	0	50	50
Intrastate	0	0	0
Total	0	50	50

<sup>a</sup> Receipts at ports are not included.<sup>b</sup> Shipments to ports are treated as separate destinations.**Table B-25. South Carolina, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Virginia	125	0	125
Total interstate	125	0	125

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Georgia	1,358	0	1,358
North Carolina	1,029	0	1,029
Total interstate	2,387	0	2,387
Intrastate	2,943	0	2,943
Total	5,330	0	5,330

<sup>a</sup> Receipts at ports are not included.<sup>b</sup> Shipments to ports are treated as separate destinations.**Table B-26. South Dakota, 1982****Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Minnesota	560	0	560
Texas Gulf	1,800	0	1,800
Total interstate	2,360	0	2,360
Intrastate	0	0	0
Total	2,360	0	2,360

<sup>a</sup> Shipments to ports are treated as separate destinations.

**Table B-27. Tennessee, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	153	153
Georgia	368	0	368
Illinois	1,062	3,067	4,129
Indiana	3,976	1,308	5,284
Iowa	0	582	582
Kentucky	2,495	810	3,305
Minnesota	0	475	475
Mississippi	337	0	337
Missouri	0	621	621
Ohio	0	366	366
<b>Total interstate</b>	<b>8,238</b>	<b>7,382</b>	<b>15,620</b>

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	256	144	400
Arkansas	0	43	43
Indiana	194	0	194
Kentucky	135	0	135
Mississippi	2,010	47	2,057
South Atlantic	1,072	0	1,072
Eastern Gulf	2,000	0	2,000
Louisiana Gulf	0	32,395	32,395
<b>Total interstate</b>	<b>5,667</b>	<b>32,629</b>	<b>38,296</b>
<b>Intrastate</b>	<b>2,519</b>	<b>0</b>	<b>2,519</b>
<b>Total</b>	<b>8,186</b>	<b>32,629</b>	<b>40,815</b>

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table B-28. Texas, 1982**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Arkansas	50	0	50
Louisiana Gulf	637	189	826
Texas Gulf	3,010	0	3,010
<b>Total interstate</b>	<b>3,697</b>	<b>189</b>	<b>3,886</b>
<b>Intrastate</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>3,697</b>	<b>189</b>	<b>3,886</b>

<sup>a</sup> Shipments to ports are treated as separate destinations.

**Table B-29. Virginia, 1982**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
North Carolina	473	0	473
South Carolina	125	0	125
South Atlantic	113	1,707	1,820
<b>Total interstate</b>	<b>711</b>	<b>1,707</b>	<b>2,418</b>
<b>Intrastate</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>711</b>	<b>1,707</b>	<b>2,418</b>

<sup>a</sup> Shipments to ports are treated as separate destinations.

**Table B-30. Washington, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	3,565	0	3,565
Kansas	332	0	332
Minnesota	2,776	0	2,776
Nebraska	7,503	0	7,503
North Dakota	708	0	708
Total interstate	14,884	0	14,884

<sup>a</sup> Receipts at ports are not included.

**Table B-31. Wisconsin, 1982****Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	102	102
Illinois	0	157	157
Louisiana Gulf	0	8,163	8,163
Total interstate	0	8,395	8,395
Intrastate <sup>b</sup>	---	---	---
Total	0	8,395	8,395

<sup>a</sup> Shipments to ports are treated as separate destinations.

<sup>b</sup> Intrastate shipments were not reported.

**Table B-32. California Ports, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	733	0	733
Nebraska	8,000	0	8,000
Total interstate	8,733	0	8,733

<sup>a</sup> Receipts at ports are not included.

**Table B-33. Chicago/Duluth Ports, 1982****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	655	65	720
Indiana	1,500	0	1,500
Total interstate	2,155	65	2,220

<sup>a</sup> Receipts at ports are not included.

