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The 2005/06 South Dakota Grain Marketing Patterns
Study: A Grain Elevator Survey Report

by

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Bashir A. Qasmi, Yonas G. Hamda, and Scott W. Fausti

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Table of Contents

	<u>Page</u>
Acknowledgements	ii
Table of Contents	iii
List of Tables	iv
List of Figures	vi
1. Introduction	1
2. Survey Procedure and Methods	3
3. Determining the Total Number of Grain Dealers in South Dakota	3
4. Defining the Regions and Distribution of the Sample	4
5. Quantities of Grain Handled by South Dakota Elevators	11
6. Total Net Quantities of Grain Handled by South Dakota Elevators	11
7. Methods of Purchase by the Responding Elevators	17
8. Methods of Sale by the Responding Elevators	20
9. Grain Sales by the Responding Elevators, by Destination	23
10. Grain Sales by the Responding Elevators, by Types of Buyers	27
11. Grain Transportation by South Dakota Elevators	30
12. Summary	36
List of References	39
Appendix A: Profile of Responding Elevator Managers	40
Appendix B: Estimates of Grain Handled by South Dakota Elevators, by Sub-Region	45
Appendix C: Elevator Survey Schedule	51

List of Tables

<u>Table</u>	<u>Page</u>
1. Selected Grain and Oilseed Acres Harvested in South Dakota, 2005/06	6
2. Selected Grain and Oilseed Production Harvested in South Dakota, 2005/06	7
3. Distribution of Responding Elevators, 2007	10
4. Storage Capacities of South Dakota Grain Elevators, 2007	10
5. Gross Quantities of Grain Handled by the Responding Elevators, 2005/06	12
6. Net Quantities of Grain Handled by the Responding Elevators, 2005/06	12
7. Net Quantities of Grain Handled by All South Dakota Elevators, 2005/06	13
8. Market Share of Elevators in South Dakota, 2005/06	16
9. Methods of Purchase by the Responding Elevators, by Region, 2005/06	18
10. Grain Purchased by the Responding Elevators, by Method, 2005/06	19
11. Methods of Sale by the Responding Elevators, by Region, 2005/06	21
12. Grain Sales by the Responding Elevators, by Method, 2005/06	22
13. Grain Sold by the Respondents, by Destination and Buyer Type, 2005/06	25
14. Grain Sold by the Respondents, by Destination, 2005/06	26
15. Gross Quantities of Grain Sold by the Respondents, by Buyer Type, 2005/06	28
16. Grain Shipments by All South Dakota Elevators, by Destination, 2005/06	31
17. Grain Shipments by All South Dakota Elevators, by Transportation Mode, 2005/06	32
Appendix A: Profile of Responding Elevator Managers	
Table A.1. Education and Experience of the responding Elevator Managers, 2005/06	42
Table A.2. Elevator Operators' Training in Futures and Access to Information, 2005/06	43
Table A.3. The Extent of Elevator Owned Grain Protected, 2005/06	44
Appendix B: Estimates of Grain Handled by SD Elevators, by Sub-Regions	
Table B.1. Distribution of South Dakota Elevators, by Sub-Region, 2005/06	46
Table B.2. Gross Quantities Handled by the Responding Elevators, by Sub-Region, 2005/06	47
Table B.3. Net Quantities Handled by the Responding Elevators, by Sub-Region, 2005/06	48
Table B.4. Gross Quantities Handled by All South Dakota Elevators, by Sub-Region, 2005/06.....	49
Table B.5. Net Quantities Handled by All South Dakota Elevators, by Sub-Region, 2005/06	50
Appendix C: Elevator Survey Schedule	
South Dakota Grain Marketing Study: Elevator Survey Schedule	52

List of Figures

<u>Figure</u>	<u>Page</u>
1. South Dakota Agricultural Crop Reporting Districts	5
2. Net Quantities Handled by SD Elevators	14
3. Net Quantities of Sunflower Seeds Handled by SD Elevators	14
4. Quantities of Grains Shipped by SD Elevators, by Mode	33
5. Sunflower Seeds Shipped by SD Elevators, by Mode	33

1. Introduction

U.S. agriculture is going through a transition and agricultural policies are being modified to make production of farm commodities more responsive to market forces. In this competitive environment, efforts on the part of commodity groups for market development are becoming increasingly important. However, in order to devise any market development plan for a commodity, the understanding of the present status of the marketing system is important. At a minimum, one needs to know the methods of buying and selling, types of buyers, shipment destinations, and transportation modes for the commodity.

Corn, soybeans, wheat, and sunflower seeds are the most important cash crops in South Dakota. Limited quantities of oats and barley are also raised in the state. Cash receipts to producers in the state from marketing of these six grains (and oilseeds) amounted to \$2.11 billion, accounting for 93.3% of cash receipts from all crops in the state, during calendar year 2005. Country grain elevators provide an important link in transferring these commodities from farmers to processors or exporters. Information on the volume of these crops moving through country elevators, the destinations of grain moving through the elevators, and marketing practices adopted by these elevators are essential for evaluating and improving the operation of the grain marketing system.

The last grain marketing patterns study for South Dakota was completed in 1997 (Qasmi and McDaniel). In 1997, there were 275 licensed grain elevators in South Dakota. During the marketing year 1994/95, these elevators handled 175, 81, and 98 million bushels of corn, soybeans, and wheat, respectively, accounting for 52%, 95%, and 98% of the quantity available in the state, respectively. It was estimated that about 72% of corn, 91% of soybeans and 93% of wheat handled by the elevators were shipped to the out-of-the state locations during the marketing year. During the marketing year, the elevators also handled 11 million bushels of oats (32% of the quantity available), 4 million bushels of barley (52% of the quantity available), and 872 million pounds of sunflower seeds (61% of the quantity

available). It was estimated that 65% of the oats, 70% of the barley, and 97% of the sunflower seeds handled by the elevators were shipped to out-of-state locations during the marketing year 1994/95.

Since the completion of the 1997 grain marketing patterns study, the grain sector in South Dakota has gone through phenomenal changes. There has been a large increase in the production of corn and soybeans, and a decrease in oats, barley, and sunflower seeds production in the state. The grain handling industry has been consolidating. There has been a decrease in the number of licensed grain dealers, and an increase in the average elevator storage capacity in the state. A large number of ethanol plants have been established in South Dakota. There is also an increased use of complete commercially manufactured feed and ethanol industry co-products by livestock producers. These changes are expected to have dramatic impacts on grain marketing patterns. Under these circumstances the need for updating and analyzing information on the grain marketing system in South Dakota cannot be overemphasized.

The main objective of this study is to provide updated information on grain marketing patterns in South Dakota. Since a large proportion of the grain is handled by grain elevators, the data on grain marketing patterns were collected through a survey of grain elevators in South Dakota during fall 2007 and spring 2008. The specific objectives of the study were to identify:

- a) The quantities of different grains handled by the grain elevators,
- b) Alternative methods of purchase used by the grain elevators,
- c) Alternative methods of sale used by the grain elevators,
- d) Major types of buyers for the grain sold by the grain elevators,
- e) Major destinations of the grain shipped by the grain elevators, and
- f) Transportation modes used to ship the grain by the grain elevators.

The study investigated the marketing patterns for spring wheat, winter wheat, oats, barley, corn, soybeans and sunflower seeds for the marketing year 2005/06.

2. Survey Procedure and Methods

For the purpose of data collection, this study focused on the grain elevators rather than the firms owning the elevators. Accordingly, each grain elevator was viewed as a separate entity. Grain dealers or truckers who bought grain in South Dakota but did not have an elevator or storage facility were also treated as elevators. The data was collected through a mail survey following a variant of the method proposed by Salant and Dillman (1994).

A mail survey questionnaire was developed and pre-tested. After pre-testing, the questionnaire was modified to correct problems identified during the pre-testing period. The questionnaire was mailed to the managers of all grain elevators in South Dakota during September 2007. A copy of the survey questionnaire is provided in Appendix C. In order to obtain a higher response rate; a) endorsements from South Dakota commodity groups and the South Dakota Feed Grain Association were obtained and visibly noted in the cover letter, b) the survey questionnaire was kept as simple and as short as possible, and c) the survey questionnaires were mailed to elevator managers during a low activity season when the elevator personnel were less busy.

Four weeks after the initial mailing a reminder letter along with another copy of the questionnaire was mailed. Each returned questionnaire was checked for any inconsistencies and incomplete answers. In some cases, responses were completed or corrected through one or more follow up telephone calls to the respondents. In total, 94 useable completed surveys were received. The profile of responding elevators is presented in Appendix B. The data were tabulated and analyzed using Microsoft Excel software.

3. Determining the Total Number of Grain Dealers in South Dakota

Determining an accurate number of grain elevators and dealers who engage in the purchase of grain from South Dakota in a particular year is a complex task. All grain dealers involved in storing or

handling grain are required to obtain either a federal or state warehouse license. Since some warehouse licensees may not engage in actual purchases of South Dakota grain in a particular year, the warehouse licensee list tends to overestimate the number of active grain dealers.

