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Corn and Soybeans Marketing Patterns in South Dakota: Regional Variations

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by

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I would like to offer my sincere thanks to the 120 elevator managers in South Dakota who responded to the survey for this study. Without their responses, this report would not be possible. I would like to thank Ms. Verna Clark for providing support for managing the survey.

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Bashir A. Qasmi
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A copy of a full report, "Grain Marketing Patterns in South Dakota: Methods of Purchase, Methods of Sale, Grain Destinations, and Modes of Transportation," Economics Research Report 97-1, containing the survey procedures and methods and summary results for all grains can also be obtained by contacting Economics Library, Box 504A, Scobey Hall, South Dakota State University. SD 57007-0895

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Introduction

U.S. Agriculture is going through a transition. Federal spending on farm programs is being curtailed and agricultural policies are being modified to make production of farm commodities responsive to market forces. In this competitive environment, efforts by the commodity groups for market development are becoming increasingly more important. However, to devise any market development plan for a commodity, understanding of the present status of the marketing system is important. At a minimum, one needs to know the methods of purchase and sale, types of buyers, shipment destinations, and transportation modes for the commodity. These aspects of grain marketing in South Dakota have not been studied for the last three decades.

To fill this void, a study on grain marketing patterns in South Dakota was launched. Since a large proportion of the grain is handled by grain elevators, the data on grain marketing patterns were collected through a mail survey of the grain elevators in South Dakota. The specific objectives of the survey were to identify: the quantities of grain handled, alternative methods of sale and purchase, major destinations, and relative importance of alternative modes of transportation for the grain handled by the elevators in South Dakota.

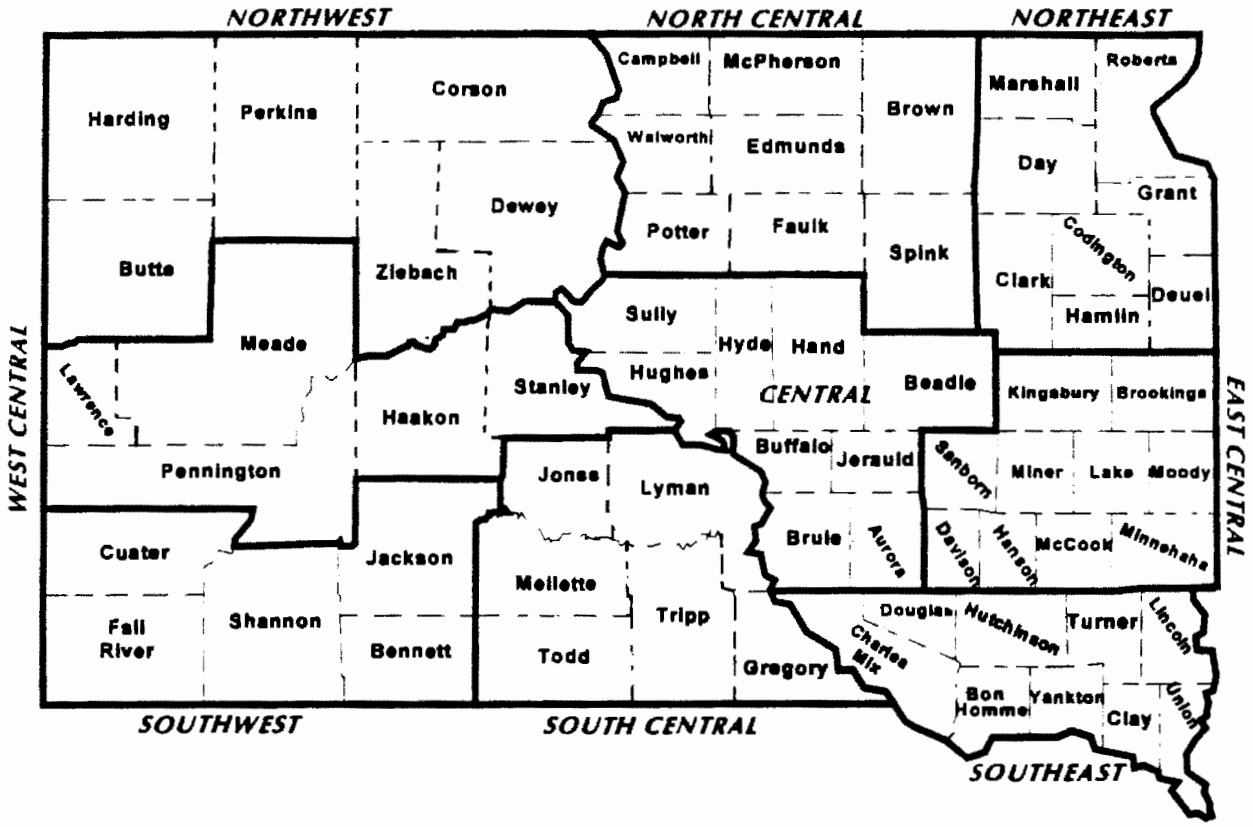
Through this survey, researchers sought information on the marketing patterns for corn, winter wheat, oats, barley, corn, soybeans, and sunflower seeds for the marketing year 1994-95. The survey forms were mailed to all 275 grain elevators in the state during the spring of 1996. One hundred twenty useable responses were returned. The responding elevator managers' locations were well distributed in the state.

This publication is devoted to documenting more detailed results relating to corn and soybeans. For both corn and soybeans, the data on marketing patterns are presented by region based on USDA's crop reporting districts in South Dakota (Figure 1). Most of the discussion of marketing patterns is on the state level. However, regional differences in the marketing patterns, when present, are also discussed.

In order to keep individual responses confidential, it was necessary that data for regions with few respondents be reported only after combining with adjoining regions. Accordingly, in the case of corn, the Southwest region is consolidated with the South Central region. Similarly, in the case of soybeans, the Northwest region is consolidated with the North Central region.

Following the introduction, section 2 of this report is devoted to discussing the corn marketing patterns in the state. Specifically, quantities of corn handled by the elevators, alternative methods of purchase and sale of corn employed by the elevators, and major types of buyers for corn sold by the elevators are presented. Major destinations of corn shipped by the elevators, and the relative importance of alternative modes of transportation for corn shipped by the elevators are also presented. Similarly, section 3 is devoted to discussing the soybean marketing patterns in the state. A brief summary of the results is presented in section 4.

Fig 1. South Dakota Agricultural Statistics Districts



Source: South Dakota Agricultural Statistics Service

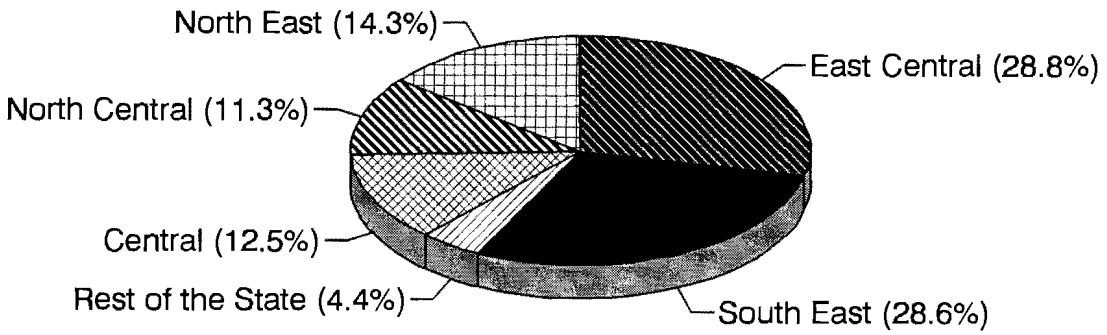
Corn Marketing Patterns in South Dakota

During the years 1990 through 1994, South Dakota harvested an average of 3.1 million acres of corn for grain (Table 1). During this period, the average annual corn production in the state was about 255.9 million bushels (Table 2). The South East, East Central and North East regions are the three most dominant areas of corn production in the state. During the five years, 1990 through 1994, these three regions, on average, accounted for 71.7% of the corn acres harvested and 75.1% of the corn produced in the state (Figure 2 and 3). The North Central and Central regions also produce significant quantities of corn. During the five years, on average, the North Central and Central regions combined accounted for 23.8% of the corn area and 21.2% of the corn production in the state (Figures 2 and 3).

2.1 Quantity of Corn Handled by Elevators

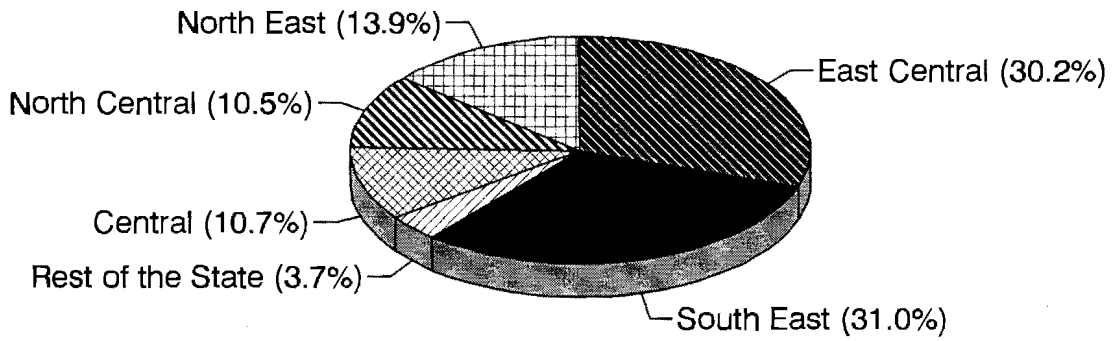
Of the 120 respondents, 110 grain elevators handled corn during the marketing year of 1993-94 and 115 handled corn during the marketing year of 1994-95. The regional distributions of these elevators and the quantities handled by these elevators are shown in Table 3. Since the elevators also purchase grain from other elevators in the state, the net quantities of corn handled by the responding elevators were calculated by adjusting the total quantities for the amounts purchased from other elevators in the state. For year 1994-95, net quantity of corn handled by the responding elevators in the state was estimated at 74.4 million bushels. During the year, the net quantity of corn handled by all elevators in South Dakota was estimated at 174.6 million bushels that was 52.2% of the total corn available in the state during the year (Table 4). During the year 1994-95, the corn originating from the

Fig 2. Corn for Grain Area in SD, Acres Harvested, by Region, 90-94 Avg



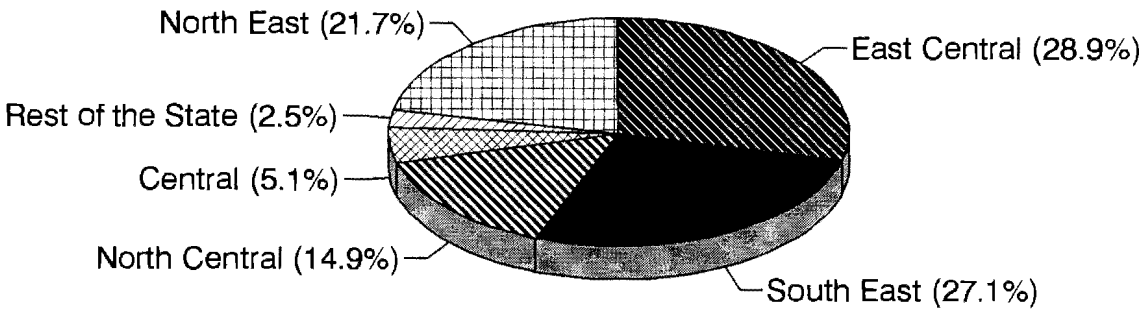
TOTAL: 3.10 Million Acres

Fig 3. Corn Production in SD, by Region, 90-94 Avg



TOTAL: 255.91 Million Bushels

Fig 4. Corn Handled by SD Elevators, by Region, 94-95



TOTAL: 174.55 Million Bushels

the three eastern regions (North East, East Central and South East) accounted for 77.7% of all corn handled by elevators in the state (Figure 4).