**Table B-34. Eastern Gulf Ports, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	2,000	10,000	12,000
Georgia	1,000	0	1,000
Illinois	0	2,000	2,000
Indiana	5,311	0	5,311
Iowa	431	0	431
Mississippi	985	47	1,032
Missouri	2,000	0	2,000
Tennessee	2,000	0	2,000
Total interstate	13,727	12,047	25,774

<sup>a</sup> Receipts at ports are not included.

**Table B-35. Louisiana Gulf Ports, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	1,892	1,892
Arkansas	240	42,009	42,249
Illinois	1,500	140,665	142,165
Indiana	0	36,622	36,622
Iowa	3,000	72,431	75,431
Kansas	0	2,701	2,701
Kentucky	0	25,078	25,078
Louisiana	0	23,000	23,000
Minnesota	0	68,589	68,589
Mississippi	722	34,270	34,992
Missouri	2,000	77,538	79,538
Nebraska	798	2,178	2,976
Ohio	0	2,422	2,422
Oklahoma	0	2,318	2,318
Pennsylvania	0	50	50
Tennessee	0	32,395	32,395
Texas	637	189	826
Wisconsin	0	8,136	8,136
Total interstate	8,897	572,483	581,380

<sup>a</sup> Receipts at ports are not included.

**Table B-36. North Atlantic Ports, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	6,276	0	6,276
Ohio	6,249	0	6,249
Total interstate	12,525	0	12,525

<sup>a</sup> Receipts at ports are not included.



**Table B-37. Pacific Northwest Ports, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	3,565	0	3,565
Kansas	332	0	332
Minnesota	2,776	0	2,776
Nebraska	7,503	0	7,503
North Dakota	708	0	708
Total interstate	14,884	0	14,884

<sup>a</sup> Receipts at ports are not included.

**Table B-38. South Atlantic Ports, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	4,191	0	4,191
Delaware	0	185	185
Florida	113	0	113
Georgia	8,128	0	8,128
Illinois	3,231	0	3,231
Indiana	23,849	0	23,849
Iowa	725	0	725
Kentucky	1,602	0	1,602
Michigan	2,138	0	2,138
North Carolina	4,873	1,813	6,686
Ohio	24,175	0	24,175
Tennessee	1,072	0	1,072
Virginia	113	1,707	1,820
Total interstate	74,210	3,705	77,915

<sup>a</sup> Receipts at ports are not included.

**Table B-39. Texas Gulf Ports, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Arkansas	520	0	520
Iowa	14,440	0	14,440
Kansas	3,927	0	3,927
Louisiana	291	0	291
Minnesota	0	53	53
Missouri	4,950	0	4,950
Nebraska	12,153	0	12,153
Oklahoma	1,081	0	1,081
South Dakota	1,800	0	1,800
Texas	3,010	0	3,010
<b>Total interstate</b>	<b>42,172</b>	<b>53</b>	<b>42,225</b>

<sup>a</sup> Receipts at ports are not included.

**Table B-40. Toledo Port Area, 1982**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	918	0	918
Michigan	1,000	0	1,000
Ohio	1,000	0	1,000
<b>Total interstate</b>	<b>2,918</b>	<b>0</b>	<b>2,918</b>

<sup>a</sup> Receipts at ports are not included.

## Appendix C

### 1983 Receipts and Shipments of Soybeans by State for All States (Rail and Barge only)

## Table C-1. Alabama, 1983

### Soybean Receipts<sup>a</sup> from Various Origins

Origin	Mode of transportation		Total
	Rail	Barge	
<i>thousands of bushels</i>			
Georgia	1,611	0	1,611
Illinois	649	417	1,066
Indiana	942	532	1,474
Iowa	0	1,000	1,000
Kentucky	420	1,918	2,338
Minnesota	0	560	560
Mississippi	1,379	0	1,379
Missouri	0	178	178
Nebraska	0	47	47
Ohio	167	895	1,062
Tennessee	1,000	0	1,000
Wisconsin	0	49	49
Total interstate	6,168	5,596	11,764