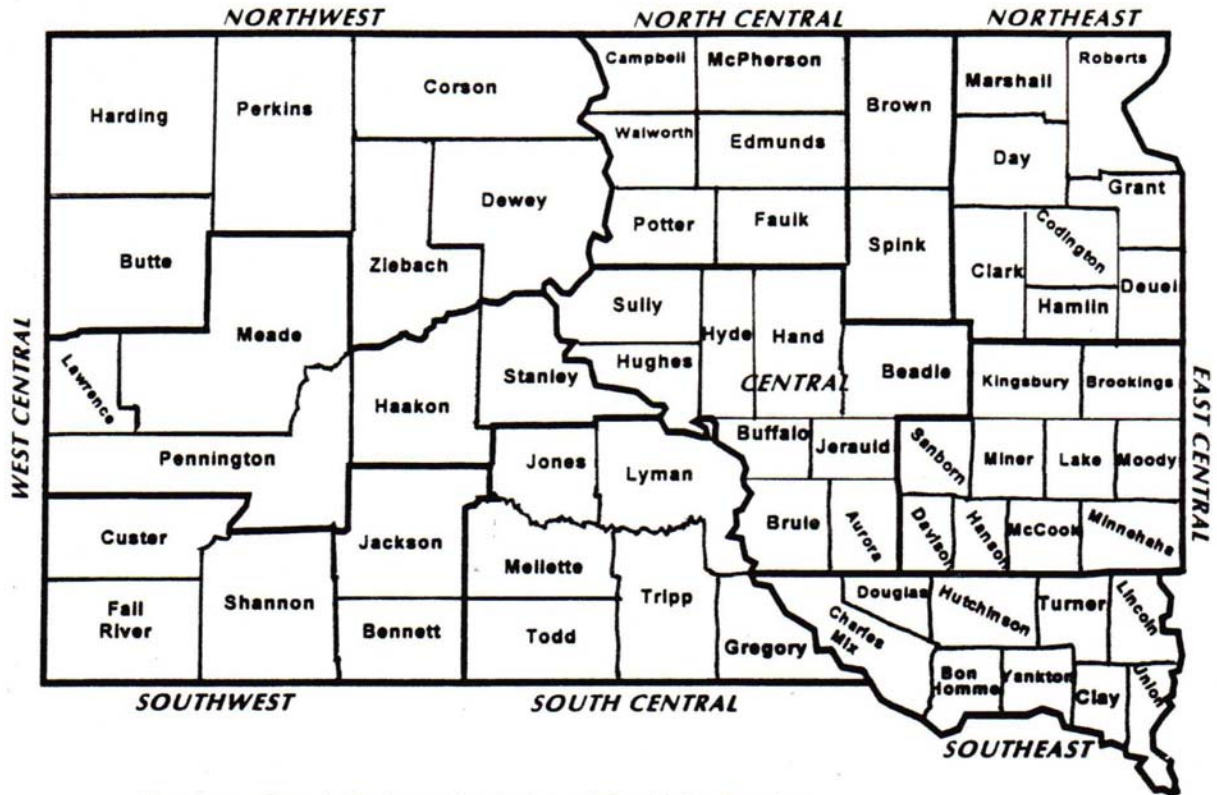
A current list of warehouse licensees, obtained from South Dakota Public Utility Commission, the agency responsible for warehouse licensing in the state, formed the initial list of grain elevators in South Dakota. All licensees were assigned a code and a survey questionnaire was mailed to each licensee on the list. However, after receiving the responses, the remaining entries on the list were carefully reviewed. The processors and feed mills which bought grain mainly from other elevators and dealers, the dealers which are not in business any more, and licensee truckers who did not purchase any South Dakota grain during marketing year 2005/06 were dropped from the list. In total, 21 licensees were dropped from the original list obtained from the South Dakota Public Utility Commission. It was determined that the total number of active elevators and grain dealers in South Dakota was 224 during marketing year 2005/06. Accordingly, the overall survey response rate was 42%.

4. Defining the Regions and Distribution of the Sample

Weather and soil conditions in South Dakota vary considerably; consequently, the types of grains produced also vary from one part of the state to another. Due to this variability, USDA's National Agricultural Statistics Service has divided the state into nine Agricultural Statistics Districts, also known as the Crop Reporting Districts, as shown in Figure 1.

The area harvested and production of selected grains during the crop year 2005/06 for different crop reporting districts in South Dakota are reported in Tables 1 and 2. The production of spring wheat is concentrated in the North Central, Northeast, and Central regions, whereas winter wheat is predominantly produced in the Central, West Central, and South Central regions. Oats production is

Figure 1. South Dakota Agricultural Crop Reporting Districts



Source: South Dakota Agricultural Statistic Service

Table 1. Selected Grain and Oilseed Acres Harvested in South Dakota, 2005/06

Description	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seed
.....1,000 acres harvested for grain							
Region:							
Northwest	208	109	20	11	31	5	0
North Central	568	124	30	15	737	936	139
North East	322	33	24	9	572	776	0
West Central	87	331	7	3	11	6	0
Central	327	384	24	3	512	358	243
East Central	51	65	21	1	982	900	0
South West	21	85	5	2	10	1	0
South Central	76	241	25	1	144	29	55
South East	31	119	24	1	951	840	0
South Dakota	1690	1490	180	47	3950	3850	530
..... Change from Avg. (1994-1996), in 1,000 acres harvested for grain							
Region:							
Northwest	-31	28	-15	-22	15	5	-10
North Central	-184	-22	-54	-59	359	678	-177
North East	-64	8	-33	-36	102	186	-94
West Central	28	8	-10	-4	6	6	-2
Central	68	11	-22	-19	117	276	-57
East Central	-1	-11	-42	-10	147	172	-33
South West	3	5	1	-1	-3	1	-2
South Central	54	-52	-5	-3	-5	13	-9
South East	6	32	-31	-4	61	-9	-30
South Dakota	-120	7	-210	-158	800	1327	-320
..... % Change in acres harvested from Avg. (1994-1996)							
Region:							
Northwest	-13%	34%	-43%	-66%	98%	NA	-100%
North Central	-25%	-15%	-64%	-79%	95%	262%	-56%
North East	-17%	32%	-58%	-79%	22%	31%	-100%
West Central	48%	3%	-58%	-59%	120%	NA	-100%
Central	26%	3%	-47%	-85%	30%	335%	-19%
East Central	-2%	-15%	-66%	-93%	18%	24%	-100%
South West	17%	6%	25%	-48%	-22%	NA	-100%
South Central	249%	-18%	-16%	-69%	-3%	87%	-13%
South East	25%	37%	-57%	-79%	7%	-1%	-100%
South Dakota	-7%	0%	-54%	-77%	25%	53%	-38%

Data Source: <http://www.nass.usda.gov/QuickStats>

Table 2. Selected Grain and Oilseed Production in South Dakota, 2005/06

Description	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seed
..... (mil bu)							(mil lbs)
Region:							
Northwest	4.5	4.1	1.0	0.4	2.3	0.1	0.0
North Central	25.4	5.2	2.3	0.8	92.7	31.9	281.5
North East	15.7	1.6	1.9	0.5	85.0	29.6	0.0
West Central	1.9	12.7	0.3	0.1	0.6	0.1	0.0
Central	13.3	18.3	1.8	0.2	44.7	10.4	396.3
East Central	2.4	3.1	1.8	0.0	127.1	34.8	7.1
South West	0.6	3.1	0.2	0.1	1.0	0.0	0.0
South Central	2.6	10.8	1.8	0.0	8.9	0.7	69.3
South East	1.2	6.8	1.8	0.1	107.8	27.2	27.2
South Dakota	67.6	65.6	13.0	2.3	470.1	134.8	877.0
.....Change from Avg. (1994-96), in mil bu							(mil lbs)
Region:							
Northwest	-1.1	1.5	-0.6	-0.8	1.3	0.1	-11.0
North Central	1.1	-0.4	-2.1	-2.4	58.9	23.7	-196.9
North East	2.0	0.8	-1.5	-1.7	41.0	11.9	-128.9
West Central	0.4	2.4	-0.3	0.0	0.3	0.1	-1.7
Central	6.0	4.9	-0.6	-0.6	12.3	7.8	-35.4
East Central	0.7	0.4	-2.2	-0.4	41.1	9.9	-38.4
South West	0.1	0.5	0.1	0.0	-0.2	0.0	-2.3
South Central	1.9	0.6	0.4	-0.1	-1.2	0.2	-20.1
South East	0.4	3.3	-1.7	-0.2	9.9	-4.5	-19.7
South Dakota	11.5	14.0	-8.5	-6.2	163.3	49.1	-359.1
.....% Change in production from Avg. (1994-96)							
Region:							
Northwest	-20%	61%	-39%	-67%	131%	NA	-100%
North Central	5%	-7%	-48%	-76%	174%	290%	-41%
North East	15%	88%	-43%	-75%	93%	67%	-100%
West Central	29%	24%	-50%	-27%	117%	NA	-100%
Central	83%	37%	-25%	-72%	38%	303%	-8%
East Central	39%	14%	-56%	-91%	48%	40%	-84%
South West	18%	17%	40%	-17%	-20%	NA	-100%
South Central	276%	5%	28%	-71%	-12%	36%	-22%
South East	45%	95%	-48%	-59%	10%	-14%	-42%
South Dakota	20%	27%	-40%	-73%	53%	57%	-29%

Data Source: <http://www.nass.usda.gov/QuickStats>

distributed throughout the state while barley production is predominantly in the northern regions of the state. Corn and soybeans are mainly produced in the North Central, Northeast, East Central and Southeast regions of the state. Sunflower seed production is predominantly concentrated in the North Central and Central regions of the state.

Because changes in available grain volumes are important for grain handlers' potential business volume, it is useful to identify shifts in production of grains and oilseeds in the state during recent years. However, selecting the base year for identifying these shifts is complicated because selection of an outlier year as a base can overestimate or underestimate production shifts. 1994 was a year of record production for corn, soybeans, and sunflower seeds. In 1995 there was a large decrease in the harvested areas for spring wheat, oats, barley, and corn. In 1995, the yields for corn, soybeans, and wheat were normal though much lower than the preceding year's record yields. Consequently, there was a large decline in production of corn, soybeans, spring wheat, and sunflower seeds in 1995. Accordingly, shifts in area and production in South Dakota were identified by comparing the data for crop year 2005/06 with the average for years 1994/96 (the base).

A comparison of the data for year 2005/06 with the average for 1994/96 indicates that the spring wheat area decreased by 7%, the winter wheat area remained unchanged, and the production of spring wheat and winter wheat increased by 20% and 27%, respectively. There has been a shift away from production of oats, barley, and sunflower seeds with a decrease in acres harvested in the state by 54%, 77%, and 38%, respectively, and a decrease in production in the state by 40%, 73%, and 29%, respectively. In contrast, corn acres (harvested for grain) and production in the state have increased by 25%, and 53%, respectively, during this period. Soybean acres harvested and production in the state has also increased by 53%, and 57%, respectively, during this period. In terms of acres and production, the shift in favor of corn and soybeans is most pronounced in the North Central, North East, Central, and East Central regions (Tables 1-2).

Because different grains are purchased by different types of buyers and move in different directions, the marketing patterns are expected to vary by grain and by region. In order to capture regional variations in marketing patterns, the state was divided into six geographic regions. Five of these regions (North Central, North East, Central, East Central, and Southeast) are located on the east side of the Missouri river and are identical to the USDA's crop reporting districts. Due to low grain production and fewer useable responses, the remaining four regions (Northwest, West Central, Southwest, and South Central) located west of the Missouri river were combined into one region, hereafter referred to as West River.

The response rate for the survey varied from 29% in the Southeast region to 59% in the North Central region, and averaged 42% statewide (Table 3). Out of 94 responding elevators, 52 (55% of responding elevators) were located on rail, and 44 of these (47% of responding elevators) actually shipped grain by rail during the marketing year 2005/06 (Table 3).

The average storage capacity for responding elevators varied from 0.44 million bushels in the West River region to 2.03 million bushels in the Central region (Table 4). The average storage capacity for non-responding elevators varied from 0.57 million bushels in Northeast region to 1.12 million bushels in the Southeast region. The average storage capacity for responding elevators was about 1.27 million bushels compared to 0.85 million bushels for the non-responding elevators (Table 4). In 2007, total grain elevator storage capacity varied from 19.8 million bushels in the West River region to 69.6 million bushels in the Southeast region. The storage capacity increase during the period was highest (216%) in the Southeast region (Table 4). In 2007, the total number of grain elevators in the state was 224, 19% fewer than 1996, while total grain elevator storage capacity in the state was 229 million bushels, up 90% since 1996 (Table 4). The sample of responding elevators was well distributed across different regions and responding elevators represent the elevator industry in different regions of the state.