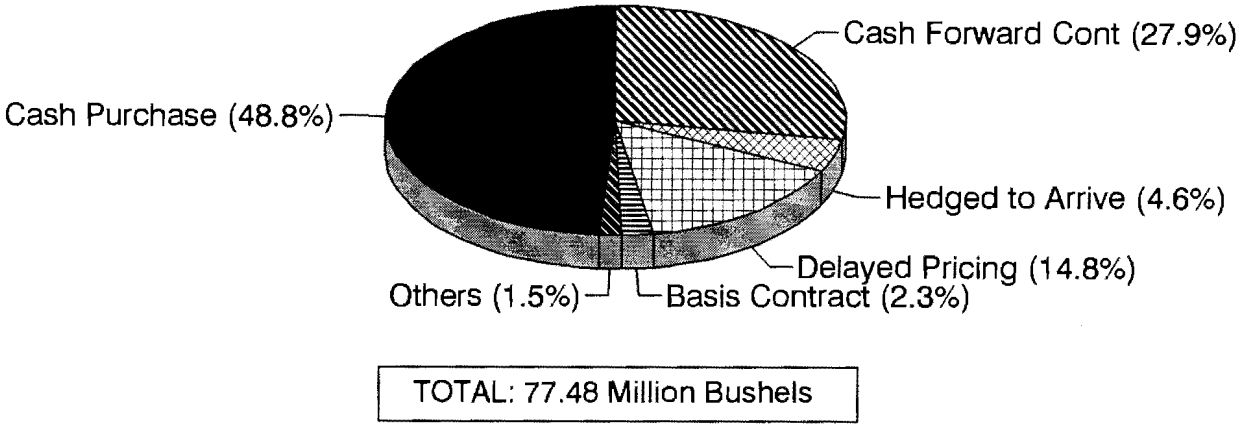
2.2 Corn Methods of Purchase Used by Elevators

The responding elevator managers reported the use of several methods of purchase for corn. The quantities of corn purchased by the elevators through different methods of purchase during the marketing year 1994-95 are reported in Table 5. During the year 1994-95, the cash purchase was the dominant method of purchase, accounting for 48.8% of the corn purchased by the responding elevators in the state (Figure 5). Cash forward contracting and delayed pricing were the next two most important methods of purchase, accounting for 27.9% and 14.8%, respectively, of the corn purchased by the elevators during the year. Hedged to arrive, basis contract, and minimum price were much less popular, jointly accounting for 8.0% of the corn purchased by the respondents (Figure 5). The relative importance of alternate methods of purchase varied very little across regions (Table 5).

2.3 Corn Methods of Sale Used by Elevators

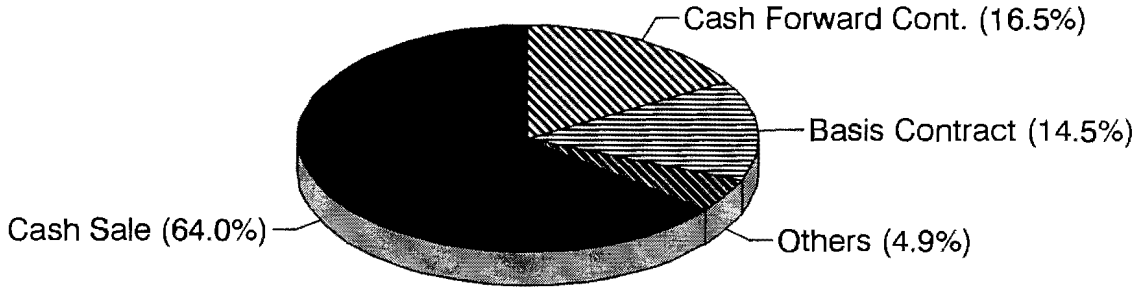
The responding elevator managers reported the use of three main methods for selling corn, namely the cash sale, cash forward contract, and a basis contract. The cash sales accounted for 64.2% of the corn sold by the respondents during the marketing year 1994-95 (Figure 6). The cash forward contracts and basis contracts accounted for 16.5% and 14.5%, respectively, of the corn sold by the respondents during the year.

Fig 5 Corn Purchase Methods, Adopted by Responding Elevators, 94-95



TOTAL: 77.48 Million Bushels

Fig 6. Corn Sales Methods, Adopted by Responding Elevators, 94-95



TOTAL: 68.25 Million Bushels

The cash sale method was dominant in all regions. The degree of dependance on cash forward and basis contracts, however, varied from region to region. In the North East and East Central regions of South Dakota, the second most important method of corn sale was the basis contract. In the North Central, Central, South Central, and South East regions, on the other hand, the second most important method for selling corn was the cash forward contract (Table 6).

2.4 Corn Sales by Type of Buyer

The two largest buyers of South Dakota corn are the terminal elevators and farmers. As indicated earlier, during the marketing year 1994-95, the South Dakota grain elevators handled 174.6 million bushels of corn. Of this, 89.2 million bushels (51.1%) were sold to terminals elevators, and 26.8 million bushels (15.3%) were sold to farmers. Another 5.37 million bushels (3.1%) were sold to feed mills. About 7.9 million bushels (4.5%) were sold to ethanol producers and 14.4 million bushels (8.2%) were sold to other processors (Table 7).

The elevators in the North Central, Northeast, Central and East Central regions tend to rely more heavily on the terminal elevators. During the year 1994-95, the elevators in these four regions shipped 69.1%, 76.3%, 61.8%, and 43.4%, respectively, of the corn handled, to the terminals (Table 7). On the other hand, the elevators in Southeast region tend to rely relatively more on selling directly to foreign buyers. During the year, the elevators in the southeast region shipped 26.1% of their corn directly to foreign buyers (Table 7).

2.5 Corn Shipments by Destination

Of the 174.6 million bushels of corn handled by South Dakota elevators during the marketing year 1994-95, only 49.0 million bushels (28.1%) were shipped to locations within South Dakota (Table 8). About 82.4 million bushels (47.2%) were shipped to the Portland, Oregon area (Figure 7). Shipments to Sioux City and Minneapolis areas accounted for 7.0 million bushels (4.0%) and 5.9 million bushels (3.4%), respectively. In the case of North Central, North East, Central, and East Central regions, a majority of the corn handled by the elevators was shipped to the Portland area. In the case of the South East region, however, only 9.4% of the corn handled was shipped to the Portland area, and 53.2% was shipped to different unspecified out-of-state locations (Figure 8).

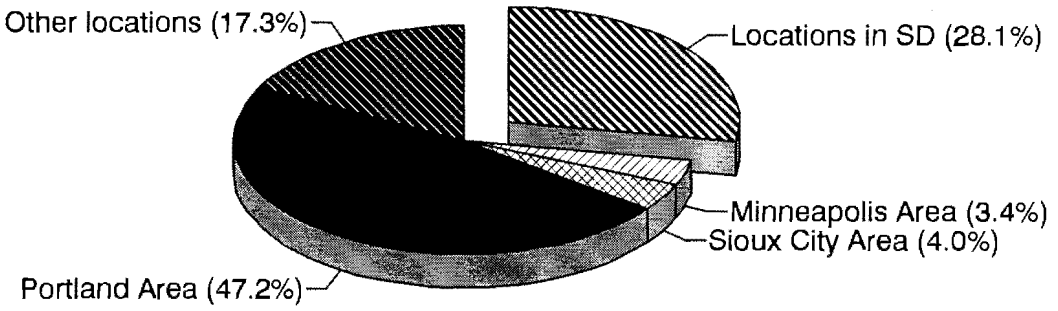
2.6 Corn Transportation Modes

Both rail and truck modes are important for transportation of South Dakota Corn. During the year 1994-95, 102.0 million bushels (58.4%) of South Dakota corn were shipped via rail, and the remaining 72.6 million bushels (41.6%) were shipped via truck (Figure 9).

The major mode of transportation for each region is directly related to the availability of rail service. If a large number of elevators in a region have access to rail, and the rail cars are available in sufficient numbers, the region relies more on rail transportation. On the other hand, if access to rail service is limited or rail cars are in short supply, the region must rely more on truck transportation.

The elevator operators in North Central, North East, Central and East Central regions reported to rely more on rail transportation. During the marketing year 1994-95, the

Fig 7. Corn Shipments by SD Elevators, by Destination, 94-95



TOTAL: 174.55 Million Bushels

Fig 8. Corn Shipments by SD Elevators, by Region and by Destination, 94-95

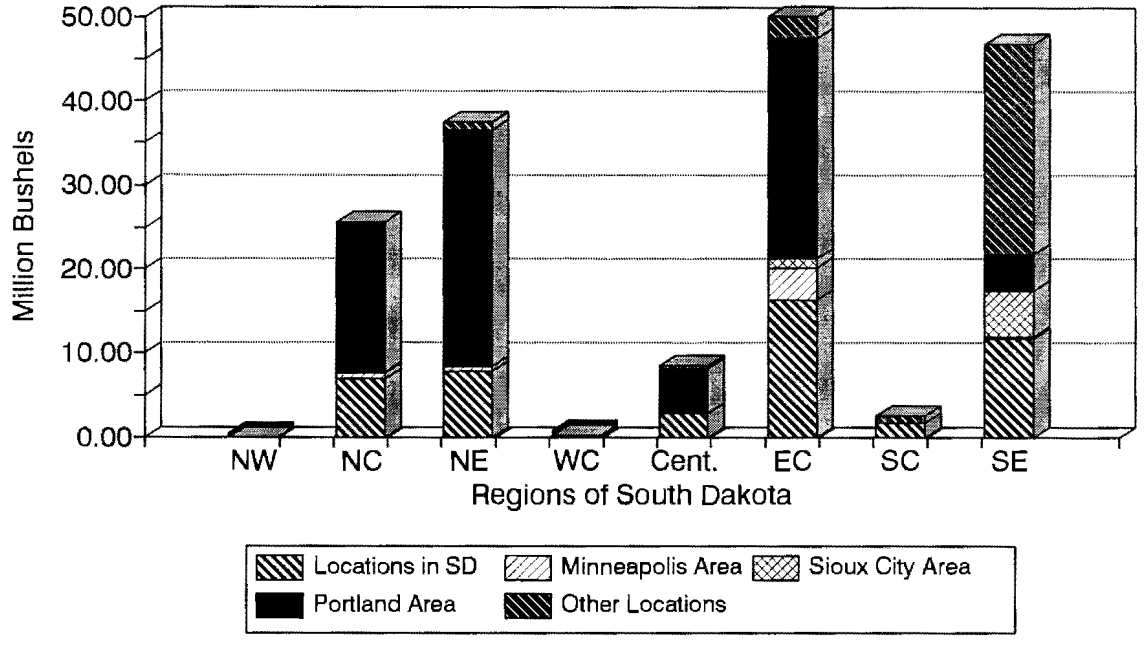
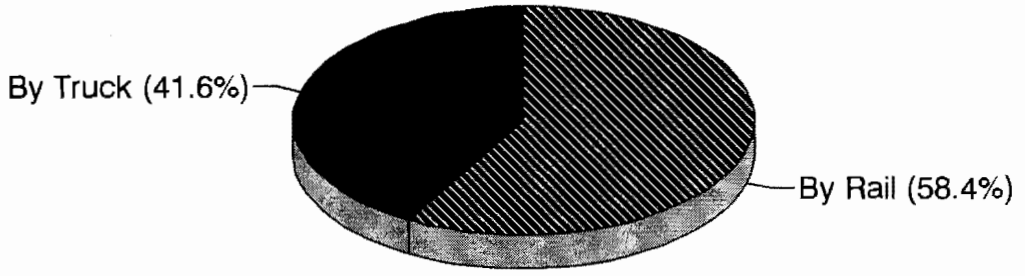
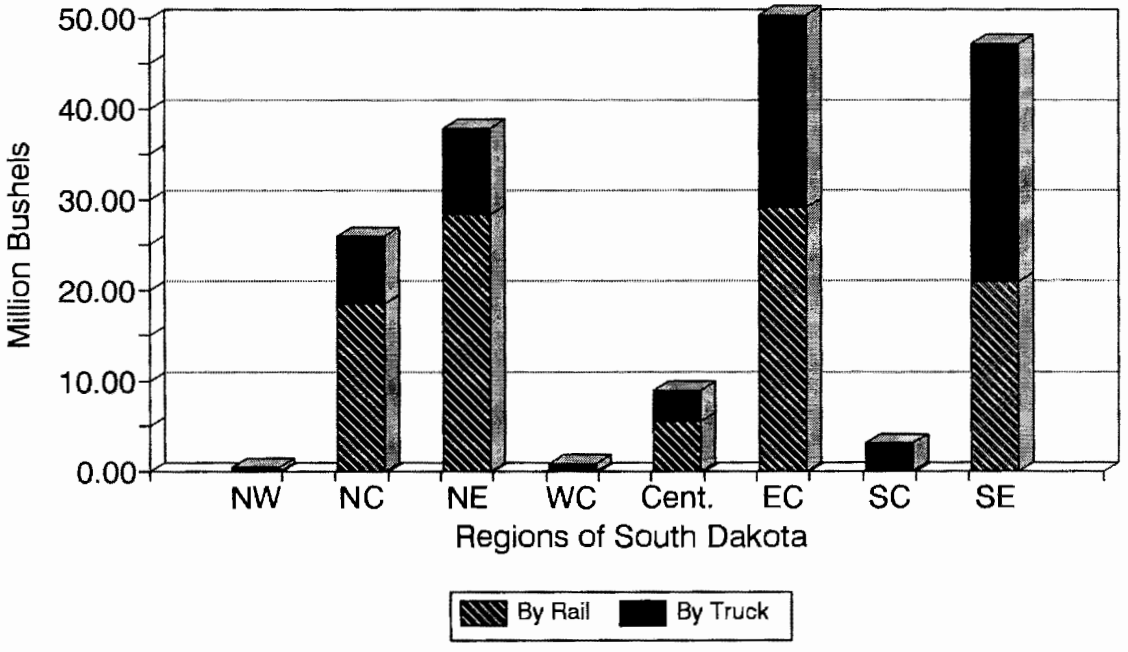