### Soybean Shipments<sup>b</sup> to Various Destinations

Destination	Mode of transportation		Total
	Rail	Barge	
<i>thousands of bushels</i>			
Georgia	418	0	418
Illinois	0	50	50
Mississippi	810	0	810
Tennessee	0	512	512
Virginia	44	0	44
South Atlantic	4,000	0	4,000
Eastern Gulf	1,750	4,314	6,064
Louisiana Gulf	0	3,710	3,710
Total interstate	7,022	8,586	15,608
Intrastate	230	1,460	1,690
Total	7,252	10,046	17,298

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-2. Arizona, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Kansas	1,447	0	1,447
Missouri	340	0	340
Texas	495	0	495
Total interstate	2,282	0	2,282

<sup>a</sup> Receipts at ports are not included.

**Table C-3. Arkansas, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	0	5,891	5,891
Indiana	0	748	748
Iowa	390	567	957
Kansas	820	0	820
Minnesota	0	49	49
Missouri	1,740	238	1,978
Nebraska	1,610	103	1,713
Ohio	0	192	192
Texas	140	0	140
Wisconsin	0	56	56
Total interstate	4,700	7,844	12,544

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Louisiana Gulf	0	33,949	33,949
Texas Gulf	960	0	960
Total interstate	960	33,949	34,909
Intrastate	2,062	0	2,062
Total	3,022	33,949	36,971

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-4. California, 1983****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Nebraska	2,593	0	2,593
Total interstate	2,593	0	2,593

<sup>a</sup> Receipts at ports are not included.

**Table C-5. Florida, 1983****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Georgia	4	0	4
Ohio	167	0	167
Total interstate	171	0	171

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Georgia	1,082	0	1,082
South Atlantic	1,200	0	1,200
Total interstate	2,282	0	2,282
Intrastate	0	0	0
Total	2,282	0	2,282

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-6. Georgia, 1983****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	418	0	418
Florida	1,082	0	1,082
Illinois	143	0	143
Indiana	2,572	0	2,572
Kentucky	553	0	553
Mississippi	194	0	194
Ohio	399	0	399
South Carolina	119	0	119
Tennessee	454	0	454
Total interstate	5,934	0	5,934

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	1,611	0	1,611
Florida	4	0	4
South Carolina	556	0	556
Tennessee	693	0	693
South Atlantic	10,556	0	10,556
Eastern Gulf	858	460	1,318
Louisiana Gulf	92	796	888
Total interstate	14,370	1,256	15,626
Intrastate	10,640	0	10,640
Total	25,010	1,256	26,266

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.



**Table C-7. Illinois, 1983****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	50	0
Indiana	11,089	47	11,136
Iowa	27,386	1,882	29,268
Kansas	0	140	140
Kentucky	0	1,738	1,738
Minnesota	2,846	635	3,481
Missouri	11,767	753	12,520
Nebraska	700	0	700
North Dakota	702	0	702
Ohio	0	542	542
South Dakota	1,917	0	1,917
Wisconsin	441	105	546
Total interstate	56,848	5,892	62,740

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	649	417	1,066
Arkansas	0	5,891	5,891
Georgia	143	0	143
Indiana	760	0	760
Kentucky	113	0	113
Mississippi	469	67	526
Missouri	0	571	571
Ohio	88	0	88
Tennessee	745	6,953	7,698
Wisconsin	87	0	87
Chicago/Duluth	718	92	810
South Atlantic	256	0	256
Eastern Gulf	500	1,500	2,000
Louisiana Gulf	800	130,239	131,039
Total interstate	5,328	145,720	151,048
Intrastate	12,305	2,592	14,897
Total	17,633	148,312	165,945

<sup>a</sup> Receipts at ports are not included.<sup>b</sup> Shipments to ports are treated as separate destinations.**Table C-8. Indiana, 1983****Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	408	760	1,168
Kentucky	0	234	234
Ohio	457	0	457
Total interstate	865	994	1,859