Table 3. Distribution of Responding Elevators, 2007

Region	Total No. of Elevators	Responding Elevators		Responding Elevators on Rail		Responding Elevators Shipping by Rail	
		No.	%	No.	%	No.	%
North Central	37	22	59%	10	45%	10	45%
Northeast	37	16	43%	11	69%	10	63%
Central	21	9	43%	7	78%	5	56%
East Central	42	19	45%	9	47%	6	32%
Southeast	52	15	29%	6	40%	4	27%
West River ¹	35	13	37%	9	69%	9	69%
South Dakota	224	94	42%	52	55%	44	47%
..... change since 1996 (1994/95 study).....							
South Dakota	-19%	-22%	-	-19%	-	-21%	-

¹ Include Northwest, West Central, Southwest, and South Central regions.

Table 4. Storage Capacities of South Dakota Grain Elevator, 2007

Region	All Elevators	Average Capacity		Total Capacity	
		Responding Elevators	Nonresponding Elevators ¹	Responding Elevators	All Elevators
	..Number..	.....Million Bushels			
North Central	37	1.61	0.96	35.45	49.88
Northeast	37	1.19	0.57	19.01	31.01
Central	21	2.03	0.76	18.31	27.43
East Central	42	0.65	0.83	12.32	31.51
Southeast	52	1.90	1.11	28.45	69.62
West River ²	35	0.44	0.64	5.75	19.82
South Dakota	224	1.27	0.85	119.28	229.27
.....% change since 1996 (1994/95 study)					
North Central	-24%	153%	157%	165%	109%
Northeast	-34%	130%	47%	116%	30%
Central	-9%	251%	67%	111%	122%
East Central	-28%	88%	88%	49%	35%
Southeast	6%	126%	230%	208%	216%
West River ²	-13%	73%	-25%	-30%	32%
South Dakota	-19%	169%	105%	111%	90%

¹ Adjusted for grain purchased or sold to other elevators.

² Includes estimates for Northwest, West Central, Southwest, and South Central regions.

5. Quantities of Grain Handled by the Responding Elevators

Respondents were asked about the quantities of different grains they handled and purchased from other dealers during the marketing year 2005/06. Gross quantities of different grains handled during the marketing year 2005/06 by the responding elevators, by regions, are shown in Table 5. In order to avoid double counting, net quantities handled by elevators were calculated by deducting the quantities of grain purchased from other dealers from the gross quantities handled by the elevator. During the year, net quantities handled by the responding elevators amounted to 38.7, 25.8, 2.4, 2.5, 133.6, and 57.2 million bushels of spring wheat, winter wheat, oats, barley, corn, and soybeans, respectively, and 292.2 million pounds of sunflower seeds (Table 6).

6. Total Net Quantities of Grain Handled by South Dakota Elevators

Total net quantities of grains handled by all South Dakota elevators during the marketing year 2005/06 were estimated by extrapolating the quantities handled by responding elevators for each region. In cases where the region lacked homogeneity, in terms of the cropping pattern and/or elevator size, the extrapolation was done at a relatively more homogeneous sub-region level and then the regional estimates were derived by combining the estimates for the sub-regions in the region. The details of these sub regions and the distribution of responding and non-responding elevators, at sub-region level are given in Appendix Table B.1. Gross and net quantities of grains handled by the responding elevators during the crop year, by sub-regions, are given in Appendix Tables B.2 and B.3. Estimates of gross and net quantities of grains handled by all South Dakota elevators during the year 2005/06, by sub-region, are reported in Appendix Tables B.4 and B.5.

Estimates of total net quantities of different grains handled by all South Dakota elevators during the marketing year 2005/06 are reported in Table 7. A comparison of net quantities of grains handled by the elevators during the year 2005/06 and the year 1994/95 are shown in Figures 2 and 3.

Table 5. Gross Quantities of Grain Handled by the Responding Elevators, 2005/06

Region	Responding Elevators	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds
	Number	..... Million Bushels.....						Million Pounds
North Central	22	15.28	4.02	0.22	0.04	38.35	22.24	56.08
Northeast	16	16.50	1.68	0.79	1.50	28.61	14.13	0.00
Central	9	4.15	7.79	0.09	0.00	19.68	5.92	24.06
East Central	19	0.53	0.30	0.37	0.98	18.74	6.53	0.00
Southeast	15	0.38	5.14	0.64	0.00	36.13	12.83	3.33
West River ¹	13	5.27	9.63	0.43	0.01	0.76	0.06	218.18
South Dakota	94	42.12	28.56	2.53	2.53	142.28	61.70	301.65

¹ Includes estimates for Northwest, West Central, Southwest, and South Central regions.

Table 6. Net Quantities of Grain Handled by the Responding Elevators¹, 2005/06

Region	Responding Elevators	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds
	Number	..... Million Bushels.....						Million Pounds
North Central	22	13.35	3.60	0.22	0.04	34.51	19.20	46.78
Northeast	16	15.66	1.55	0.68	1.50	27.99	13.74	0.00
Central	9	4.05	7.54	0.09	0.00	19.56	5.92	23.88
East Central	19	0.53	0.30	0.36	0.98	18.07	6.27	0.00
Southeast	15	0.38	3.34	0.60	0.00	32.68	12.03	3.33
West River ²	13	4.76	9.49	0.43	0.01	0.76	0.06	218.16
South Dakota	94	38.73	25.81	2.38	2.53	133.56	57.21	292.15

¹ Adjusted for grain purchased from other elevators.

² Includes estimates for Northwest, West Central, Southwest, and South Central regions.

Table 7. Net Quantities of Grain Handled by All South Dakota Elevators¹, 2005/06

Region	All Elevators	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds
	Number	.....Million Bushels						Million Pounds
North Central	37	18.81	5.06	0.31	0.05	48.59	27.08	66.41
Northeast	37	24.58	2.64	1.18	2.28	45.08	22.06	0.00
Central	21	6.07	11.30	0.13	0.00	29.30	8.86	35.76
East Central	42	1.35	0.76	0.92	2.52	46.22	16.04	0.00
Southeast	52	0.88	7.71	1.43	0.00	80.09	29.09	7.25
West River ²	35	11.63	28.45	1.63	0.03	2.55	0.20	727.18
South Dakota	224	63.32	55.92	5.60	4.87	251.83	103.34	836.60
		.....change since 1994/95						
North Central	-12	-7.14	-1.38	-0.40	-2.61	22.65	13.68	-343.68
Northeast	-19	14.28	1.76	-1.12	1.25	7.26	4.77	-63.26
Central	-2	1.90	-1.70	-0.20	-0.07	20.39	7.41	-178.56
East Central	-16	0.86	-0.63	-0.81	2.32	-4.15	-3.46	-13.15
Southeast	3	0.06	2.90	-3.67	-0.15	32.87	0.44	-45.18
West River ²	-5	5.14	4.82	0.41	-0.22	-1.74	-0.12	608.50
South Dakota	-51	15.10	5.77	-5.79	0.51	77.28	22.73	-35.33
		.....% change since 1994/95						
North Central	-24%	-28%	-21%	-57%	-98%	87%	102%	-84%
Northeast	-34%	139%	200%	-49%	121%	19%	28%	-100%
Central	-9%	46%	-13%	-61%	-100%	229%	511%	-83%
East Central	-28%	176%	-45%	-47%	1158%	-8%	-18%	-100%
Southeast	6%	8%	60%	-72%	-100%	70%	2%	-86%
West River ²	-13%	79%	20%	34%	-90%	-41%	-37%	513%
South Dakota	-19%	31%	12%	-51%	12%	44%	28%	-4%

¹ Net Quantity is defined as gross quantity handled by an elevator minus the quantity purchased from another elevator. Includes estimates of grain handled by non-responding elevators based on the assumption the capacity use on non-responding elevators is similar to those of responding elevators in the region (or sub region).

² Includes estimates for Northwest, West Central, Southwest, and South Central regions.