Fig 9. Corn Shipments by SD Elevators, by Transportation Mode, 94-95



TOTAL: 174.55 Million Bushels

Fig 10. Corn Shipments by SD Elevators, by Region and by Mode, 94-95



elevators in these four regions shipped 81.2 million bushels (65.9%) of their corn via rail (Figure 10). The elevators in South East relied on both rail and truck modes for shipping their corn (Figure 10). It is estimated that during the year 1994-95, the elevator operators in this region shipped only 20.8 million bushels (44.1%) of corn via rail. The balance of 26.4 million bushels (55.9%) were shipped via truck (Table 9).

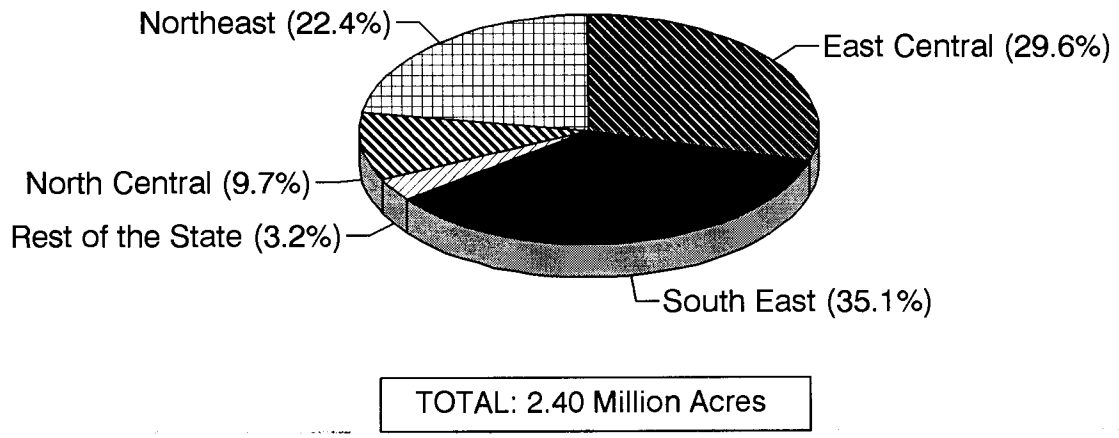
Soybean Marketing Patterns in South Dakota

During the years 1990 through 1994, South Dakota harvested an average of 2.1 million acres of soybean (Table 10). During this period, the average annual soybean production in the state was 60.9 million bushels (Table 11). The soybeans are mostly produced in the North East, East Central and South East regions of the state. During the five years, 1990 through 1994, these three regions, on average, accounted for 87.1% of the soybean area and 88.0% of the soybean production in the state (Figure 11 and 12). The North Central region also produces significant quantities of soybeans. During the five years, on an average, the North Central region accounted for 9.7% of the acres harvested and 9.2% of the soybean production in the state (Figure 11 and 12).

3.1 Quantity of Soybeans Handled by Elevators

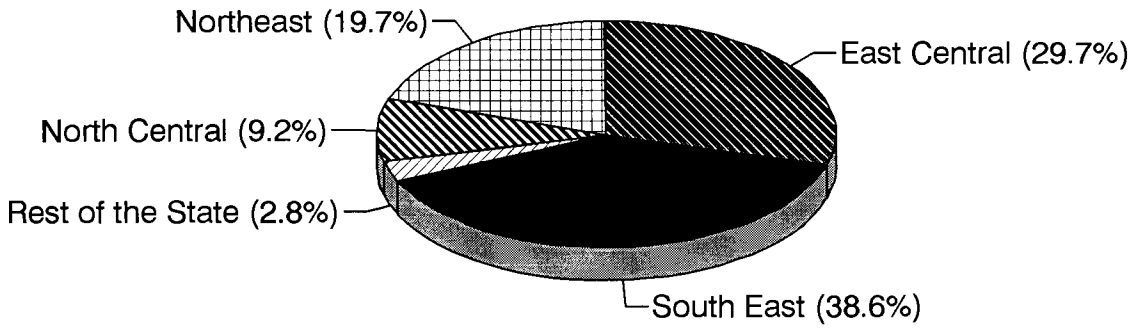
Of the 120 elevator operators responding to the survey, 93 and 98 grain elevators handled soybeans during the marketing years 1993-94 and 1994-95, respectively (Table 12). The regional distribution of these elevators and the quantities handled by these elevators are shown in Table 12. Since the elevators also purchase grain from other elevators in the state, the net quantities of soybeans handled by the responding elevators were calculated by adjusting the quantities for the amounts purchased by the respondents from the other elevators in the state. For the year 1994-95, the net quantity of soybeans handled by the responding elevators is estimated at 33.8 million bushels (Table 13). During the year, the net quantity of soybeans handled by all South Dakota elevators is estimated at about 80.6 million bushels or 95.1% of the total soybeans available in the state during the year (Table 13).

Fig 11. Soybean Area Harvested in SD, Acres by Region, 90-94 Avg



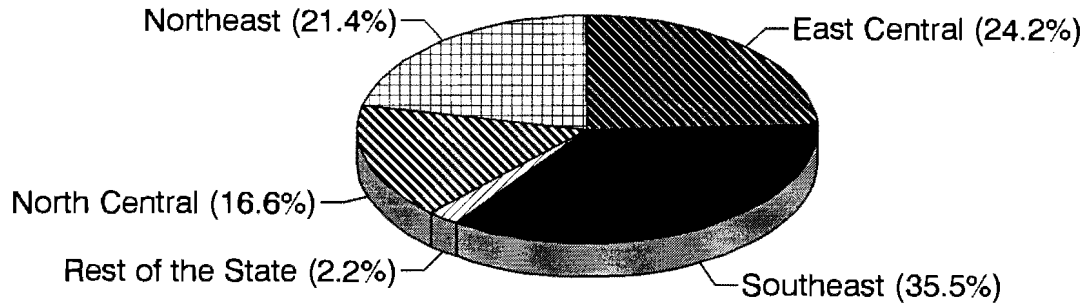
TOTAL: 2.40 Million Acres

Fig 12. Soybean Production in SD, by Region, 90-94 Avg



TOTAL: 60.94 Million Bushels

Fig 13. Soybeans Handled by SD Elevators, by Region, 94-95



TOTAL: 80.61 Million Bushels

The regional distribution of the 80.6 million bushels of soybeans handled by all grain elevators in the state is shown in Figure 13. During the year, the East Central and Southeast regions accounted for 59.8% of the soybeans handled by all grain elevators in the state (Figure 13). During the year, another 38.1% of the soybeans handled by the South Dakota elevators originated in the Northeast and North Central regions of the state (Figure 13).

3.2 Soybean Methods of Purchase Used by Elevators

The respondents reported the use of several methods of purchase for soybeans. The quantities of soybeans purchased by the elevators via different methods during the marketing year 1994-95 are reported in Table 14. Cash purchase was the dominant method of purchase, followed by cash forward pricing and delayed pricing. During the year 1994-95, the cash purchase method accounted for nearly half (48.8%) of the soybeans purchased by the responding elevators (Figure 14). Cash forward pricing and delayed pricing accounted for 29.4%, and 15.7%, respectively. Purchases through basis contracts, hedge to arrive, and minimum price contracts combined accounted for 5.4% of the soybeans purchased. Cash purchase was the dominant method of purchase in all four major soybean producing regions of South Dakota (Table 14).