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	942	532	1,474
Arkansas	0	748	748
Georgia	2,572	0	2,572
Illinois	11,089	47	11,136
Kentucky	1,832	0	1,832
Maryland	1,399	0	1,399
North Carolina	237	0	237
Ohio	11,116	0	11,116
Pennsylvania	5,042	0	5,042
Virginia	1,871	0	1,871
Wisconsin	0	57	57
Toledo	200	0	200
South Atlantic	9,000	0	9,000
Eastern Gulf	0	1,000	1,000
Louisiana Gulf	0	28,420	28,420
Total interstate	47,760	32,139	79,899
Intrastate	8,479	0	8,479
Total	56,239	32,139	88,378

<sup>a</sup> Receipts at ports are not included.<sup>b</sup> Shipments to ports are treated as separate destinations.

## Table C-9. Iowa, 1983

### Soybean Receipts<sup>a</sup> from Various Origins

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Kentucky	0	115	115
Minnesota	198	0	198
Missouri	0	108	108
Nebraska	317	0	317
South Dakota	127	0	127
Total interstate	642	223	865

### Soybean Shipments<sup>b</sup> to Various Destinations

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	1,000	1,000
Arkansas	390	567	957
Illinois	27,386	1,882	29,268
Kansas	887	0	887
Minnesota	406	0	406
Mississippi	1,819	0	1,819
Missouri	3,570	240	3,810
Nebraska	259	0	259
Tennessee	1,181	1,366	2,547
Virginia	735	0	735
Washington	907	0	907
Chicago/Duluth	200	0	200
South Atlantic	735	0	735
Eastern Gulf	1,000	1,475	2,475
Louisiana Gulf	2,081	82,491	84,572
Texas Gulf	3,247	0	3,247
Pacific N.W.	2,367	0	2,367
California Ports	2,746	0	2,746
Total interstate	49,916	89,021	138,937
Intrastate	39,187	0	39,187
Total	89,103	89,021	178,124

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

## Table C-10. Kansas, 1983

### Soybean Receipts<sup>a</sup> from Various Origins

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	887	0	887
Missouri	681	0	681
Nebraska	1,158	0	1,158
Total interstate	2,726	0	2,726

### Soybean Shipments<sup>b</sup> to Various Destinations

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Arizona	1,447	0	1,447
Arkansas	820	0	820
Illinois	0	140	140
Missouri	379	0	379
Louisiana Gulf	10	486	496
Texas Gulf	500	0	500
California Ports	326	0	326
Total interstate	3,482	626	4,108
Intrastate	2,188	0	2,188
Total	5,670	626	6,296

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-11. Kentucky, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	113	0	113
Indiana	1,832	0	1,832
Minnesota	805	0	805
Ohio	0	154	154
Total interstate	2,750	154	2,904

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	420	1,918	2,338
Georgia	553	0	553
Illinois	0	1,738	1,738
Indiana	234	0	234
Iowa	0	115	115
North Carolina	364	0	364
Tennessee	1,203	1,001	2,204
Louisiana Gulf	0	18,871	18,871
Total interstate	2,774	23,643	26,417
Intrastate	1,600	258	1,858
Total	4,374	23,901	28,275

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-12. Louisiana, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Mississippi	509	0	509
Total interstate	509	0	509

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Tennessee	0	51	51
Louisiana Gulf	128	24,294	24,422
Total interstate	128	24,345	24,473
Intrastate	0	0	0
Total	128	24,345	24,473

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-13. Maryland, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	1,399	0	1,399
Total interstate	1,399	0	1,399

<sup>a</sup> Receipts at ports are not included.

**Table C-14. Michigan, 1983**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Ohio	650	0	650
Pennsylvania	3,826	0	3,826
Virginia	797	0	797
South Atlantic	5,000	0	5,000
Louisiana Gulf	0	903	903
Total interstate	10,273	903	11,176
Intrastate <sup>b</sup>	---	---	---
Total	10,273	903	11,176

<sup>a</sup> Shipments to ports are treated as separate destinations.