Fig 2. Net Quantities Handled by SD Elevators

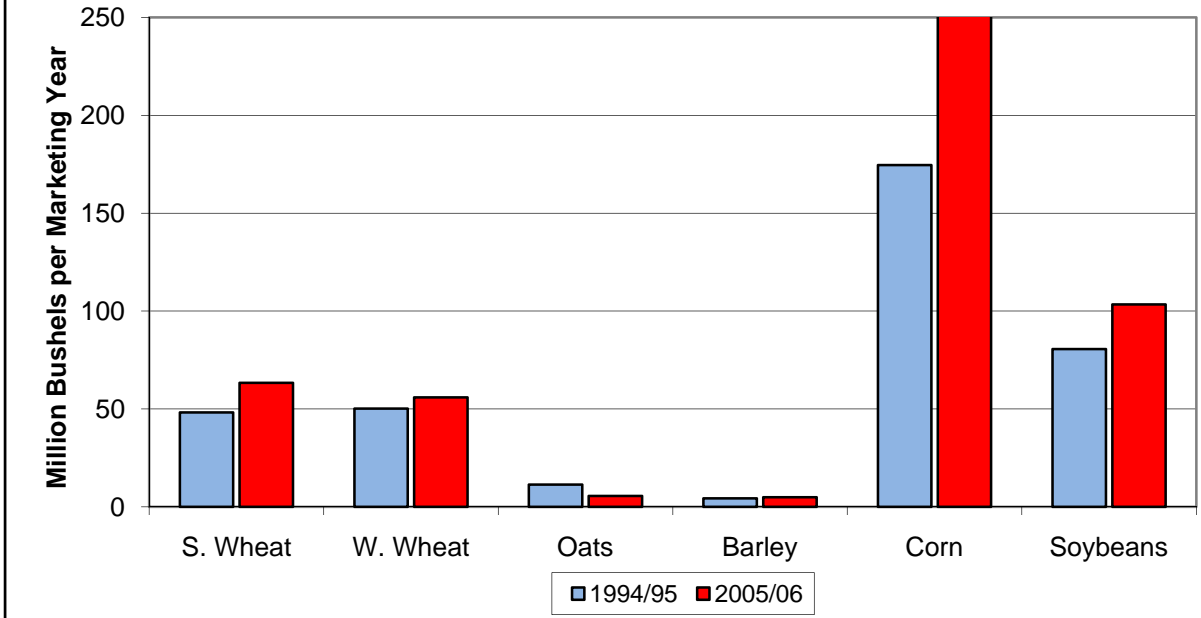
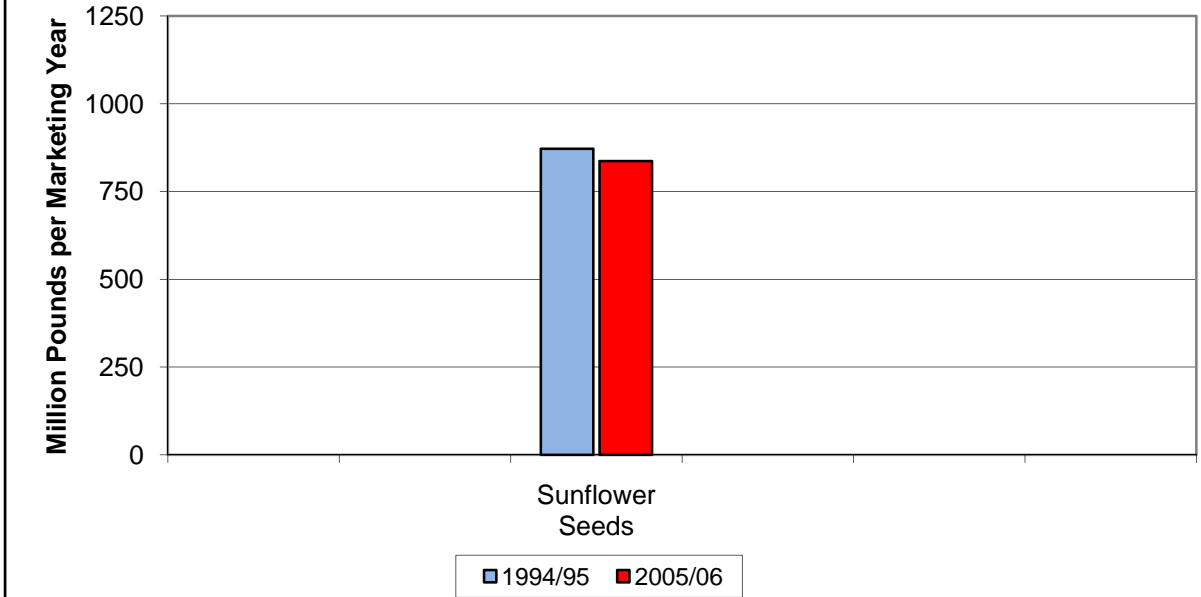


Fig 3. Net Quantities of Sunflower Seeds Handled by SD Elevators



During the year 2005/06, South Dakota elevators handled 251.8 million bushels of corn (44% more than in 1994/95) and 103.3 million bushels of soybeans (28% more than in 1994/95). As expected, most of the increase was in the Southeast, North Central, and Central regions for corn, and in the North Central and Central regions for soybeans. During the year 2005/06, elevators in South Dakota handled 63.3 million bushels of spring wheat (31% more than 1994/95), and 55.9 million bushels of winter wheat (12% more than in 1994/95). In terms of bushels, most of the increase in spring wheat was concentrated in the Northeast region while the increase in winter wheat was predominantly in the West River region. During the year 2005/06, elevators handled 5.6 million bushels of oats (a drop of 51% since 1994/95), and 4.8 million bushels of barley (12% more than in 1994/95). The changes in sunflower seeds were mixed. During the year 2005/06, elevators in South Dakota handled 836.6 million pounds of sunflower seeds (4% less than in 1994/95). During this period, there was an increase in the net quantity of sunflower seeds handled by elevators in the West River region which was offset by a decrease in the other regions (Table 7).

During a marketing year, the total quantity of a grain available to elevators in a region predominantly depends on production of the grain and changes in regional stock levels. Sales across regional boundaries by producers and elevators/traders can also affect the total quantity available. Net sales across regional boundaries were assumed to be negligible. Accordingly, elevators' market share in the state is defined as the total net quantity of a grain handled by all elevators divided by the total quantity of the grain available in the state during the year. The elevators' market shares for different grains for crop years 2005/06 and 1994/95 are reported in Table 8.

During the year 2005/06, elevators' market share in South Dakota was 54%, 83%, 91% and 83% for corn, soybeans, spring wheat, and winter wheat, respectively. Between 1994/95 and 2005/06, the elevators' market share has slightly increased for corn and spring wheat. As a result of the dramatic increase in ethanol production, producers have been reported to bypass local grain elevators and

Table 8. Market Share of Elevators in South Dakota, 2005/06

	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds
	.....Million Bushels.....						Million Pounds
Production in 2005 ¹	67.60	65.56	12.96	2.30	470.05	134.75	876.95
Stock Change in 2005/06 ²	-2.03	-1.97	-0.42	-1.00	+7.00	+9.70	-
Total Available Quantity in 2005/06 ³	69.63	67.53	13.38	3.30	463.05	125.05	876.95
Gross Qty. Handled by All Elevators ⁴	68.70	61.98	5.89	4.87	268.70	110.89	850.17
Net Qty. Handled by All Elevators ⁵	63.32	55.92	5.60	4.87	251.83	103.34	836.60
	..... Elevators' Market Share ⁶						
Elevators' Market Share in 1994/95	88%	110%	55%	34%	52%	95%	61%
Elevators' Market Share in 2005/06	91%	83%	42%	148%	54%	83%	95%

¹ State total for Sunflower seed also includes seed for oil and non-oil use.

² Changes in on farm stocks: from June 2005 through June 2006 for Wheat, Oats and Barley; September 2005 through September 2006 for Corn and Soybeans. Stock changes for all wheat were assigned to spring and winter based on their respective production share in SD.

³ Production minus stock change.

⁴ Regional details are in Appendix B.4.

⁵ Regional details are in Appendix B.5.

⁶ Net quantity handled by all elevators as a % of total available quantity during the marketing year.

Source: Data on Production and stock changes are from USDA, SDASS, 2009.

deliver more corn directly to ethanol plants in Iowa and Indiana (Dooley, 2006, and Yu and Hart, 2009). In contrast to the findings reported by Dooley (for Indiana), and Yu and Hart (for Iowa), our survey results show that despite the large increase in ethanol production in the state, elevators' market share for corn has actually increased in South Dakota. During this period, the elevators' market share for soybeans decreased by 12 percentage points as the only soybean processor in the state expanded soybean intake for processing. Most likely producers increased their direct sales of soybeans to the processing plant.

Compared to 1994/95, the elevators' market share for winter wheat was much lower in 2004/05. This is probably due to errors in reporting the correct type of wheat by the respondents in 1994/95 survey. This is likely to occur when an elevator predominantly handling one type of wheat receives few loads of the other type of wheat. Under these circumstances, combining the spring and winter wheat data may provide a better estimate of the market share. Elevators' combined market share for spring and winter wheat for 2005/06 was 87% (down from 98% in 1994/95).

During the period, the elevators' market share decreased from 55% to 42% for barley and increased from 34% to 148% for barley. Because of low production levels, changes in stock levels and commodity flows across state boundaries can drastically change elevators' market shares for oats and barley from year to year. During the year 2005/06, the elevators' market share of sunflower seeds was 95% (up from 61% in 1994/95).

7. Methods of Purchase by the Responding Elevators

Grain elevators in South Dakota employ a number of methods to purchase grain (Table 9). Two most frequently used methods of purchase are cash purchase (used by 100% of elevators), and delayed pricing (used by 87% of elevators). The regional rankings of the top two methods are similar to that of

Table 9. Methods of Purchase by the Responding Elevators, by Region, 2005/06

	North Central	Northeast	Central	East Central	Southeast	West River ¹	South Dakota
Total Number of Respondents	19	14	6	19	13	11	82
METHOD OF PURCHASE:	..... Number of Respondents						
1. Cash Purchase	19	14	6	19	13	11	82
2. Delayed Pricing	18	11	6	18	8	10	71
3. Basis Contract	17	6	4	1	5	0	33
4. Hedged to Arrive	11	14	4	12	7	1	49
5. Minimum Price Contract	3	5	1	3	2	1	15
6. Cash Forward Contract	2	10	4	14	6	9	45
7. Others	0	2	2	3	1	0	8
METHOD OF PURCHASE:	..... Percent of Respondents						
1. Cash Purchase	100%	100%	100%	100%	100%	100%	100%
2. Delayed Pricing	95%	79%	100%	95%	62%	91%	87%
3. Basis Contract	89%	43%	67%	5%	38%	0%	40%
4. Hedged to Arrive	58%	100%	67%	63%	54%	9%	60%
5. Minimum Price Contract	16%	36%	17%	16%	15%	9%	18%
6. Cash Forward Contract	11%	71%	67%	74%	46%	82%	55%
7. Others	0%	14%	33%	16%	8%	0%	10%

¹Includes estimates for Northwest, West Central, Southwest, and South Central regions.

Table 10. Grain Purchased by the Responding Elevators, by Method, 2005/06

	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds
Total Number of Respondents	60	60	51	6	79	72	21
METHOD OF PURCHASE:	..... Number of Respondents						
1. Cash Purchase	59	59	50	6	77	71	21
2. Delayed Pricing	45	43	9	2	59	57	8
3. Basis Contract	19	18	4	2	28	22	4
4. Hedged to Arrive	28	18	0	0	41	33	0
5. Minimum Price Contract	8	3	0	0	7	5	0
6. Cash Forward Contract	25	20	9	0	38	30	7
7. Others	2	0	2	0	5	3	0
METHOD OF PURCHASE:	..... Percent of Respondents						
1. Cash Purchase	98%	98%	98%	100%	97%	99%	100%
2. Delayed Pricing	75%	72%	18%	33%	75%	79%	38%
3. Basis Contract	32%	30%	8%	33%	35%	31%	19%
4. Hedged to Arrive	47%	30%	0%	0%	52%	46%	0%
5. Minimum Price Contract	13%	5%	0%	0%	9%	7%	0%
6. Cash Forward Contract	42%	33%	18%	0%	48%	42%	33%
7. Others	3%	0%	4%	0%	6%	4%	0%
METHOD OF PURCHASE:	..... Million Bushels						Million Lbs.
1. Cash Purchase	27.14	12.79	2.11	1.53	58.32	29.59	124.52
2. Delayed Pricing	6.49	6.82	0.13	0.02	23.61	13.38	0.78
3. Basis Contract	1.54	0.91	0.01	0.00	5.29	1.77	0.02
4. Hedged to Arrive	3.33	2.49	0.00	0.00	26.04	7.66	0.00
5. Minimum Price Contract	0.68	0.20	0.00	0.00	1.53	0.80	0.00
6. Cash Forward Contract	2.56	4.23	0.17	0.00	23.69	5.87	30.41
7. Others	0.04	0.00	0.01	0.00	1.04	0.19	0.00
TOTAL ¹	41.78	27.48	2.43	1.55	139.52	59.27	155.73
METHOD OF PURCHASE:	..... Percent Quantity						
1. Cash Purchase	65%	47%	87%	99%	42%	50%	80%
2. Delayed Pricing	16%	25%	5%	1%	17%	23%	1%
3. Basis Contract	4%	3%	0%	0%	4%	3%	0%
4. Hedged to Arrive	8%	9%	0%	0%	19%	13%	0%
5. Minimum Price Contract	2%	1%	0%	0%	1%	1%	0%
6. Cash Forward Contract	6%	15%	7%	0%	17%	10%	20%
7. Others	0%	0%	0%	0%	1%	0%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%

¹Methods of purchase information on balance quantities of grain (0.34, 1.08, 0.10, 0.98, 2.75, and 2.44 million bushels of spring wheat, winter wheat, oats, barley, corn, and soybeans, respectively; and 145.93 million pounds of sunflower seed purchased by the respondents was not available.

the statewide ranking except in the Northeast region. In the northeast region, the hedged to arrive method (used by 100% of elevators) surpassed the delayed pricing method (used by 79% of elevators).