3.3 Soybean Methods of Sale Used by Elevators

The responding elevators reported the use of three main methods of sale for soybeans, namely cash sale, cash forward and basis contracts. Cash sales accounted for 63.4% of the

Fig 14. Soybean Purchase Methods, Adopted by Responding Elevators, 94-95

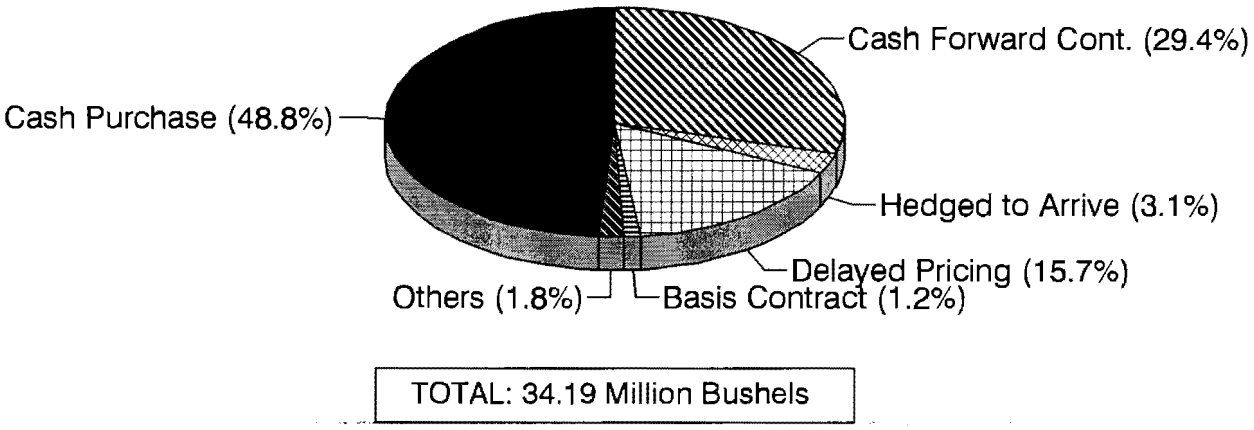
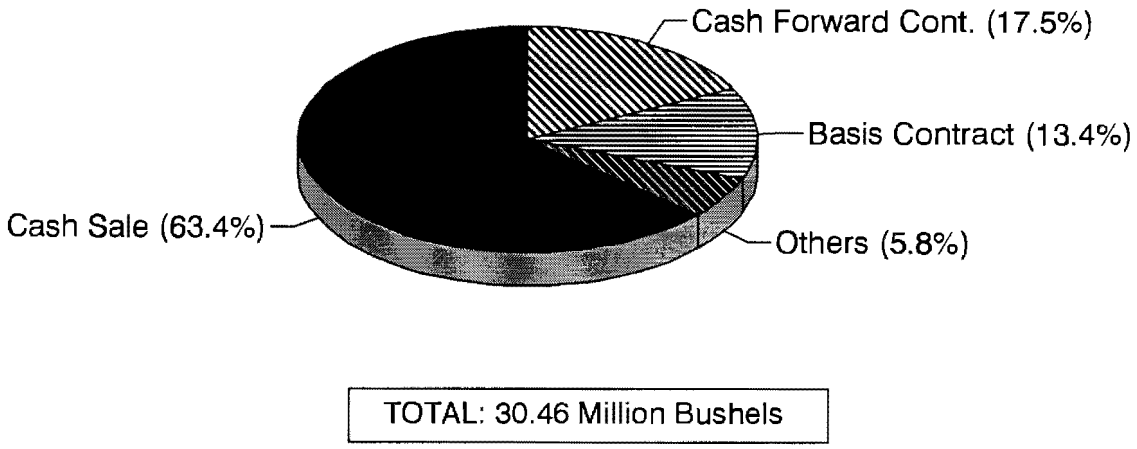


Fig 15 Soybean Sale Methods, Adopted by Responding Elevators, 94-95



soybeans sold by the responding elevators during the year 1994-95 (Figure 15). Cash forward and basis contracts accounted for 17.5% and 13.4% of the soybeans sold by the elevators during the year (Figure 15).

In all four major soybean growing regions of South Dakota, cash sale was the dominant method of soybean sale followed by cash forward or basis contracts (Table 15). The degree of dependance on cash sales, however, varied from region to region. The elevators in North Central and Northeast regions, for example, relied less heavily on cash sales and placed increased importance on other methods of sale for their soybeans during the year (Table 15).

3.4 Soybean Sales by Type of Buyer

The responding elevators reported that the main buyers of South Dakota soybeans were the terminals elevators and processors. Of the 80.0 million bushels of soybeans handled by South Dakota grain elevators during the marketing year 1994-95, 39.7 million bushels (49.2%) were sold to terminals, and 30.6 million bushels (37.9%) were sold to processors (Table 16). During the year, the South Dakota elevators also sold 5.6 million bushels (6.9%) of their soybeans directly to foreign buyers (Table 6).

Regional comparison shows that the elevator managers in North Central and Northeast regions relied more on terminals to sell their soybeans. On the other hand, the elevator managers in East Central and Southeast regions relied more on sales to processors. Only the grain elevators in the Southeast region reported selling directly to foreign buyers (Table 16).

3.5 Soybean Shipments by Destination

It is estimated that out of the 80.6 million bushels of soybeans handled by the South Dakota elevators during the marketing year 1994-95, only 7.6 million bushels (9.6%) were shipped to locations within South Dakota. During the year, the soybean shipments by South Dakota elevators to Portland, OR, and Sioux City, IA amounted to 31.4 million bushels (38.9%), and 21.0 million bushels (26.0%), respectively (Table 17 and Figure 16). Another 8.0 million bushels (10.0%) of soybeans were shipped to the Minneapolis area, and 5.6 million bushels (6.9%) were shipped directly to foreign buyers. The remaining 7.1 million bushels (8.8%) of soybeans were shipped to Duluth, MN, and other unspecified out-of-state locations (Figure 16).

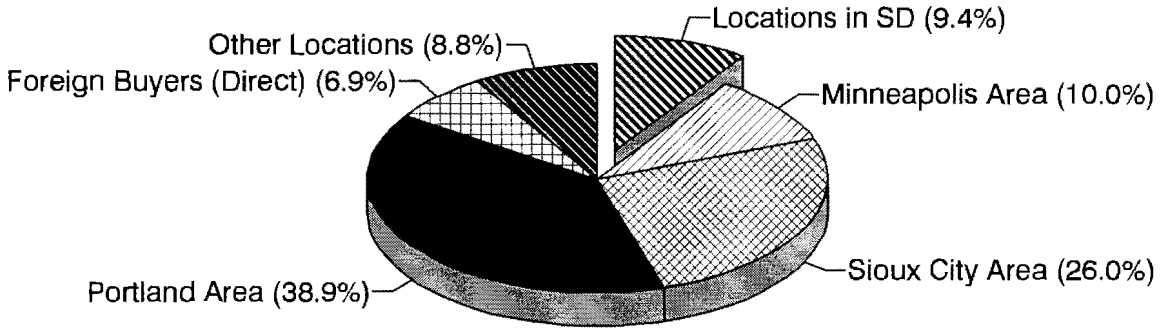
The regional comparison shows that North Central, Northeast, and East Central regions are more dependent on shipments of soybeans to Portland, OR (Figure 17). On the other hand, due to geographical proximity, the Southeast region is more reliant upon shipments to Sioux City, IA (Figure 17).

3.6 Soybean Transportation Modes

Both rail and truck modes of transportation are important for transporting South Dakota soybeans. It is estimated that during the marketing year 1994-95, elevators in South Dakota shipped about 47.6 million bushels (59.1%) of soybeans via rail, and 33.0 million bushels (41.0%) via truck (Figure 18).

As noted earlier, the dominant mode of transportation for each region is directly related to the extent to which the elevators in the region have access to rail and the availability

Fig 16. Soybean Shipments by SD Elevators, by Destination, 94-95



TOTAL: 80.61 Million Bushels

Fig 17 Soybean Shipments by SD Elevators, by Region and by Destination, 94-95

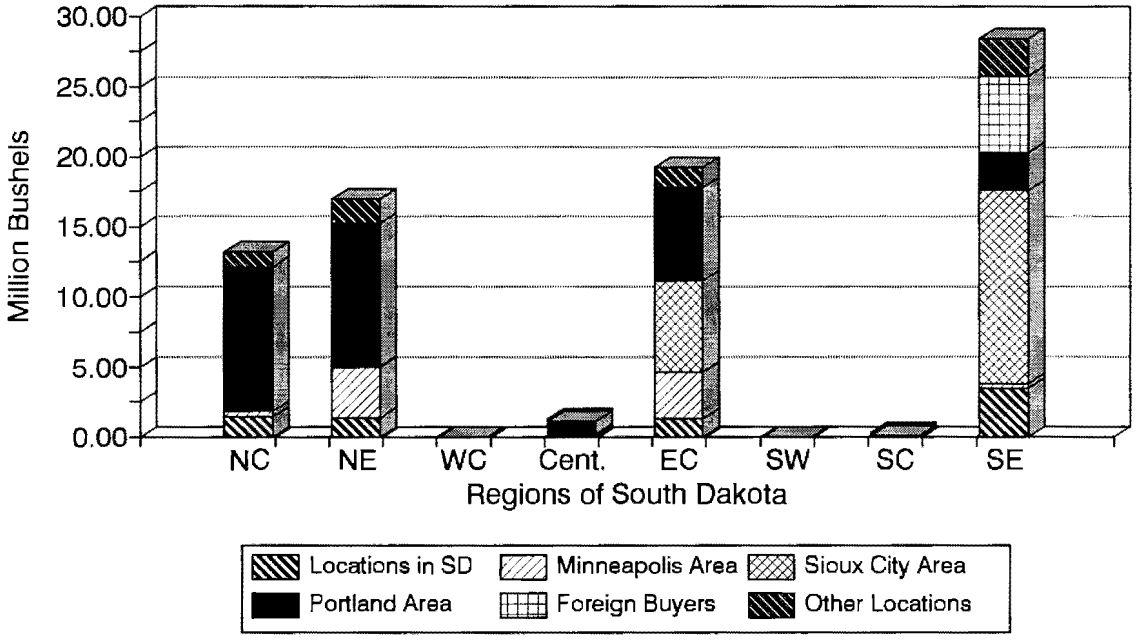
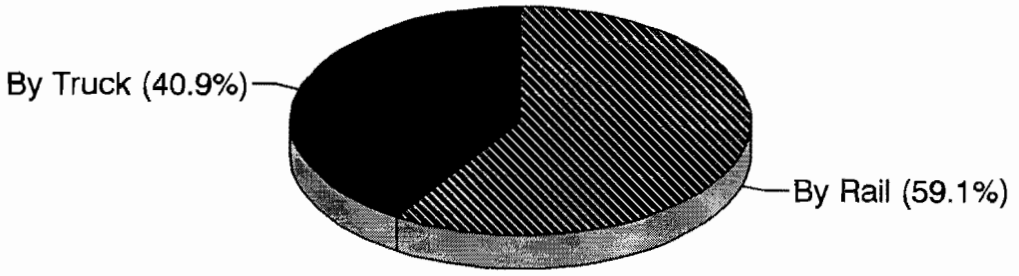
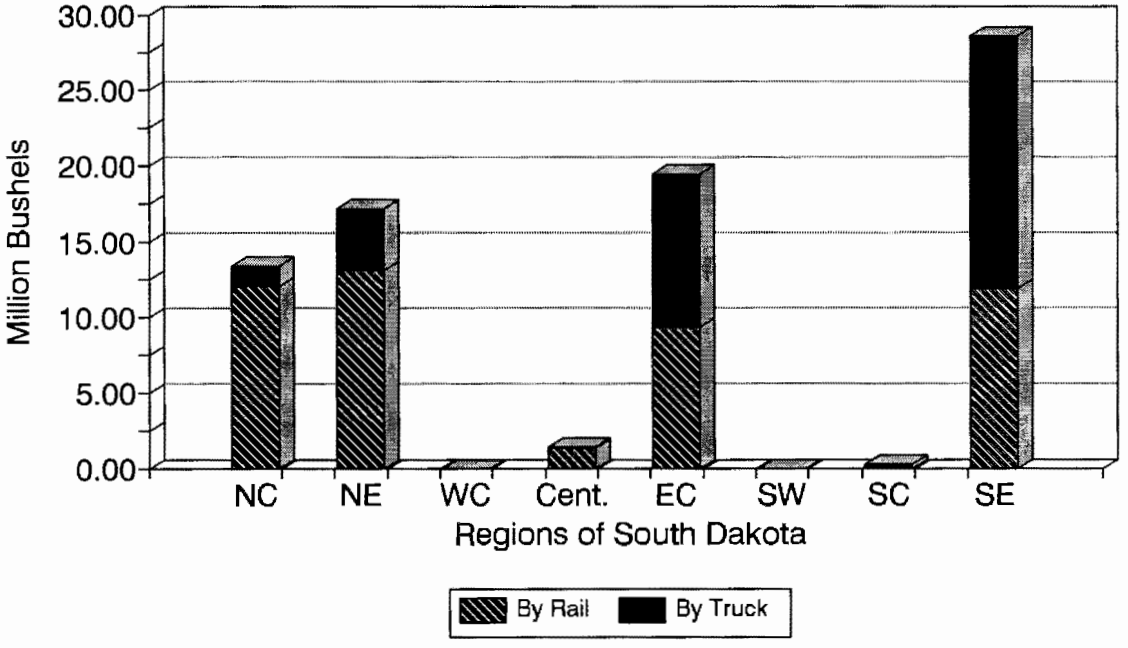


Fig 18. Soybean Shipments by SD Elevators, by Transportation Mode, 94-95



TOTAL: 80.61 Million Bushels

Fig 19. Soybean Shipments by SD Elevators, by Region and by Mode, 94-95



of rail cars. The elevators in North Central and Northeast regions rely more on rail transportation. During the year, the elevators in these two regions shipped 25.13 million bushels (81.9%) of soybean via rail, and 5.6 million bushels (18.1%) of soybeans via truck (Figure 19, and Table 18). The elevators in East Central and South Central regions rely more on truck transportation for shipping their soybeans. During the year, the elevators in these two regions shipped about 27 million bushels (56.0%) of soybeans via truck and 21.2 million bushels (44.0%) of soybeans via rail (Figure 19 and Table 18).