<sup>b</sup> Intrastate shipments were not reported.

**Table C-15. Minnesota, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	406	0	406
North Dakota	2,208	0	2,208
South Dakota	540	0	540
Total interstate	3,154	0	3,154

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	560	560
Arkansas	0	49	49
Illinois	2,846	635	3,481
Iowa	198	0	198
Kentucky	805	0	805
Missouri	820	684	1,504
Nebraska	191	0	191
Tennessee	0	788	788
Wisconsin	209	0	209
Eastern Gulf	0	2,399	2,399
Louisiana Gulf	0	98,261	98,261
Total interstate	5,069	103,376	108,445
Intrastate	40,586	0	40,586
Total	45,655	103,376	149,031

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-16. Mississippi, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	810	0	810
Illinois	469	57	526
Iowa	1,819	0	1,819
Total interstate	3,098	57	3,155

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	1,379	0	1,379
Georgia	194	0	194
Louisiana	509	0	509
Tennessee	405	0	405
Louisiana Gulf	4,000	28,570	32,570
Total interstate	6,487	28,570	35,057
Intrastate	5,479	261	5,740
Total	11,966	28,831	40,797

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-17. Missouri, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	0	571	571
Iowa	3,570	240	3,810
Kansas	379	0	379
Minnesota	820	684	1,504
Nebraska	4,097	0	4,097
South Dakota	700	0	700
Wisconsin	0	46	46
Total interstate	9,566	1,541	11,107

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	178	178
Arizona	340	0	340
Arkansas	1,740	238	1,978
Illinois	11,767	753	12,520
Iowa	0	108	108
Kansas	681	0	681
Ohio	0	47	47
Tennessee	0	414	414
Louisiana Gulf	476	65,120	65,596
Texas Gulf	2,181	0	2,181
Total interstate	17,185	66,858	84,043
Intrastate	8,630	0	8,630
Total	25,815	66,858	92,673

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.



**Table C-18. Nebraska, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	259	0	259
Minnesota	191	0	191
South Dakota	2,472	0	2,472
Total interstate	2,922	0	2,922

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	47	47
Arkansas	1,610	103	1,713
California	2,593	0	2,593
Illinois	700	0	700
Iowa	317	0	317
Kansas	1,158	0	1,158
Missouri	4,097	0	4,097
Tennessee	0	51	51
Louisiana Gulf	3,232	3,454	6,686
Texas Gulf	3,160	0	3,160
California Ports	7,107	0	7,107
Total interstate	23,974	3,655	27,629
Intrastate	657	0	657
Total	24,631	3,655	28,286

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-19. North Carolina, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	237	0	237
Kentucky	364	0	364
Ohio	4,176	0	4,176
South Carolina	791	0	791
Virginia	632	0	632
Total interstate	6,200	0	6,200

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
South Carolina	434	0	434
South Atlantic	1,181	1,418	2,599
Total interstate	1,615	1,418	3,033
Intrastate	3,679	0	3,679
Total	5,294	1,418	6,712

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-20. North Dakota, 1983**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	702	0	702
Minnesota	2,208	0	2,208
Wisconsin	129	0	129
Total interstate	3,039	0	3,039
Intrastate	233	0	233
Total	3,272	0	3,272

<sup>a</sup> Shipments to ports are treated as separate destinations.