The quantities of grain purchased by the responding elevators with alternative methods during the year 2005/06 are shown in Table 10. The relative importance of methods of purchase, in terms of grain volume purchased, vary from grain to grain. Cash purchase is the dominant method of purchase, accounting for 65% of spring wheat, 47% of winter wheat, 87% of oats, 99% of barley, 42% of corn, 50% of soybeans, and 16% of sunflower seeds purchased by the responding elevators. Delayed pricing is the second most prominent method of purchase, accounting for 16% of spring wheat, 25% of winter wheat, 17% of corn, and 23% of soybean purchases by the responding elevators. Hedged to arrive and cash forward contracts are also important methods of purchase. Hedged to arrive contracts accounting for 8% of spring wheat, 9% of winter wheat, 19% of corn, and 13% of soybeans purchased by the responding elevators during the year. Cash forward contracts accounting for 15% of winter wheat, 17% of corn, 10% of soybeans, and 20% of sunflower seeds purchased by the responding elevators during the year. Basis contracts and minimum price contracts were used infrequently by the responding elevators during the year.

A comparison of the methods purchase in 2005/06 with those utilized in 1994/95 shows that the elevators relied more on delayed pricing and hedged to arrive and less on forward contracts for purchase of grains in year 2005/06.

8. Methods of Sale by the Responding Elevators

Elevators employ a number of methods to sell their grain. Commonly reported methods of sale by the responding grain elevators in South Dakota during 2005/06 are listed in Tables 11 and 12. The three most commonly reported methods were cash sale (used by 94% elevators), cash forward contracts

Table 11. Methods of Sale by the Responding Elevators, by Region, 2005/06

	North Central	Northeast	Central	East Central	Southeast	West River ¹	South Dakota
Total Number of Respondents	20	15	6	14	14	11	80
METHOD OF PURCHASE:	..... Number of Respondents						
1. Cash Sale	19	15	5	12	13	11	75
2. Delayed Pricing	1	2	2	3	3	0	11
3. Basis Contract	10	7	3	3	5	1	29
4. Hedged to Arrive	0	3	0	0	1	0	4
5. Minimum Price Contract	0	0	0	0	0	0	0
6. Cash Forward Contract	4	11	4	8	5	9	41
7. Others	0	2	0	0	2	0	4
METHOD OF PURCHASE:	..... Percent of Respondents						
1. Cash Sale	95%	100%	83%	86%	93%	100%	94%
2. Delayed Pricing	5%	13%	33%	21%	21%	0%	14%
3. Basis Contract	50%	47%	50%	21%	36%	9%	36%
4. Hedged to Arrive	0%	20%	0%	0%	7%	0%	5%
5. Minimum Price Contract	0%	0%	0%	0%	0%	0%	0%
6. Cash Forward Contract	20%	73%	67%	57%	36%	82%	51%
7. Others	0%	13%	0%	0%	14%	0%	5%

¹Includes estimates for Northwest, West Central, Southwest, and South Central regions.

Table 12. Grain Sales by the Responding Elevators, by Method, 2005/06

	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds
Total Number of Respondents	61	57	45	3	69	67	22
METHOD OF SALE:	..... Number of Respondents						
1. Cash Sale	53	50	43	2	58	54	21
2. Delayed Pricing	1	2	0	0	3	9	1
3. Basis Contract	18	16	0	0	24	22	0
4. Hedged to Arrive	1	1	0	0	4	1	0
5. Minimum Price Contract	0	0	0	0	0	0	0
6. Cash Forward Contract	24	21	9	1	26	25	8
7. Others	1	0	0	0	4	3	0
METHOD OF SALE:	..... Percent of Respondents						
1. Cash Sale	87%	88%	96%	67%	84%	81%	95%
2. Delayed Pricing	2%	4%	0%	0%	4%	13%	5%
3. Basis Contract	30%	28%	0%	0%	35%	33%	0%
4. Hedged to Arrive	2%	2%	0%	0%	6%	1%	0%
5. Minimum Price Contract	0%	0%	0%	0%	0%	0%	0%
6. Cash Forward Contract	39%	37%	20%	33%	38%	37%	36%
7. Others	2%	0%	0%	0%	6%	4%	0%
METHOD OF SALE:	..... Million Bushels						Million Lbs.
1. Cash Sale	15.28	9.30	1.71	0.04	36.83	23.21	120.78
2. Delayed Pricing	0.04	0.01	0.00	0.00	0.20	0.54	6.89
3. Basis Contract	21.12	8.55	0.00	0.00	67.93	20.59	0.00
4. Hedged to Arrive	0.03	0.04	0.00	0.00	2.19	0.08	0.00
5. Minimum Price Contract	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6. Cash Forward Contract	5.05	9.40	0.65	1.50	26.69	12.14	73.97
7. Others	0.36	0.00	0.00	0.00	2.42	1.90	0.00
TOTAL¹	41.88	27.30	2.36	1.54	136.26	58.46	201.65
METHOD OF SALE:	..... Percent Quantity						
1. Cash Sale	36%	34%	72%	2%	27%	40%	60%
2. Delayed Pricing	0%	0%	0%	0%	0%	1%	3%
3. Basis Contract	50%	31%	0%	0%	50%	35%	0%
4. Hedged to Arrive	0%	0%	0%	0%	2%	0%	0%
5. Minimum Price Contract	0%	0%	0%	0%	0%	0%	0%
6. Cash Forward Contract	12%	34%	28%	98%	20%	21%	37%
7. Others	1%	0%	0%	0%	2%	3%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%

¹Method of sale information for balance quantities of grain handled by the respondents (0.24, 1.27, 0.17, 0.99, 6.02, and 3.25 million bushels of spring wheat, winter wheat, oats, barley, corn, and soybeans, respectively; and 100.00 million pounds of sunflower seed) was not available.

(used by 51% elevators), and basis contracts (used by 36% elevators). The regional rankings for these methods are, more or less, similar to the statewide rankings (Table 11).

In terms of volume of sales, the relative importance of the top three methods of sale varies from grain to grain (Table 12). For spring wheat, basis contracts are most important, accounting for 50% followed by cash sales (36%) and cash forward sales (12%). In case of winter wheat, cash sales and cash forward contracts (each accounting for 34% of sales) are most important followed by basis contracts (31%). For corn, the most important method is basis contracts, accounting for 50% of sales, followed by cash sales (27%) and cash forward contracts (20%). For soybeans, cash sales method accounts for 40% of the sales, followed by basis contracts (35%) and cash forward contracts (21%). In case of sunflower seeds, cash sales account for 60% of the sales followed by cash forward contracts (37%). During the year, delayed pricing, hedged to arrive and minimum price contracts methods of sale were much less frequently used by the responding elevators.

A comparison of the methods of sale in 2005/06 with that of 1994/95 shows that the elevators were relying less on cash method of sale and more on basis contracts and cash forward contracts for sale of their grain in 2005/06.

9. Grain Sales by the Responding Elevators, by Destinations

Respondents were asked about the total quantity of each grain handled by their elevators during the crop year 2005/06. They were also asked to provide proportions of sales for each grain during the crop year attributable to different types of buyers at specified locations. Since only five respondents provided the sales destination information for barley (with a total sale of 0.05 million bushels), the destination information on barley is not reported. The information for the remaining six grains was used to develop profiles of South Dakota grain sales in terms of destination and types of buyers (Table 13). A summary indicating the destinations of the grain sold by the responding elevators

during the crop year 2005/06 is presented in Table 14. A brief discussion of the major destinations for each grain follows.

Spring Wheat Destinations: During the year, 4% of spring wheat handled by the responding elevators was sold to in-state buyers. The most dominant destination for spring wheat was the Minneapolis area accounting for 61% spring wheat handled by the respondents (down from 88% in 1994/95). Spring wheat shipments destined for Pacific Northwest Terminals and Duluth accounted for 2% each. About 29% of the spring wheat was shipped by the responding elevators to other unspecified out-of-state destinations.

Winter Wheat Destinations: During the year, 7% of the winter wheat handled by the responding elevators was sold to in-state buyers. The Minneapolis area was the most dominant destination for the winter wheat, accounting for 45% (down from 60% in 1994/95) of the shipments during the year. Winter wheat shipments to Pacific Northwest Terminals accounted for 8% of the shipments during the year. About 40% of the winter wheat was shipped by the responding elevators to other unspecified out-of-state destinations.

Oats Destinations: During the year, 35% of the oats handled by the responding elevators were sold to in-state buyers. The Sioux City Area and Minneapolis Area account for 11% and 10%, respectively, of the oats shipped by the elevators. About 44% of the oats were shipped to other unspecified out-of-state destinations.

Corn Destinations: During the year, 63% (up from 28% in 1994/95) of the corn handled by responding elevators was sold to in-state buyers (53% within 30 miles and another 10% in the state). This is obviously due to a large increase in the number and capacity of ethanol plants in the corn producing areas of the state. Pacific Northwest Terminals accounted for 35% (down from 47% in 1994/95) of the corn shipped by the responding elevators.