3.7 Impacts of SD Soybean Processing Plant on Soybean Movements

Since the completion of the survey, the most important factor with possible impacts on South Dakota soybean movements has been the start of the South Dakota Soybean Processors' plant at Volga, SD. The Information regarding the quantities of soybeans purchased and processed by the plant, sources of these purchases, and modes of transportation reported in this section were obtained through a personal interview with Mr. Rodney G. Christianson, Chief Executive Officer, South Dakota Soybean Processors.

The plant started its operation on October 8, 1996, and is expected to process about 22.0 million bushels during the marketing year 1997-98. Currently, about 85% of the soybeans processed by the plant originate within a 50 mile radius surrounding the plant. Another 5% of the soybeans originate from the elevators in the Aberdeen, SD area, and the remaining 10% come from elevators located in the Pipestone, MN area, and the neighboring counties in Minnesota. About 80% of the soybeans are purchased directly from farmers, and the remaining 20% are purchased from the elevators. In terms of the modes of transportation,

97% of the soybeans arrive at the plant via trucks, and the remaining 3% via rail.

Currently, the plant exports about 40% of its soymeal production to Canada (25% via truck, and 15% via rail). Another 32% of the soymeal produced by the plant is shipped to the Pacific Northwest area via rail. The remaining 28% of the soymeal is shipped to other locations (25% via truck, and 3% via rail). In total, the split between the truck and rail shipment of soybean meal from Volga plant is 50-50. About 99% of the soybean oil produced at the plant is shipped to Mankato, MN (85% via rail, and 15% via truck). The remaining 1% of the soybean oil is shipped to Sioux City, IA via truck.

Between the crop years 1994-95, and 1997-98 inclusive, soybean production in South Dakota increased by 29.8 million bushels which is more than the bushels of soybeans currently processed annually by the plant. Therefore, for the state as a whole, the total bushels of soybeans handled by the elevators are not expected to decrease from the 1994-95 level. However, during the year, about 17.6 million bushels of the soybeans processed by the plant are expected to be purchased from the farmers within 50 mile of Volga covering parts of Deuel, Codington, Hamlin, and Clark counties in the Northeast region, and parts of Brookings, Kingsbury, Moody, Lake, Miner, and Sanborn counties in the East Central region. During the crop year 1997-98, these ten counties, jointly, produced 31.0 million bushels of soybeans, 11.4 million bushels up since the crop year 1994-95. Accordingly, the elevators in these counties are expected to handle about 7.3 million bushels fewer soybeans during the year 1997-98 than 1994-95.

During the marketing year 1994-95, SD elevators shipped 7.6 million bushels (9.4%) of soybeans to different locations in the state and the remaining 73.0 million bushels (89.6%) were

shipped to various locations out of the state. During the marketing year 1997-98, the Volga plant is expected to process 22.0 million bushels of soybeans. It can be assumed that the soybean shipments to the other locations in the state (i.e., other than the Volga plant) by the SD elevators will continue to be 7.6 million bushels per year, as in the year 1994-95. Therefore, it is estimated that during the marketing year 1997-98, the proportion of the SD soybeans shipped out of the state without capturing the additional value in processing will decrease to 75.5%.

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Summary

In an era when federal spending on farm programs is being cut and agricultural producers are expected to be increasingly more reliant on the market, the role of farm commodity groups in market development is becoming increasingly more important. However, in order to devise a good market development plan for a commodity, understanding of the present status of the marketing system is necessary. In order to increase knowledge about the SD marketing system, a study of grain marketing patterns in South Dakota was initiated in 1996.

The data on grain marketing patterns were collected through a mail survey of South Dakota grain elevators during the spring of 1996. The specific objectives of the survey were to identify: the quantities handled, alternative methods of sale and purchase, major destinations, and the relative importance of alternative modes of transportation for the major grains handled by grain elevators in South Dakota. The survey yielded 120 useable responses from the elevator operators. The responses were well distributed geographically in the state. Through this survey, researchers sought information on spring wheat, winter wheat, oats, barley, corn, soybeans, and sunflower seeds handled by the grain elevators during the marketing year 1994-95. Major findings of the survey relating to the corn and soybeans handled by South Dakota elevators are summarized below.

4.1 Corn Marketing Patterns

During the five years, 1990 through 1994, South Dakota produced an average of 255.9 million bushels of corn per year. About 75.1% of this was produced in the South East, East

Central, and South East regions of the state. During the marketing year 1994-95, grain elevators in the state handled 174.6 million bushels of corn. Cash purchase was the most dominant method of purchase, accounting for 48.8% of the corn purchased by the elevators. Delayed pricing and cash forward contracting accounted for 27.9% and 14.8%, respectively, of the corn purchased by the elevators. The top three methods of sale were cash sale, cash forward contracts, and basis contracts, accounting for 64.2%, 16.1%, and 14.5%, respectively, of the corn handled by the elevators.

During the marketing year of 1994-95, the South Dakota elevators sold 51.1% of the corn to terminals. Sales to farmers and the feed mills accounted for another 15.3%, and 3.1%, respectively of the corn handled by the elevators. Sales to ethanol producers and other processors accounted for 4.5%, and 8.2%, respectively, of the corn handled by the elevators.

It is estimated that only 28.1% of the corn handled by the elevators was shipped to locations within South Dakota. Shipments to Portland, Sioux City, and Minneapolis areas accounted for 47.2%, 4.0%, and 3.4%, respectively, of the corn handled by the elevators. The remaining 17.3% of the corn was shipped to other out-of-state locations.

Both rail and trucks are important modes of transportation for the corn handled by elevators in South Dakota. It is estimated that, during the marketing year of 1994-95, 58.4% of the corn was shipped via rail, and the remaining 41.6% was shipped via truck. The elevators in North Central, North East, Central and East Central regions relied more on rail for transporting their corn. On the other hand, the elevators in the South Eastern region relied more on trucks for transportation of their corn.

4.2 Soybean Marketing Patterns

During the five years, 1990 through 1994, on average, South Dakota produced 60.9 million bushels of soybeans. About 88.0% of these soybeans were produced in the South East, East Central, and Northeast regions of the state. It is estimated that during the marketing year of 1994-95, grain elevators in the state handled 80.6 million bushels of soybeans. Cash purchase was the most dominant method of purchase, accounting for 48.8% of the soybeans purchased by the elevators. Cash forward contracting and delayed pricing accounted for 29.4% and 15.7%, respectively, of the soybeans handled. Purchases by basis, hedged to arrive, and minimum price contracts accounted for only 5.4% of the soybeans purchased by the elevators. The top three methods of sale were cash sale, cash forward contracts, and basis contracts, accounting for 63.4%, 17.5%, and 13.4%, respectively, of the soybeans handled by the elevators during the year.

During the marketing year of 1994-95, South Dakota elevators sold 49.2% of the soybeans to terminal elevators. Sales to processors accounted for 37.9% of the soybeans handled by the elevators. Soybeans shipped directly to foreign buyers during the year accounted for another 6.9% of the soybeans handled by the elevators.

It is estimated that during the year 1994-95, only 9.4% of the soybeans handled by the South Dakota elevators were shipped to various locations in the state. Shipments to Portland, Sioux City, and Minneapolis areas, accounted for 38.9%, 26.0%, and 10.0%, respectively, of the soybeans shipped by the South Dakota elevators during the year.

Both rail and trucks are important modes of transportation for the soybeans handled by the elevators. It is estimated that, during the crop year 1994-95, 60.8% of the soybeans were

shipped via truck, and the remaining 39.2% were shipped via rail. The elevators in North Central, and Northeast regions reported to rely more on rail for transportation of their soybeans, where as the elevators in East Central and South Central regions relied more on truck transportation.

Since the completion of the survey, a soybean processing plant has started its operation at Volga, South Dakota. During the marketing year 1997-98, the Volga plant is expected to process 22.0 million bushels of soybeans. The plant purchases 80% of its soybeans directly from farmers, and remaining 20% from the elevators. Currently, 85% of the soybeans processed at the plant originate within 50 miles of the plant. About 97% of the soybeans arrive at the plant via trucks, and the remaining 3% come by rail. About 50% of the soybean meal, and 85% of the soybean oil produced at the plant are shipped out via train, and the balance 50% of meal and 15% of oil is shipped via truck. It is estimated that during the marketing year 1997-98, the proportion of South Dakota soybeans shipped out of the state without capturing the additional value by processing in the state will decrease to about 75.5%.

List of References

South Dakota Agricultural Statistics Service, Various Issues, South Dakota Agricultural Statistics, Sioux Falls, SD: South Dakota Department of Agriculture.

Qasmi, Bashir A., and Kelly McDaniel. 1997. Grain Marketing Patterns in South Dakota: Methods of Purchase, Methods of Sale, Grain Destinations, and Modes of Transportation", South Dakota State University Economics Research Report 97-1, July.

Christianson, Rodney G., Chief Executive Officer, South Dakota Soybean Processors. Personal Interview, Brookings: April 24, 1998.

Appendix

Tables

Table 1. Corn Acres Harvested in SD, 1990 to 1994

Region	Year 1990	Year 1991	Year 1992	Year 1993	Year 1994	5 Year Average 1990-94	
	..... 1,000 Acres Harvested for Grain						
Northwest	14.6	16.3	20.5	12.5	13.5	15.5	0.5%
North Central	311.1	367.7	370.5	326.5	381.0	351.4	11.3%
Northeast	436.1	490.5	498.5	324.0	468.0	443.4	14.3%
West Central	5.1	5.7	6.3	4.5	5.5	5.4	0.2%
Central	363.7	397.0	391.0	373.5	419.0	388.8	12.5%
East Central	888.8	977.7	974.5	647.0	973.0	892.2	28.8%
South Western	5.5	8.9	8.7	9.5	11.0	8.7	0.3%
South Central	88.0	94.0	97.0	115.0	139.0	106.6	3.4%
South East	887.1	892.2	933.0	737.5	990.0	888.0	28.6%
SOUTH DAKOTA	3000.0	3250.0	3300.0	2550.0	3400.0	3100.0	100.0%

SOURCE: South Dakota Agricultural Statistics, USDA, South Dakota Agricultural Statistics Service, 1996.