**Table C-21. Ohio, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	88	0	88
Indiana	11,116	0	11,116
Michigan	650	0	650
Missouri	0	47	47
Total interstate	11,854	47	11,901

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	167	895	1,062
Arkansas	0	192	192
Florida	167	0	167
Georgia	399	0	399
Illinois	0	542	542
Kentucky	0	154	154
New York	1,662	0	1,662
North Carolina	4,176	0	4,176
Pennsylvania	240	0	240
South Carolina	946	0	946
Tennessee	930	1,210	2,140
Toledo	1,500	0	1,500
North Atlantic	6,092	0	6,092
South Atlantic	15,000	0	15,000
Total interstate	0	23,125	23,125
Intrastate	3,328	0	3,328
Total	35,272	26,118	61,390

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-22. Oklahoma, 1983**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Louisiana Gulf	0	1,870	1,870
Texas Gulf	252	0	252
Total interstate	252	1,870	2,122
Intrastate <sup>b</sup>	---	---	---
<b>Total</b>	<b>252</b>	<b>1,870</b>	<b>2,122</b>

<sup>a</sup> Shipments to ports are treated as separate destinations.

<sup>b</sup> Intrastate shipments were not reported.

**Table C-23. Pennsylvania, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	5,042	0	5,042
Michigan	3,826	0	3,826
Ohio	240	0	240
Total interstate	9,108	0	9,108

<sup>a</sup> Receipts at ports are not included.

**Table C-24. South Carolina, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Georgia	556	0	556
North Carolina	434	0	434
Ohio	946	0	946
Total interstate	1,936	0	1,936

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Georgia	119	0	119
North Carolina	791	0	791
South Atlantic	1,225	0	1,225
Total interstate	2,135	0	2,135
Intrastate	1,106	0	1,106
<b>Total</b>	<b>3,241</b>	<b>0</b>	<b>3,241</b>

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-25. South Dakota, 1983**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	1,917	0	1,917
Iowa	127	0	127
Minnesota	540	0	540
Missouri	700	0	700
Nebraska	2,472	0	2,472
Total interstate	5,756	0	5,756
Intrastate <sup>b</sup>	---	---	---
<b>Total</b>	<b>5,756</b>	<b>0</b>	<b>5,756</b>

<sup>a</sup> Shipments to ports are treated as separate destinations.

<sup>b</sup> Intrastate shipments were not reported.

**Table C-26. Tennessee, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	512	512
Georgia	693	0	693
Illinois	745	6,953	7,698
Indiana	2,460	1,335	3,795
Iowa	1,181	1,366	2,547
Kentucky	1,203	1,001	2,204
Louisiana	0	51	51
Minnesota	0	788	788
Mississippi	405	0	405
Missouri	0	414	414
Nebraska	0	51	51
Ohio	930	1,210	2,140
Wisconsin	0	102	102
Total interstate	7,617	13,783	21,400

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	1,000	0	1,000
Georgia	454	0	454
Eastern Gulf	5,354	0	5,354
Louisiana Gulf	0	30,141	30,141
Total interstate	6,808	30,141	36,949
Intrastate	1,525	94	1,619
<b>Total</b>	<b>8,333</b>	<b>30,235</b>	<b>38,568</b>

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-27. Texas, 1983**

**Soybean Shipments<sup>a</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Arizona	495	0	495
Arkansas	140	0	140
Texas Gulf	2,238	0	2,238
Total interstate	2,873	0	2,873
Intrastate	2,238	0	2,238
Total	5,111	0	5,111

<sup>a</sup> Shipments to ports are treated as separate destinations.

**Table C-28. Virginia, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	1,871	0	1,871
Iowa	735	0	735
Michigan	797	0	797
Ohio	665	0	665
Total interstate	4,068	0	4,068

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
North Carolina	632	0	632
South Atlantic	0	1,306	1,306
Total interstate	632	1,306	1,938
Intrastate	113	0	113
Total	745	1,306	2,051

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

**Table C-29. Washington, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	907	0	907
Total interstate	907	0	907

<sup>a</sup> Receipts at ports are not included.