Table 13. Grain Sold by the Respondents, by Destination and Buyer Type, 2005/06

Sales Destination/ Buyer Type	Spring Wheat	Winter Wheat	Oats	Corn	Soybeans	Sunflower Seed
Number of Respondents	61	55	49	79	67	14
	..... Million Bushels .....					..Million Lbs..
LOCAL, WITH IN 30 MILES:						
a. Farmers as Feed	0.00	0.00	0.49	16.75	0.01	0.00
b. Feed Mills	0.30	0.12	0.10	6.42	0.32	0.00
c. Ethanol Producers	0.00	0.00	0.00	49.99	0.00	0.00
d. Other Processors	0.69	1.02	0.05	1.84	4.18	0.00
IN S.D., BEYOND 30 MILES:						
e. Feed Mills	0.00	0.00	0.07	2.38	0.00	0.00
f. Ethanol Producers	0.01	0.06	0.00	9.57	0.00	0.00
g. Other Processors	0.64	0.72	0.14	1.66	7.69	4.33
MINNEAPOLIS AREA:						
h. Spot(Cash) Market	13.63	7.66	0.00	0.00	0.09	0.00
i. Grain Dealers	8.19	2.86	0.22	0.00	1.11	0.00
j. Feed Mills	0.00	0.00	0.02	0.50	0.00	0.00
k. Ethanol Producers	0.00	0.00	0.00	0.00	0.00	0.00
l. Other Processors	2.18	1.10	0.00	0.00	3.64	20.59
m. Terminals	1.80	0.59	0.00	0.00	0.00	0.00
SIOUX CITY AREA:						
n. Feed Mills	0.00	0.00	0.19	0.00	0.00	0.00
o. Ethanol Producers	0.00	0.00	0.00	0.00	0.00	0.00
p. Other Processors	0.28	0.03	0.06	0.00	7.25	0.00
q. Terminals	0.00	0.00	0.02	0.00	1.35	0.00
PACIFIC NORTHWEST AREA:						
r. Terminals	0.92	2.13	0.00	48.97	28.19	0.00
DULUTH AREA:						
s. Terminals	1.04	0.00	0.00	0.00	0.50	0.00
OTHER DESTINATIONS:						
t. Foreign Buyers	0.20	0.15	0.00	0.58	1.00	19.89
u. Others	12.11	11.01	1.08	2.33	4.34	149.04
TOTAL¹	42.00	27.45	2.45	140.99	59.67	193.85

¹Destination information on balance quantities of grain (0.12, 1.11, 0.08, 1.28, and 2.03 million bushels of spring wheat, winter wheat, oats, corn, and soybeans, respectively; and 107.80 million pounds of sunflower seeds) handled by the respondents was not available.

Table 14. Grain Sold by the Respondents, by Destination, 2005/06

Sales Destination/ Buyer Type	Spring Wheat	Winter Wheat	Oats	Corn	Soybeans	Sunflower Seed
Number of Respondents	61	55	49	79	67	14
SALES BY RESPONDENTS TO:	..... Million Bushels .....					..Million Lbs..
1. Locals, within 30 miles	0.99	1.14	0.64	75.00	4.51	0.00
2. Others in S.D.	0.65	0.77	0.21	13.61	7.69	4.33
3. MPLS Area	25.80	12.22	0.24	0.50	4.84	20.59
4. Sioux City Area	0.28	0.03	0.28	0.00	8.60	0.00
5. Pacific NW Terminals	0.92	2.13	0.00	48.97	28.19	0.00
6. Duluth	1.04	0.00	0.00	0.00	0.50	0.00
7. Foreign Buyers	0.20	0.15	0.00	0.58	1.00	19.89
8. Others	12.11	11.01	1.08	2.33	4.34	149.04
TOTAL SALE¹	42.00	27.45	2.45	140.99	59.67	193.85
SALES BY RESPONDENTS TO:	..... Percent					
1. Locals, within 30 miles	2%	4%	26%	53%	8%	0%
2. Others in S.D.	2%	3%	9%	10%	13%	2%
3. MPLS Area	61%	45%	10%	0%	8%	11%
4. Sioux City Area	1%	0%	11%	0%	14%	0%
5. Pacific NW Terminals	2%	8%	0%	35%	47%	0%
6. Duluth	2%	0%	0%	0%	1%	0%
7. Foreign Buyers	0%	1%	0%	0%	2%	10%
8. Others	29%	40%	44%	2%	7%	77%
TOTAL SALE	100%	100%	100%	100%	100%	100%

¹Destination information on balance quantities of grain (0.12, 1.11, 0.08, 1.28, and 2.03 million bushels of spring wheat, winter wheat, oats, corn, and soybeans; and 107.80 million pounds of sunflower seeds) handled by the respondents was not available.

Soybeans Destinations: During the year, 21% (up from 9% in 1994/95) of the soybeans handled by the responding elevators were sold to in-state buyers (8% within 30 miles and 13% in the state). Pacific Northwest Terminals were the dominant out-of-state destination accounting for 47% (up from 39% in 1994/95) of soybean shipments by the respondents. The Sioux City Area and Minneapolis Area accounted for 14% (down from 26% in 1994/95) and 8% (down from 10% in 1994/95) of the shipments, respectively.

Sunflower Seeds: During the year, 77% of the sunflower seeds handled by the responding elevators were sold to other unspecified destinations. Most of these sunflower seeds were destined for the sunflower seed processing plant at Enderlin, North Dakota. Some of these sunflower seeds also were shipped to various other locations. Minneapolis and foreign buyers accounted for 11%, and 10%, respectively, of the shipments by the respondents. About 2% of the sunflower seeds were shipped to in state locations (mostly for birdfeed processors) during the year.

10. Grain Sales by the Responding Elevators, by the Types of Buyers

The precise breakdown of sales by types of buyers is difficult to compile. This difficulty arises when a large quantity of a grain is shipped to a location to be sold to one or more buyers. A relatively large quantity of South Dakota wheat is shipped to the Minneapolis spot market or Minneapolis area dealers for sale to processors and other buyers. In this case, many respondents are not able to provide the breakdown of such shipments by buyer types. With this caveat for wheat, a summary of grain sales by the responding elevators in year 2005/06, by buyer types, is presented in Table 15. A brief discussion of major types of buyers for different grains and their relative market share during the crop year follows.

Major Buyers of Spring Wheat: During the year, 52% of spring wheat handled by the responding elevators was shipped to the Minneapolis area (32% to spot market and 20% to area dealers). Shipments to processors accounted for 9% (down from 36% in 1994/95) of the spring wheat shipments.

Table 15. Gross Quantities of Grain Sold by the Respondents, by Buyer Type, 2005/06

Sales Destination	Spring Wheat	Winter Wheat	Oats	Corn	Soybeans	Sunflower Seed
Number of Respondents	61	55	49	79	67	14
	..... Million Bushels .....					..Million Lbs..
SALES BY RESPONDENTS TO:						
1. Farmers as Feed	0.00	0.00	0.49	16.75	0.01	0.00
2. Feed Mills	0.30	0.12	0.38	9.31	0.32	0.00
3. Ethanol Producers	0.01	0.06	0.00	59.57	0.00	0.00
4. Other Processors	3.79	2.88	0.25	3.50	22.76	24.92
5. MPLS Spot (cash) Market	13.63	7.66	0.00	0.00	0.09	0.00
6. MPLS Area Grain Dealers	8.19	2.86	0.22	0.00	1.11	0.00
7. Terminals	3.76	2.72	0.02	48.97	30.04	0.00
8. Foreign Buyers	0.20	0.15	0.00	0.58	1.00	19.89
9. Others	12.11	11.01	1.08	2.33	4.34	149.04
TOTAL¹	42.00	27.45	2.45	140.99	59.67	193.85
SALES BY RESPONDENTS TO:						
	..... Percent					
1. Farmers as Feed	0%	0%	20%	12%	0%	0%
2. Feed Mills	1%	0%	16%	7%	1%	0%
3. Ethanol Producers	0%	0%	0%	42%	0%	0%
4. Other Processors	9%	10%	10%	2%	38%	13%
5. MPLS Spot (cash) Market	32%	28%	0%	0%	0%	0%
6. MPLS Area Grain Dealers	20%	10%	9%	0%	2%	0%
7. Terminals	9%	10%	1%	35%	50%	0%
8. Foreign Buyers	0%	1%	0%	0%	2%	10%
9. Others	29%	40%	44%	2%	7%	77%
TOTAL	100%	100%	100%	100%	100%	100%

¹Destination information on balance quantities of grain (0.12, 1.11, 0.08, 1.28, and 2.03 million bushels of spring wheat, winter wheat, oats, corn, and soybeans; and 107.80 million pounds of sunflower seeds) handled by the respondents was not available.

by the respondents during the year. Shipments to terminals and others (unspecified buyers) accounted for 9%, and 29%, respectively, of the spring wheat shipments by the respondents during the year.

Major Buyers of Winter Wheat: During the year, 38% of winter wheat handled by the responding elevators was shipped to the Minneapolis area (28% to spot market and 10% to area dealers). Shipments to processors accounted for 10% (down from 26% in 1994/95) of the winter wheat volume shipped by the respondents during the year. Shipments to terminals and other unspecified buyers accounted for 10% and 40%, respectively, of the winter wheat shipments during the year.

Major Buyers of Oats: Sales of oats to farmers as feed and to feed mills jointly accounted for 36% of all oats handled by the responding elevators during 2005/06. Shipments to other processors and Minneapolis area grain dealers, accounted for 10% and 9%, respectively, of the oats handled by the respondents during the year. About 44% of oats handled by the responding elevators during the year were sold to other unspecified buyers.

Major Buyers of Corn: Corn sales to famers and to feed mills accounted for 12% and 7%, respectively, of the corn handled by the responding elevators during the year 2005/06. Ethanol processors accounted for 42% (up from 5% in 1994/95) of the corn shipped by the responding elevators. Shipments to terminal buyers accounted for 35% (down from 51% in 1994/95) of the corn shipped by the responding elevators in 2005/06. Other processors and foreign buyers each accounted for 2% of corn handled by the responding elevators during the year.

Major Buyers of Soybeans: During the year 2005/06, 50% of the soybeans handled by the responding elevators were destined to terminals. Processors accounted for 38% of the soybeans sold by the respondents. Sales to other unspecified buyers accounted for 7% of the soybeans handled by the respondents. The shares of South Dakota soybeans purchased by different types of buyers in 2005/06 were very similar to the ones in 1994/95.

Major Buyers of Sunflower Seeds: During the year, the dominant buyers of South Dakota sunflower seeds were processors and other (unspecified) buyers, jointly accounting for 90% of the sunflower seeds sales by the responding elevators. Other (unspecified) buyers are mostly out of state sunflower seed processors and bird feed processors. The remaining 10% of the sunflower seeds handled by the responding elevators went to foreign buyers.

11. Grain Transportation by South Dakota Elevators

The quantities of different grains shipped to different locations by all elevators in South Dakota were estimated by extrapolating the gross quantities of grain shipped by the responding elevators, reported in Tables 13 and 14. The estimates for the quantities of grains shipped to different locations by all elevators in South Dakota during the year 2005/06 are presented in Table 16. The respondents were asked to list the quantities of each grain they shipped by rail to a number of specified locations. The quantities not shipped by rail were assumed to be transported by trucks. The estimated grain quantities shipped by train and trucks by all elevators in South Dakota during the year, by major destinations are presented in Table 17. A comparison of grains and oilseeds shipped by all elevators in South Dakota, by modes, for years 1994/95 and 2005/06 are presented in Figures 4 and 5.