Table 2. Corn Production in SD, 1990 to 1994

Region	Year 1990	Year 1991	Year 1992	Year 1993	Year 1994	5 Year Average 1990-94	
	..... million bushels						
Northwest	1.09	1.02	1.20	0.43	0.98	0.94	0.4%
North Central	24.08	28.04	22.35	20.01	39.51	26.80	10.5%
Northeast	37.81	44.03	32.61	14.64	48.89	35.60	13.9%
West Central	0.39	0.38	0.38	0.22	0.31	0.34	0.1%
Central	23.76	23.43	26.74	24.10	38.61	27.33	10.7%
East Central	73.34	78.99	88.08	35.16	111.41	77.40	30.2%
South Western	0.62	0.89	0.88	0.71	1.18	0.86	0.3%
South Central	6.51	4.35	6.69	7.79	10.80	7.23	2.8%
South East	66.41	59.38	98.26	57.57	115.50	79.43	31.0%
SOUTH DAKOTA	234.00	240.50	277.20	160.65	367.20	255.91	100.0%

SOURCE: South Dakota Agricultural Statistics, USDA, South Dakota Agricultural Statistics Service, 1996.

Table 3. Distribution of Responding Elevators Handling Corn

Region	Total Number of Elevators	Number of Responding Elevators	Crop Year 1993-94 Number of Responding Elevators Handling Corn	Crop Year 1993-94 Quantity of Corn Handled by Respondents (1,000 bu)	Crop Year 1994-95 Number of Responding Elevators Handling Corn	Crop Year 1994-95 Quantity of Corn Handled by Respondents (1,000 bu)
Northwest	11	5	5	221	5	261
North Central	49	21	18	11438	19	15321
Northeast	56	17	15	11990	15	19506
West Central	12	5	5	508	5	550
Central	23	15	13	4901	14	6047
East Central	58	24	23	16415	24	18281
South Central 1/	17	11	11	2008	11	2002
Southeast	49	22	20	17415	22	20965
South Dakota	275	120	110	64896	115	82933

1/ Includes estimates for Southwest region.

Table 4. Corn Handled by SD Elevators, 1994-95

Region	Net Quantity Handled by Responding Elevators (mil bu)	Net Quantity Handled by All Elevators (mil bu)	Production During the Yr. 1994 (mil bu)	Changes in Stocks During the Crop Yr. 1994-95 1/ (mil bu)	Total Quantity Available During the Yr. 1994-95 (mil bu)	Quantitiy Handled by All Elevators as % of Total Available Qty.
Northwest	0.21	0.46	0.98	0.09	0.89	51.6%
North Central	14.82	25.94	39.51	3.55	35.96	72.1%
Northeast	13.91	37.82	48.89	4.40	44.49	85.0%
West Central	0.44	0.76	0.31	0.03	0.28	269.4%
Central	5.55	8.91	38.61	3.47	35.14	25.4%
East Central	17.78	50.37	111.41	10.02	101.39	49.7%
South Central 2/	2.00	3.06	11.98	1.08	10.90	28.1%
Southeast	19.74	47.22	115.50	10.39	105.11	44.9%
South Dakota	74.44	174.55	367.20	33.02	334.18	52.2%

1/ South Dakota Stock Changes are based on Marketing Year; October 94 through September 95. Regional corn stock changes are assumed to be proporetional to the production during the year 1994.

2/ Includes estimates for Southwest region.

Table 5. Corn Purchased by Responding Elevators, by Method, 1994-95

	Region								
	North-west	North Central	North-east	West Central	Central	East Central	South Central 1/	South-east	South Dakota
NUMBER OF RESPONDENTS	5	18	13	5	13	24	11	20	109
	number of respondents								
METHOD OF PURCHASE:									
1. Cash Purchase	5	18	13	5	13	24	11	20	109
2. Delayed Pricing	0	12	8	0	5	22	2	17	66
3. Basis Contract	0	7	4	0	2	8	0	2	23
4. Hedged to Arrive	0	5	7	0	0	10	4	4	30
5. Minimum Price Contract	0	3	4	0	0	9	0	3	19
6. Cash Forward Contract	1	8	6	0	4	11	6	7	43
7. Others	0	0	0	0	1	1	1	1	4
	percent respondents								
METHOD OF PURCHASE:									
1. Cash Purchase	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2. Delayed Pricing	0.0%	66.7%	61.5%	0.0%	38.5%	91.7%	18.2%	85.0%	60.6%
3. Basis Contract	0.0%	38.9%	30.8%	0.0%	15.4%	33.3%	0.0%	10.0%	21.1%
4. Hedged to Arrive	0.0%	27.8%	53.8%	0.0%	0.0%	41.7%	36.4%	20.0%	27.5%
5. Minimum Price Contract	0.0%	16.7%	30.8%	0.0%	0.0%	37.5%	0.0%	15.0%	17.4%
6. Cash Forward Contract	20.0%	44.4%	46.2%	0.0%	30.8%	45.8%	54.5%	35.0%	39.4%
7. Others	0.0%	0.0%	0.0%	0.0%	7.7%	4.2%	9.1%	5.0%	3.7%
	million bu								
METHOD OF PURCHASE:									
1. Cash Purchase	0.24	6.00	7.26	0.55	3.92	10.09	1.37	8.38	37.81
2. Delayed Pricing	0.00	3.36	1.66	0.00	0.50	2.92	0.20	2.86	11.49
3. Basis Contract	0.00	0.89	0.28	0.00	0.11	0.40	0.00	0.12	1.79
4. Hedged to Arrive	0.00	0.98	1.32	0.00	0.00	0.40	0.12	0.77	3.60
5. Minimum Price Contract	0.00	0.42	0.23	0.00	0.00	0.13	0.00	0.05	0.83
6. Cash Forward Contract	0.02	3.66	5.83	0.00	1.49	4.30	0.27	6.04	21.60
7. Others	0.00	0.00	0.00	0.00	0.01	0.04	0.05	0.26	0.36
TOTAL	0.26	15.30	16.57	0.55	6.03	18.28	2.00	18.49	77.48
	percent quantity								
METHOD OF PURCHASE:									
1. Cash Purchase	90.8%	39.2%	43.8%	100.0%	65.0%	55.2%	68.4%	45.3%	48.8%
2. Delayed Pricing	0.0%	21.9%	10.0%	0.0%	8.3%	16.0%	9.8%	15.5%	14.8%
3. Basis Contract	0.0%	5.8%	1.7%	0.0%	1.8%	2.2%	0.0%	0.6%	2.3%
4. Hedged to Arrive	0.0%	6.4%	8.0%	0.0%	0.0%	2.2%	6.0%	4.2%	4.6%
5. Minimum Price Contract	0.0%	2.7%	1.4%	0.0%	0.0%	0.7%	0.0%	0.3%	1.1%
6. Cash Forward Contract	9.2%	23.9%	35.2%	0.0%	24.7%	23.5%	13.4%	32.7%	27.9%
7. Others	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	2.4%	1.4%	0.5%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1/ Includes information for 1 respondent from Southwest region.

Table 6. Corn Sold by Responding Elevators, by Method, 1994-95

	Region								
	North-west	North Central	North-east	West Central	Central	East Central	South Central 1/	South-east	South Dakota
NUMBER OF RESPONDENTS	5	14	14	4	13	23	11	20	104
	..... number of respondents								
METHOD OF SALE:									
1. Cash Sale	5	11	13	4	12	23	11	19	98
2. Delayed Pricing	0	0	0	0	1	0	0	2	3
3. Basis Contract	0	1	4	0	2	7	1	4	19
4. Cash Forward Contract	1	7	4	0	3	3	5	5	28
5. Others	0	0	2	1	0	1	0	0	4
	..... percent respondents								
METHOD OF SALE:									
1. Cash Sale	100.0%	78.6%	92.9%	100.0%	92.3%	100.0%	100.0%	95.0%	94.2%
2. Delayed Pricing	0.0%	0.0%	0.0%	0.0%	7.7%	0.0%	0.0%	10.0%	2.9%
3. Basis Contract	0.0%	7.1%	28.6%	0.0%	15.4%	30.4%	9.1%	20.0%	18.3%
4. Cash Forward Contract	20.0%	50.0%	28.6%	0.0%	23.1%	13.0%	45.5%	25.0%	26.9%
5. Others	0.0%	0.0%	14.3%	25.0%	0.0%	4.3%	0.0%	0.0%	3.8%
	..... million bu								
METHOD OF SALE:									
1. Cash Sale	0.21	6.54	7.07	0.44	3.46	12.99	1.29	11.67	43.68
2. Delayed Pricing	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.07	0.12
3. Basis Contract	0.00	0.94	2.94	0.00	0.49	4.14	0.04	1.37	9.93
4. Cash Forward Contract	0.05	4.07	1.15	0.00	2.00	0.48	0.67	2.88	11.29
5. Others	0.00	0.00	2.84	0.03	0.00	0.36	0.00	0.00	3.23
TOTAL	0.26	11.55	14.01	0.48	6.00	17.96	2.00	15.99	68.25
	..... percent quantity								
METHOD OF SALE:									
1. Cash Sale	81.6%	56.6%	50.5%	93.2%	57.7%	72.3%	64.4%	73.0%	64.0%
2. Delayed Pricing	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.4%	0.2%
3. Basis Contract	0.0%	8.2%	21.0%	0.0%	8.2%	23.0%	2.2%	8.6%	14.5%
4. Cash Forward Contract	18.4%	35.2%	8.2%	0.0%	33.3%	2.7%	33.3%	18.0%	16.5%
5. Others	0.0%	0.0%	20.3%	6.8%	0.0%	2.0%	0.0%	0.0%	4.7%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1/ Includes information for 1 respondent from Southwest region.

Table 7. Corn Sold by SD Elevators, by Type of Buyer, 1994-95

	Region								
	North-west	North Central	North-east	West Central	Central	East Central	South Central 1/	South-east	South Dakota
	million bu								
SALES BY TYPES OF BUYERS:									
1. Farmers	0.09	2.40	2.88	0.65	1.98	9.31	2.08	9.03	26.75
2. Feed Mills	0.00	0.06	1.63	0.11	0.18	1.89	0.03	1.87	5.37
3. Ethanol Producers	0.02	3.78	0.26	0.00	0.00	2.71	0.00	0.83	7.92
4. Other Processors	0.35	1.66	3.10	0.00	0.66	9.99	0.02	0.71	14.36
5. Terminals	0.00	17.93	28.87	0.00	5.51	21.85	0.00	9.22	89.19
6. Foreign Buyers (Direct)	0.00	0.00	0.00	0.00	0.00	0.08	0.00	12.31	11.91
7. Others	0.00	0.11	1.07	0.00	0.59	4.53	0.92	13.24	19.04
TOTAL	0.46	25.94	37.82	0.76	8.91	50.37	3.06	47.22	174.55
	percent								
SALES BY TYPES OF BUYERS:									
1. Farmers	20.0%	9.2%	7.6%	85.0%	22.2%	18.5%	68.1%	19.1%	15.3%
2. Feed Mills	0.0%	0.2%	4.3%	15.0%	2.0%	3.8%	1.0%	4.0%	3.1%
3. Ethanol Producers	5.0%	14.6%	0.7%	0.0%	0.0%	5.4%	0.0%	1.8%	4.5%
4. Other Processors	75.0%	6.4%	8.2%	0.0%	7.4%	19.8%	0.8%	1.5%	8.2%
5. Terminals	0.0%	69.1%	76.3%	0.0%	61.8%	43.4%	0.0%	19.5%	51.1%
6. Foreign Buyers (Direct)	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	26.1%	6.8%
7. Others	0.0%	0.4%	2.8%	0.0%	6.6%	9.0%	30.1%	28.0%	10.9%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1/ Includes information for 1 respondent from Southwest region.