**Table C-30. Wisconsin, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	87	0	87
Indiana	0	57	57
Minnesota	209	0	209
North Dakota	129	0	129
Total interstate	425	57	482

**Soybean Shipments<sup>b</sup> to Various Destinations**

Destination	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	0	49	49
Arkansas	0	56	56
Illinois	441	105	546
Missouri	0	46	46
Tennessee	0	102	102
Louisiana Gulf	0	14,789	14,789
Total interstate	441	15,147	15,588
Intrastate <sup>c</sup>	---	---	---
Total	441	15,147	15,588

<sup>a</sup> Receipts at ports are not included.

<sup>b</sup> Shipments to ports are treated as separate destinations.

<sup>c</sup> Intrastate shipments were not reported.

**Table C-31. California Ports, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	2,746	0	2,746
Kansas	326	0	326
Nebraska	7,107	0	7,107
Total interstate	10,179	0	10,179

<sup>a</sup> Receipts at ports are not included.

**Table C-32. Chicago/Duluth Ports, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Illinois	718	92	810
Iowa	200	0	200
Total interstate	918	92	1,010

<sup>a</sup> Receipts at ports are not included.

**Table C-33. Eastern Gulf Ports, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
<i>thousands of bushels</i>			
Alabama	1,750	4,314	6,064
Georgia	858	460	1,318
Illinois	500	1,500	2,000
Indiana	0	1,000	1,000
Iowa	1,000	1,475	2,475
Minnesota	0	2,399	2,399
Tennessee	5,354	0	5,354
Total interstate	9,462	11,148	20,610

<sup>a</sup> Receipts at ports are not included.

**Table C-34. Louisiana Gulf Ports, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
<i>thousands of bushels</i>			
Alabama	0	3,710	3,710
Arkansas	0	33,949	33,949
Georgia	92	796	888
Illinois	800	130,239	131,039
Indiana	0	28,420	28,420
Iowa	2,081	82,491	84,572
Kansas	10	486	496
Kentucky	0	18,871	18,871
Louisiana	128	24,294	24,422
Michigan	0	903	903
Minnesota	0	98,261	98,261
Mississippi	4,000	28,570	32,570
Missouri	476	65,120	65,596
Nebraska	3,232	3,454	6,686
Ohio	0	23,125	23,125
Oklahoma	0	1,870	1,870
Tennessee	0	30,141	30,141
Wisconsin	0	14,789	14,789
Total interstate	10,819	589,489	600,308

<sup>a</sup> Receipts at ports are not included.

**Table C-35. North Atlantic Ports, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
<i>thousands of bushels</i>			
Ohio	6,092	0	6,092
Total interstate	6,092	0	6,092

<sup>a</sup> Receipts at ports are not included.

**Table C-36. Pacific Northwest Ports, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Iowa	2,367	0	2,367
Total interstate	2,367	0	2,367

<sup>a</sup> Receipts at ports are not included.

**Table C-37. South Atlantic Ports, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Alabama	4,000	0	4,000
Florida	1,200	0	1,200
Georgia	10,556	0	10,556
Illinois	256	0	256
Indiana	9,000	0	9,000
Iowa	735	0	735
Michigan	5,000	0	5,000
North Carolina	1,181	1,418	2,599
Ohio	15,000	0	15,000
South Carolina	1,225	0	1,225
Virginia	0	1,306	1,306
Total interstate	48,153	2,724	50,877

<sup>a</sup> Receipts at ports are not included.

**Table C-38. Texas Gulf Ports, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Arkansas	960	0	960
Iowa	3,247	0	3,247
Kansas	500	0	500
Missouri	2,181	0	2,181
Nebraska	3,160	0	3,160
Oklahoma	252	0	252
Texas	2,238	0	2,238
Total interstate	12,538	0	12,538

<sup>a</sup> Receipts at ports are not included.

**Table C-39. Toledo Port Area, 1983**

**Soybean Receipts<sup>a</sup> from Various Origins**

Origin	Mode of transportation		Total
	Rail	Barge	
	<i>thousands of bushels</i>		
Indiana	200	0	200
Ohio	1,500	0	1,500
Total interstate	1,700	0	1,700

<sup>a</sup> Receipts at ports are not included.

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