Rail is an important means of grain transportation from many locations in South Dakota. During the year 2005/06, rail carried 283 million bushels of wheat, oats, corn and soybeans (about 55% of grains and soybeans handled by the elevators in the state) to various locations. Rail transportation is very important for moving spring and winter wheat to the Minneapolis area and corn and soybeans to the Pacific North West area.

Trucks are also an important means of grain transportation from many locations in South Dakota. During the year, trucks carried a total of about 233 million bushels of wheat, oats, corn and

Table 16. Grain Shipments by All South Dakota Elevators, by Destination, 2005/06

	Spring Wheat	Winter Wheat	Oats	Corn	Soybeans	Grains & Beans Total	Sunflower Seeds
DESTINATION:	.....Million Bushels.....						..Million Lbs..
1. Locations in SD	2.73	4.94	1.88	166.25	23.84	199.63	12.45
2. Minneapolis Area	40.17	29.22	0.45	0.77	8.26	78.87	63.34
3. Sioux City Area	0.46	0.08	0.57	0.00	21.34	22.47	0.00
4. Pacific NW Terminals	1.48	5.24	0.00	95.63	47.20	149.55	0.00
5. Duluth Area	1.87	0.00	0.00	0.00	0.78	2.65	0.00
6. Other Locations	21.99	22.49	2.99	6.05	9.47	62.98	774.38
Total	68.70	61.98	5.89	268.70	110.89	516.15	850.17
DESTINATION:	.....percent.....						
1. Locations in SD	4%	8%	32%	62%	21%	39%	1%
2. Minneapolis Area	58%	47%	8%	0%	7%	15%	7%
3. Sioux City Area	1%	0%	10%	0%	19%	4%	0%
4. Portland Area	2%	8%	0%	36%	43%	29%	0%
5. Duluth Area	3%	0%	0%	0%	1%	1%	0%
6. Other Locations	32%	36%	51%	2%	9%	12%	91%
Total	100%	100%	100%	100%	100%	100%	100%

Table 17. Grain Shipments by All South Dakota Elevators, by Transportation Mode, 2005/06

Shipment Modes/ Destinations	Spring Wheat	Winter Wheat	Oats	Corn	Soybeans	Grains & Soybeans	Sunflower Seeds
Rail Shipments To:	..... Million Bushels.....						..Million Lbs..
1. Locations in SD	0.15	0.00	0.00	35.62	5.79	41.56	0.00
2. Minneapolis Area	22.50	23.73	0.08	0.77	4.82	51.89	0.00
3.Sioux City Area	0.07	0.00	0.00	0.00	0.00	0.07	0.00
4.Pacific NW Area	1.47	4.50	0.00	92.53	45.52	144.02	0.00
5.Duluth Area	1.87	0.00	0.00	0.00	0.78	2.65	0.00
6.Other Locations	19.86	17.65	0.21	2.14	3.43	43.29	3.22
Sub Total	45.93	45.88	0.30	131.05	60.33	283.49	3.22
Truck Shipments To:							
1. Locations in SD	2.58	4.94	1.88	130.63	18.05	158.08	12.45
2. Minneapolis Area	17.67	5.49	0.37	0.00	3.45	26.98	63.34
3.Sioux City Area	0.39	0.08	0.57	0.00	21.34	22.39	0.00
4.Pacific NW Area	0.00	0.74	0.00	3.10	1.68	5.52	0.00
5.Duluth Area	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6.Other Locations	2.13	4.85	2.77	3.91	6.04	19.69	771.16
Sub Total	22.77	16.10	5.60	137.64	50.56	232.66	846.95
Total Qty. Shipped	68.70	61.98	5.89	268.70	110.89	516.15	850.17
Rail Shipments To:	..... Percent of Total Quantity						
1. Locations in SD	0%	0%	0%	13%	5%	8%	0%
2. Minneapolis Area	33%	38%	1%	0%	4%	10%	0%
3.Sioux City Area	0%	0%	0%	0%	0%	0%	0%
4.Pacific NW Area	2%	7%	0%	34%	41%	28%	0%
5.Duluth Area	3%	0%	0%	0%	1%	1%	0%
6.Other Locations	29%	28%	4%	1%	3%	8%	0%
Sub Total	67%	74%	5%	49%	54%	55%	0%
Truck Shipments To:							
1. Locations in SD	4%	8%	32%	49%	16%	31%	1%
2. Minneapolis Area	26%	9%	6%	0%	3%	5%	7%
3.Sioux City Area	1%	0%	10%	0%	19%	4%	0%
4.Pacific NW Area	0%	1%	0%	1%	2%	1%	0%
5.Duluth Area	0%	0%	0%	0%	0%	0%	0%
6.Other Locations	3%	8%	47%	1%	5%	4%	91%
Sub Total	33%	26%	95%	51%	46%	45%	100%
Total Qty. Shipped	100%	100%	100%	100%	100%	100%	100%

NOTE: Rail shipments of spring and winter wheat to Duluth and other areas and corn to MPLS and other areas are adjusted so that these quantities do not exceed the total quantities of the grain shipped to these destinations.

Fig 4. Quantities of Grains Shipped by SD Elevators, by Mode

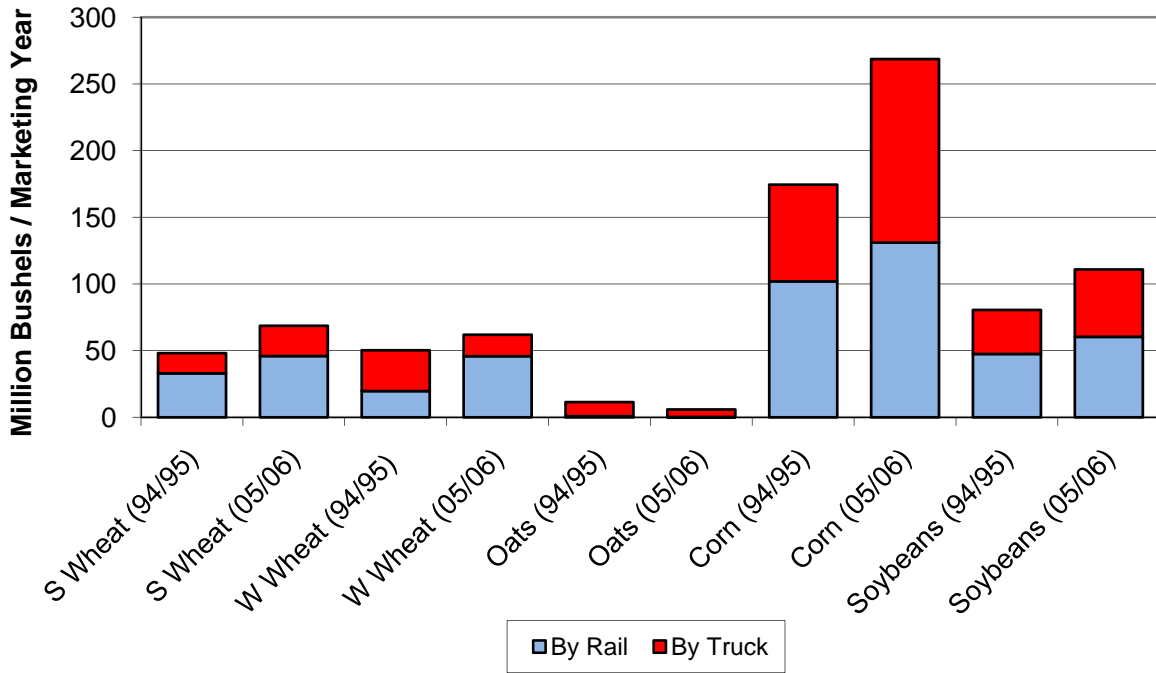
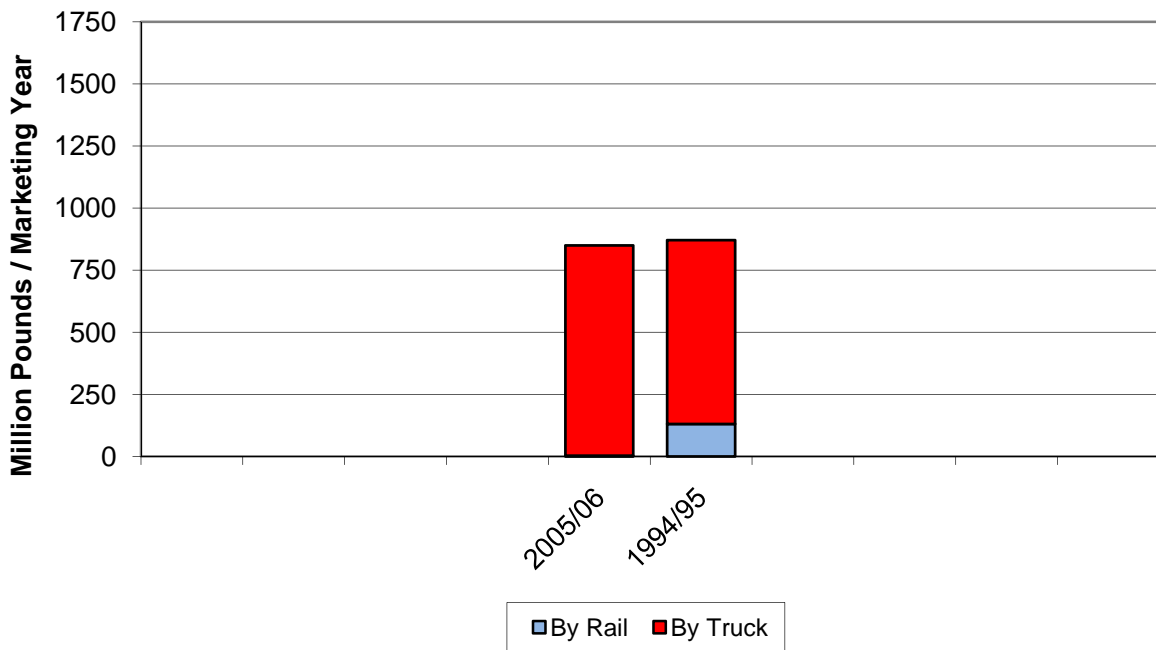


Fig 5. Sunflower Seeds Shipped by SD Elevators, by Mode



soybeans (about 45% of grains and soybeans handled by the elevators in the state) to various locations. Trucks also carried 847 million pounds of sunflower seeds to various locations. A brief discussion of the relative importance of rail and truck transportation for each grain during the year 2005/06 follows.