Table 8. Corn Shipments by SD Elevatores, by Destination, 1994-95

	Region								
	North-west	North Central	North-east	West Central	Central	East Central	South Central 1/	South-east	South Dakota
	million bu								
CORN SHIPPED TO:									
1. Locations in South Dakota	0.46	6.96	7.88	0.76	2.82	16.27	2.14	11.72	49.01
2. Minneapolis Area	0.00	0.71	0.68	0.00	0.18	3.93	0.00	0.36	5.87
3. Sioux City Area	0.00	0.23	0.00	0.00	0.00	1.17	0.00	5.58	6.98
4. Portland Area	0.00	17.93	28.27	0.00	5.43	26.35	0.00	4.44	82.43
5. Other locations	0.00	0.11	0.99	0.00	0.48	2.65	0.92	25.12	30.27
TOTAL	0.46	25.94	37.82	0.76	8.91	50.37	3.06	47.22	174.55
	percent								
CORN SHIPPED TO:									
1. Locations in South Dakota	100.0%	26.8%	20.8%	100.0%	31.6%	32.3%	69.9%	24.8%	28.1%
2. Minneapolis Area	0.0%	2.7%	1.8%	0.0%	2.0%	7.8%	0.0%	0.8%	3.4%
3. Sioux City Area	0.0%	0.9%	0.0%	0.0%	0.0%	2.3%	0.0%	11.8%	4.0%
4. Portland Area	0.0%	69.1%	74.8%	0.0%	60.9%	52.3%	0.0%	9.4%	47.2%
5. Other locations	0.0%	0.4%	2.6%	0.0%	5.4%	5.3%	30.1%	53.2%	17.3%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1/ Includes 1 response from Southwest region.

Table 9. Corn Shipments by SD Elevators, by Transportation Modes, 1994-95

	Crop Reporting District								
	North-west	North Central	North-east	West Central	Central	East Central	South Central 1/	South-east	South Dakota
	million bu								
CORN SHIPPED BY RAIL TO:									
1. Locations in S.D.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Minneapolis Area	0.00	0.34	0.01	0.00	0.06	0.44	0.00	0.00	0.85
3. Sioux City Area	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.86	1.86
4. Portland Area 2/	0.00	17.93	28.27	0.00	5.43	26.35	0.00	4.44	82.43
5. Other Locations	0.00	0.11	0.00	0.00	0.00	2.20	0.02	14.53	16.87
SUB TOTAL	0.00	18.38	28.28	0.00	5.49	29.00	0.02	20.83	102.00
CORN SHIPPED BY TRUCKS TO:									
1. Locations in S.D.	0.46	6.96	7.88	0.76	2.82	16.27	2.14	11.72	49.01
2. Minneapolis Area	0.00	0.37	0.67	0.00	0.12	3.48	0.00	0.36	5.02
3. Sioux City Area	0.00	0.23	0.00	0.00	0.00	1.17	0.00	3.73	5.12
4. Portland Area	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Other Locations	0.00	0.00	0.99	0.00	0.48	0.45	0.90	10.58	13.41
SUB TOTAL	0.46	7.56	9.54	0.76	3.43	21.38	3.04	26.40	72.55
TOTAL QUANTITY SHIPED	0.46	25.94	37.82	0.76	8.91	50.37	3.06	47.22	174.55
	percent								
CORN SHIPPED BY RAIL TO:									
1. Locations in S.D.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2. Minneapolis Area	0.0%	1.3%	0.0%	0.0%	0.7%	0.9%	0.0%	0.0%	0.5%
3. Sioux City Area	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	1.1%
4. Portland Area 2/	0.0%	69.1%	74.8%	0.0%	60.9%	52.3%	0.0%	9.4%	47.2%
5. Other locations	0.0%	0.4%	0.0%	0.0%	0.0%	4.4%	0.7%	30.8%	9.7%
SUB TOTAL	0.0%	70.9%	74.8%	0.0%	61.6%	57.6%	0.7%	44.1%	58.4%
CORN SHIPPED BY TRUCKS TO:									
1. Locations in S.D.	100.0%	26.8%	20.8%	100.0%	31.6%	32.3%	69.9%	24.8%	28.1%
2. Minneapolis Area	0.0%	1.4%	1.8%	0.0%	1.4%	6.9%	0.0%	0.8%	2.9%
3. Sioux City Area	0.0%	0.9%	0.0%	0.0%	0.0%	2.3%	0.0%	7.9%	2.9%
4. Portland Area	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5. Other locations	0.0%	0.0%	2.6%	0.0%	5.4%	0.9%	29.3%	22.4%	7.7%
SUB TOTAL	100.0%	29.1%	25.2%	100.0%	38.4%	42.4%	99.3%	55.9%	41.6%
TOTAL QUANTITY SHIPPED	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1/ Includes 1 response from Southwest region.

2/ Estimates of corn shipments to portland area based on respondents answer to corn sales destined for Portland Area (all assumed to be shipped by rail). The estimates based on respondents's answers to rail shipments to Portland Area were lower and judged to be in error.

Table 10. Soybean Acres Harvested in SD, 1990 to 1994

Region	Year 1990	Year 1991	Year 1992	Year 1993	Year 1994	5 Year Average 1990-94	
	..... 1,000 Acres Harvested for Grain						
Northwest	0.0	0.5	0.0	0.0	0.0	0.1	0.0%
North Central	139.6	210.0	237.0	198.0	230.0	202.9	9.7%
Northeast	383.0	448.5	540.0	445.4	532.0	469.8	22.4%
West Central	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Central	56.8	66.0	46.5	49.0	62.0	56.1	2.7%
East Central	601.3	659.3	669.0	437.0	742.0	621.7	29.6%
South Western	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
South Central	10.8	12.5	9.7	10.0	12.7	11.1	0.5%
South East	727.8	762.4	747.0	610.0	839.0	737.2	35.1%
SOUTH DAKOTA	1920.0	2160.0	2250.0	1750.0	2400.0	2099.0	100.0%

SOURCE: South Dakota Agricultural Statistics, USDA, South Dakota Agricultural Statistics Service, 1996.

Table 11. Soybean Production in SD, 1990 to 1994

Region	Year 1990	Year 1991	Year 1992	Year 1993	Year 1994	5 Year Average 1990-94	
	..... million bushels						
Northwest	0.00	0.01	0.00	0.00	0.00	0.00	0.0%
North Central	3.91	5.61	5.08	5.24	8.15	5.60	9.2%
Northeast	11.65	13.28	10.32	7.26	17.46	11.99	19.7%
West Central	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
Central	1.26	1.29	1.12	1.19	2.25	1.42	2.3%
East Central	16.67	18.83	18.70	8.24	27.98	18.08	29.7%
South Western	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
South Central	0.30	0.23	0.28	0.29	0.48	0.32	0.5%
South East	19.96	19.06	27.50	16.26	34.88	23.53	38.6%
SOUTH DAKOTA	53.76	58.32	63.00	38.50	91.20	60.94	100.0%

SOURCE: South Dakota Agricultural Statistics, USDA, South Dakota Agricultural Statistics Service, 1996.

Table 12. Distribution of Responding Elevators Handling Soybeans

Region	Total Number of Elevators	Number of Responding Elevators	Crop Year 1993-94		Crop Year 1994-95	
			Number of Responding Elevators Handling Soybeans	Quantity of Soybeans Handled by Respondents (1,000 bu)	Number of Responding Elevators Handling Soybeans	Quantity of Soybeans Handled by Respondents (1,000 bu)
Northwest	11	5	1	12	1	7
North Central	49	21	15	5003	17	7735
Northeast	56	17	17	5614	17	8458
West Central	12	5	2	8	2	2
Central	23	15	9	751	9	878
East Central	58	24	22	7409	23	7083
South Central 1/	17	11	8	220	8	197
Southeast	49	22	19	8511	21	12646
South Dakota	275	120	93	27528	98	37006

1/ Includes estimates for Southwest region.

Table 13. Soybeans Handled by SD Elevators, 1994-95

Region	Net Quantity Handled by Responding Elevators (mil bu)	Net Quantity Handled by All Elevators (mil bu)	Production During the Yr. 1994 (mil bu)	Changes in Stocks During the Crop Yr. 1994-95 1/ (mil bu)	Total Quantity Available During the Yr. 1994-95 (mil bu)	Quantitiy Handled by All Elevators as % of Total Available Qty.
Northwest	0.01	0.02	0.00	0.00	0.00	-
North Central	7.46	13.40	8.15	0.58	7.57	177.0%
Northeast	6.36	17.29	17.46	1.24	16.22	106.6%
West Central	0.00	0.00	0.00	0.00	0.00	-
Central	0.88	1.45	2.25	0.16	2.09	69.4%
East Central	6.88	19.50	27.98	1.99	25.99	75.0%
South Central 2/	0.20	0.30	0.48	0.03	0.45	67.3%
Southeast	12.05	28.65	34.88	2.48	32.40	88.4%
South Dakota	33.83	80.61	91.20	6.48	84.72	95.1%

1/ South Dakota Stock Changes are based on Marketing Year; October 94 through September 95. Regional soybean stock changes are assumed to be proporetional to the production during the year 1994.

2/ Includes estimates for Southwest region.

Table 14. Soybeans Purchased by Responding Elevators, by Method, 1994-95

	Region								
	North Central 1/	North-east	West Central	Central	East Central	South-west	South Central	South-east	South Dakota
NUMBER OF RESPONDENTS	15	16	2	8	23	-	7	19	90
	number of respondents								
METHOD OF PURCHASE:									
1. Cash Purchase	15	16	2	8	23	-	7	19	90
2. Delayed Pricing	9	9	0	2	20	-	0	16	56
3. Basis Contract	4	3	0	1	8	-	0	1	17
4. Hedged to Arrive	3	6	0	0	8	-	0	4	21
5. Minimum Price Contract	2	4	0	0	10	-	0	1	17
6. Cash Forward Contract	9	6	0	2	11	-	5	9	42
7. Others	0	0	0	1	0	-	1	2	4
	percent respondents								
METHOD OF PURCHASE:									
1. Cash Purchase	100.0%	100.0%	100.0%	100.0%	100.0%	-	100.0%	100.0%	100.0%
2. Delayed Pricing	60.0%	56.3%	0.0%	25.0%	87.0%	-	0.0%	84.2%	62.2%
3. Basis Contract	26.7%	18.8%	0.0%	12.5%	34.8%	-	0.0%	5.3%	18.9%
4. Hedged to Arrive	20.0%	37.5%	0.0%	0.0%	34.8%	-	0.0%	21.1%	23.3%
5. Minimum Price Contract	13.3%	25.0%	0.0%	0.0%	43.5%	-	0.0%	5.3%	18.9%
6. Cash Forward Contract	60.0%	37.5%	0.0%	25.0%	47.8%	-	71.4%	47.4%	46.7%
7. Others	0.0%	0.0%	0.0%	12.5%	0.0%	-	14.3%	10.5%	4.4%
	million bu								
METHOD OF PURCHASE:									
1. Cash Purchase	3.64	3.33	0.00	0.62	4.03	-	0.17	4.89	16.68
2. Delayed Pricing	1.57	0.62	0.00	0.06	1.14	-	0.00	1.97	5.36
3. Basis Contract	0.12	0.09	0.00	0.03	0.15	-	0.00	0.03	0.42
4. Hedged to Arrive	0.26	0.40	0.00	0.00	0.07	-	0.00	0.33	1.06
5. Minimum Price Contract	0.11	0.07	0.00	0.00	0.20	-	0.00	0.01	0.38
6. Cash Forward Contract	1.89	2.75	0.00	0.16	1.48	-	0.02	3.75	10.05
7. Others	0.00	0.00	0.00	0.01	0.00	-	0.00	0.22	0.23
	7.58	7.26	0.00	0.87	7.08	-	0.20	11.20	34.19
	percent quantity								
METHOD OF PURCHASE:									
1. Cash Purchase	48.0%	45.9%	100.0%	70.8%	56.9%	-	87.7%	43.7%	48.8%
2. Delayed Pricing	20.7%	8.5%	0.0%	6.5%	16.1%	-	0.0%	17.6%	15.7%
3. Basis Contract	1.5%	1.2%	0.0%	3.8%	2.2%	-	0.0%	0.3%	1.2%
4. Hedged to Arrive	3.4%	5.5%	0.0%	0.0%	1.1%	-	0.0%	3.0%	3.1%
5. Minimum Price Contract	1.4%	1.0%	0.0%	0.0%	2.9%	-	0.0%	0.1%	1.1%
6. Cash Forward Contract	24.9%	38.0%	0.0%	17.8%	20.9%	-	11.5%	33.5%	29.4%
7. Others	0.0%	0.0%	0.0%	1.2%	0.0%	-	0.8%	1.9%	0.7%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	-	100.0%	100.0%	100.0%

1/ Includes information for 1 respondent from Northwest region.

Table 15. Soybeans Sold by Responding Elevators, by Method, 1994-95

	Region								
	North Central 1/	North-east	West Central	Central	East Central	South-west	South Central	South-east	South Dakota
TOTAL NO. OF RESPONDENTS:	13	16	2	8	22	-	7	19	87
	..... number of respondents								
METHOD OF SALE:									
1. Cash Sale	11	12	2	8	22	-	3	18	76
2. Delayed Pricing	2	0	0	0	0	-	0	2	4
3. Basis Contract	1	5	0	0	7	-	0	3	16
4. Cash Forward Contract	6	3	0	2	3	-	5	4	23
5. Others	0	2	0	0	1	-	0	0	3
	..... percent respondents								
METHOD OF SALE:									
1. Cash Sale	85%	75%	100%	100%	100%	-	43%	95%	87%
2. Delayed Pricing	15%	0%	0%	0%	0%	-	0%	11%	5%
3. Basis Contract	8%	31%	0%	0%	32%	-	0%	16%	18%
4. Cash Forward Contract	46%	19%	0%	25%	14%	-	71%	21%	26%
5. Others	0%	13%	0%	0%	5%	-	0%	0%	3%
	..... million bu								
METHOD OF SALE:									
1. Cash Sale	3.70	3.49	0.00	0.72	4.31	-	0.04	7.04	19.30
2. Delayed Pricing	0.15	0.00	0.00	0.00	0.00	-	0.00	0.27	0.42
3. Basis Contract	0.25	1.06	0.00	0.00	2.25	-	0.00	0.51	4.07
4. Cash Forward Contract	2.86	0.48	0.00	0.15	0.21	-	0.16	1.47	5.33
5. Others	0.00	1.23	0.00	0.00	0.11	-	0.00	0.00	1.34
TOTAL	6.96	6.26	0.00	0.87	6.88	-	0.20	9.30	30.46
	..... percent quantity								
METHOD OF SALE:									
1. Cash Sale	53%	56%	100%	83%	63%	-	20%	76%	63%
2. Delayed Pricing	2%	0%	0%	0%	0%	-	0%	3%	1%
3. Basis Contract	4%	17%	0%	0%	33%	-	0%	6%	13%
4. Cash Forward Contract	41%	8%	0%	17%	3%	-	80%	16%	17%
5. Others	0%	20%	0%	0%	2%	-	0%	0%	4%
TOTAL	100%	100%	100%	100%	100%	-	100%	100%	100%

1/ Includes information for 1 respondent from Northwest region.

Table 16. Soybeans Sold by SD Elevators, by Type of Buyer, 1994-95

	Crop Reporting District								
	North Central 1/	North-east	West Central	Central	East Central	South-west	South Central	South-east	South Dakota
	million bu								
SALES BY TYPES OF BUYERS:									
1. Farmers	0.00	0.00	-	0.00	0.01	-	0.00	0.01	0.02
2. Processors	1.89	4.09	-	0.20	8.95	-	0.28	15.16	30.58
3. Terminals	11.50	12.56	-	1.22	8.91	-	0.02	5.45	39.67
4. Foreign Buyers (Direct)	0.00	0.00	-	0.00	0.00	-	0.00	5.55	5.55
5. Others	0.03	0.63	-	0.02	1.62	-	0.00	2.48	4.78
TOTAL	13.42	17.29	-	1.45	19.50	-	0.30	28.65	80.61
	percent								
SALES BY TYPES OF BUYERS:									
1. Farmers	0.0%	0.0%	-	0.0%	0.1%	-	0.0%	0.0%	0.0%
2. Processors	14.1%	23.7%	-	13.9%	45.9%	-	92.4%	52.9%	37.9%
3. Terminals	85.7%	72.6%	-	84.4%	45.7%	-	7.6%	19.0%	49.2%
4. Foreign Buyers (Direct)	0.0%	0.0%	-	0.0%	0.0%	-	0.0%	19.4%	6.9%
5. Others	0.2%	3.7%	-	1.7%	8.3%	-	0.0%	8.6%	5.9%
TOTAL	100%	100%	-	100%	100%	-	100%	100%	100%

1/ Includes information for Northwest region.

Table 17. Soybean Shipments by SD Elevatores, by Destinatio, 1994-95

	Crop Reporting District								
	North Central 1/	North-east	West Central	Central	East Central	South-west	South Central	South-east	South Dakota
	million bu								
SOYBEANS SHIPPED TO:									
1. Locations in South Dakota	1.41	1.39	-	0.01	1.31	-	0.00	3.46	7.57
2. Minneapolis Area	0.52	3.67	-	0.07	3.41	-	0.00	0.39	8.05
3. Sioux City Area	0.00	0.12	-	0.23	6.55	-	0.30	13.79	20.99
4. Portland Area	10.39	10.32	-	1.14	6.74	-	0.00	2.78	31.37
5. Duluth Area	1.11	1.47	-	0.00	0.43	-	0.00	0.00	3.01
6. Foreign Buyers Directly	0.00	0.00	-	0.00	0.00	-	0.00	5.55	5.55
7. Others	0.00	0.32	-	0.00	1.07	-	0.00	2.68	4.06
TOTAL:	13.42	17.28	-	1.45	19.50	-	0.30	28.65	80.61
SOYBEANS SHIPPED TO:	million bu								
1. Locations in South Dakota	10.5%	8.0%	-	0.7%	6.7%	-	0.0%	12.1%	9.4%
2. Minneapolis Area	3.9%	21.2%	-	4.8%	17.5%	-	0.0%	1.4%	10.0%
3. Sioux City Area	0.0%	0.7%	-	16.0%	33.6%	-	100.0%	48.1%	26.0%
4. Portland Area	77.4%	59.7%	-	78.5%	34.6%	-	0.0%	9.7%	38.9%
5. Duluth Area	8.3%	8.5%	-	0.0%	2.2%	-	0.0%	0.0%	3.7%
6. Foreign Buyers Directly	0.0%	0.0%	-	0.0%	0.0%	-	0.0%	19.4%	6.9%
7. Others	0.0%	1.8%	-	0.0%	5.5%	-	0.0%	9.4%	5.0%
TOTAL:	100.0%	100.0%	-	100.0%	100.0%	-	100.0%	100.0%	100.0%

1/ Includes information for 1 respondent from Northwest region.

Table 18. Soybean Shipments by SD Elevators, by Transportation Modes, 1994-95

	Crop Reporting District								
	North Central 1/	North-east	West Central	Central	East Central	South-west	South Central	South-east	South Dakota
	million bu								
SOYBEAN SHIPPED BY RAIL TO:									
1. Locations in SD	0.00	0.00	-	0.00	0.00	-	0.00	0.00	0.00
2. Minneapolis Area	0.52	1.03	-	0.05	0.73	-	0.00	0.39	2.71
3. Sioux City Area	0.00	0.00	-	0.12	0.35	-	0.00	0.48	0.95
4. Portland Area 2/	10.39	10.32	-	1.14	6.74	-	0.00	2.78	31.37
5. Duluth Area	1.11	1.47	-	0.00	0.43	-	0.00	0.00	3.01
6. Other Locations	0.00	0.29	-	0.00	1.07	-	0.00	8.23	9.59
SUB TOTAL	12.02	13.11	-	1.31	9.31	-	0.00	11.88	47.63
SOYBEAN SHIPPED BY TRUCKS TO:									
1. Locations in SD	1.41	1.39	-	0.01	1.31	-	0.00	3.46	7.57
2. Minneapolis Area	0.00	2.64	-	0.02	2.68	-	0.00	0.00	5.34
3. Sioux City Area	0.00	0.12	-	0.11	6.20	-	0.30	13.31	20.04
4. Portland Area	0.00	0.00	-	0.00	0.00	-	0.00	0.00	0.00
5. Duluth Area	0.00	0.00	-	0.00	0.00	-	0.00	0.00	0.00
6. Other Locations	0.00	0.03	-	0.00	0.00	-	0.00	0.00	0.03
SUB TOTAL	1.41	4.17	-	0.14	10.19	-	0.30	16.77	32.98
TOTAL QUANTITY SHIPPED	13.42	17.28	-	1.45	19.50	-	0.30	28.65	80.61
	percent								
SOYBEAN SHIPPED BY RAIL TO:									
1. Locations in South Dakota	0.0%	0.0%	-	0.0%	0.0%	-	0.0%	0.0%	0.0%
2. Minneapolis Area	3.9%	6.0%	-	3.7%	3.7%	-	0.0%	1.4%	3.4%
3. Sioux City Area	0.0%	0.0%	-	8.2%	1.8%	-	0.0%	1.7%	1.2%
4. Portland Area 2/	77.4%	59.7%	-	78.5%	34.6%	-	0.0%	9.7%	38.9%
5. Duluth Area	8.3%	8.5%	-	0.0%	2.2%	-	0.0%	0.0%	3.7%
6. Other Locations	0.0%	1.7%	-	0.0%	5.5%	-	0.0%	28.7%	11.9%
SUB TOTAL	89.5%	75.9%	-	90.4%	47.8%	-	0.0%	41.5%	59.1%
SOYBEAN SHIPPED BY TRUCKS TO:									
1. Locations in South Dakota	10.5%	8.0%	-	0.7%	6.7%	-	0.0%	12.1%	9.4%
2. Minneapolis Area	0.0%	15.3%	-	1.1%	13.7%	-	0.0%	0.0%	6.6%
3. Sioux City Area	0.0%	0.7%	-	7.8%	31.8%	-	100.0%	46.4%	24.9%
4. Portland Area	0.0%	0.0%	-	0.0%	0.0%	-	0.0%	0.0%	0.0%
5. Duluth Area	0.0%	0.0%	-	0.0%	0.0%	-	0.0%	0.0%	0.0%
6. Other Locations	0.0%	0.1%	-	0.0%	0.0%	-	0.0%	0.0%	0.0%
SUB TOTAL	10.5%	24.1%	-	9.6%	52.2%	-	100.0%	58.5%	40.9%
TOTAL QUANTITY SHIPPED	100.0%	100.0%	-	100.0%	100.0%	-	100.0%	100.0%	100.0%

1/ Includes information for 1 respondent from Northwest region.

2/ Estimates of soybean shipments to portland area based on respondents answer to soybean sales destined for Portland Area (all assumed to be shipped by rail). The estimates based on respondents's answers to rail shipments to Portland Area were lower and judged to be in error.