Spring Wheat Transportation. During the crop year, elevators in South Dakota shipped 68.7 million bushels of spring wheat, of which about 45.9 million bushels (67%) were shipped by rail and the remaining 22.7 million bushels (33%) were shipped by trucks. The Minneapolis area was the dominant destination for spring wheat shipped by the South Dakota elevators. During the year, 22.5 million bushels (33% of spring wheat shipped by the elevators) reached the Minneapolis area by rail, and another 17.7 million bushels (26% of spring wheat shipped by the elevators) reached the Minneapolis by trucks. Another 26% of spring wheat shipped by South Dakota elevators reached the Minneapolis area by trucks.

Winter Wheat Transportation. During the year, elevators in South Dakota shipped 62.0 million bushels of winter wheat, of which about 45.9 million bushels (74%) were shipped by rail and the remaining 16.1 million bushels (26%) were shipped by trucks. As in case of spring wheat, the Minneapolis area was the dominant destination for South Dakota winter wheat. About 38% of winter wheat shipped by South Dakota elevators during the year reached the Minneapolis area by rail. An additional 9% of wheat shipped by South Dakota elevators reached Minneapolis area by trucks.

Oats Transportation. Trucks are the dominant means of transportation for South Dakota oats. During the year, South Dakota elevators shipped 5.9 million bushels of oats of which 5.6 million bushels (95%) were transported by trucks. Shipments to in-state, and Sioux City area locations by trucks accounted for 32% and 10%, of all oats shipped by the elevators, respectively. About 47 % of the oats handled by the elevators were shipped by trucks to other unspecified destinations.

Corn Transportation. South Dakota grain elevators shipped 268.7 million bushels of corn during the year. Of this, 131 million bushels (49%) were shipped by rail and the remaining 138 million bushels

(51%) were shipped by truck. The most dominant rail destination for the South Dakota corn was the Pacific Northwest Area accounting for 92.5 million bushels (34%) of the corn shipped during the year. Another 35.6 million bushels (13%) of the corn handled by the South Dakota elevators was shipped by rail to in-state locations. Elevators also reported shipping 130.6 million bushels (49%) to in-state locations by trucks during the year.

Soybean Transportation. During the year, South Dakota grain elevators shipped 110.9 million bushels of soybeans, of which 60.3 million bushels (54%) were shipped by rail and the remaining 50.6 million bushels (46%) were shipped by trucks. The most important rail destination for South Dakota soybeans was the Pacific Northwest Area, accounting for 41% of soybeans shipped by the elevators during the year. The two important truck destinations for South Dakota soybeans were the Sioux City Area and in-state locations, accounting for 19% and 16%, respectively, of total shipments by elevators during the year.

Sunflower Seeds Transportation. During the year, South Dakota elevators shipped 850 million pounds of sunflower seeds, of which 99.6% were shipped by truck. Other (unspecified) locations accounted for 91% of the sunflower seeds shipped by the elevators. However, the bulk of these were destined to the sunflower processing plant in Enderlin, North Dakota, and some were shipped to many other unspecified locations. About 7% of the sunflower seeds were shipped to Minneapolis. About 1% of the sunflower seeds were shipped to locations in South Dakota, mostly to bird feed processors.

12. Summary

Corn, Soybeans, Wheat, and sunflower seeds are important cash crops in South Dakota. Cash receipts to producers in the state from marketing of these grains (and oilseeds) amounted to about \$2.1 billion, accounting for 93.3% of cash receipts from all crops in the state during the calendar year 2005. Country elevators provide an important link in transferring these commodities from farmers to processors or exporters. In order to devise a good market development plan for a commodity, information on the total volume of grain moving through country elevators, and the destinations of grain shipments are essential. The previous study on South Dakota grain movements and transportation was completed in 1997 and contained data for marketing year 1994/95. Since then, no comprehensive study dealing with these aspects of grain marketing in South Dakota has been reported. This study is an effort to provide updated information of the grain marketing system in South Dakota.

The objectives of this study were to identify the volume of grain handled, methods of purchase and sale, types of buyers, major destinations, and modes of transportation for South Dakota grains. The study focused on spring wheat, winter wheat, oats, barley, corn, soybeans and sunflower seeds handled by grain elevators in South Dakota during the marketing year 2005/06. The information was mainly collected from elevator managers through a mail survey during early 2008. Major findings of the study follow.

Since the completion of previous study in 1997, South Dakota grain elevators have been going through a phase of consolidation and restructuring. In 1996, there were 275 licensed and active grain dealers in South Dakota with a total storage capacity of 120 million bushels. In 2008, there were 224 licensed and active grain dealers in the state with a total storage capacity of 229 million bushels. The average elevator storage capacity has increased from 438 thousand bushels to slightly over 1 million bushels.

During the marketing year 2005/06, elevators in South Dakota handled 252, 103, 63, and 56 million bushels of corn, soybeans, spring wheat, and winter wheat, respectively. During the year, the elevators also handled 5.6 and 4.9 million bushels of oats and barley, respectively, and 837 million pounds of sunflower seeds. During the year, 2005/06, elevators' market share in South Dakota was 54%, 83%, 91% and 83% for corn, soybeans, spring wheat, and winter wheat, respectively. Contrary to reports for Iowa and Indiana, the increase in ethanol production in the state did not have an adverse impact on elevators' market share for corn in South Dakota.

In terms of volume, cash purchase, delayed pricing, cash forward contracts, and hedge to arrive contracts, collectively, accounted for more than 95% of each of the grain and oilseed purchased by the responding elevators during the year. The three most commonly used methods for grain sales were cash sales, cash forward contracts and basis contracts, collectively, accounting for more than 95% of each of the grain oilseeds volume handled by the responding elevators during the year.

During the marketing year 2005/06, the responding elevators reported selling 42% and 35% of their corn to ethanol producers and terminals, respectively. In 2005/06 corn shipments to all out-of-state locations jointly accounted for 38% (down from 71.9% in 1994/95) of the total corn shipments by all South Dakota Elevators. During the year, the responding elevators sold 38% and 50% of their soybeans to processors and terminals, respectively. Shipments of soybeans to all out of state locations jointly accounted for 79% (down from 91% in 1994/95) of total soybean shipments by all South Dakota elevators in 2005/06. Most of the wheat was either sold to processors or shipped to Minneapolis spot (cash) market or Minneapolis Area grain dealers. These categories of buyers jointly accounted for 61% of spring wheat, and 48% of winter wheat handled by the responding elevators during the year. Sunflower seeds were sold to processors (listed as others) or foreign buyers. Sales to processors and foreign buyers accounted for 90% and 10%, respectively, of the sunflower seeds handled by the responding elevators during the year.

Both rail and trucks are important modes of transportation for shipping South Dakota grains. During the year 2005/06, about 283 million bushels (55% of the combined quantity of wheat, oats, corn, and soybeans handled by all elevators in South Dakota) were shipped by rail, and the remaining about 233 million bushels (45%) were shipped by truck. South Dakota grain elevators also shipped 850 million pounds of sunflower seeds predominantly by trucks to Enderlin, North Dakota, and Minneapolis, Minnesota. With the exception of corn and soybeans, all shipments by rail were destined for out-of-state locations. The bulk of the oats handled by the elevators were shipped by trucks.

The consolidation and restructuring of grain handling industry and the trends of fewer grain elevators with larger average storage capacity will continue. The proportions of corn and soybeans shipped to out-of-state locations have been declining and these trends are also expected to continue.

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Appendix A

Profile of Responding Elevator Managers

Profile of Responding Elevator Managers

To provide insight about the respondents, the questionnaire included a number of questions about the elevator managers, their formal education and their experience. Grain elevators in South Dakota are run by well educated and experienced managers (Tables A.1). Forty two percent (up from 40% in 1996) of the elevators are managed by a person with more than 15 years experience as a grain elevator manager. Seventy two percent of the elevators reported to be managed by someone who has 15+ years experience in the grain business. About two thirds of the elevator managers have attended some college and one in three elevator managers have completed a college degree.

About two thirds of elevator managers have attended more than one seminar on the futures' markets during the preceding three years (Table A.2). A majority of the elevators have an additional employee (other than the manager) who has also attended at least one seminar on futures' markets during the preceding three years. Ninety two percent of the responding elevators have access to electronic grain marketing data network, and sixty percent of the responding elevators have access to a printed grain marketing information service.

Risk management strategies adopted vary to some extent by the type of grain handled. Most elevators handling spring wheat, winter wheat, corn and soybeans reported protecting 100% of the elevator owned grain during 2005/06 (Table A.3). On state wide basis, 86% of the elevators handling spring wheat and 77% of the elevators handling winter wheat reported to protect 100% of the elevator owned grain mostly through the use of commodity futures, their options, or forward sales contracts. Similarly, 82% of the elevators handling corn and 69% of the elevators handling soybeans also reported to protect 100% of the elevators owned grain through these risk transfer tools. Among the elevators handling sunflower seeds, 63% reported to protect 100% of the elevator owned sunflower seeds through the use of these risk transfer tools.

Table A.1. Education and Experience of the Responding Elevator Managers, 2005/06

	North central	North east	Central	East central	South east	West River ¹	South Dakota
Experience in Elevator	.....number of respondents.....						
0-5 Years	10	2	3	8	5	2	30
6-10 Years	6	2	0	1	3	2	14
11-15 Years	0	1	1	3	4	1	10
16-20 Years	3	2	2	1	0	1	9
More than 20 Years	2	9	2	6	3	7	29
Total No. of Res	21	16	8	19	15	13	92
Experience in Grain Business							
0-5 Years	1	2	1	3	4	0	11
6-10 Years	1	0	1	3	2	0	7
11-15 Years	2	0	0	2	2	2	8
16-20 Years	6	1	2	0	2	2	13
More than 20 Years	11	13	4	11	5	9	53
Total No. of Res	21	16	8	19	15	13	92
Formal Education¹							
Some High School	0	0	0	0	1	1	2
Graduated From HS	4	9	2	6	2	4	27
Some College	12	2	3	7	2	3	29
Graduated from College	5	4	2	4	9	5	29
Total No. of Responses	21	15	7	17	14	13	87
Experience as Elevator Manager	.....percent.....						
0-5 Years	48%	13%	38%	42%	33%	15%	33%
6-10 Years	29%	13%	0%	5%	20%	15%	15%
11-15 Years	0%	6%	13%	16%	27%	8%	11%
16-20 Years	14%	13%	25%	5%	0%	8%	10%
More than 20 Years	10%	56%	25%	32%	20%	54%	32%
Total No. of Res	100%	100%	100%	100%	100%	100%	100%
Experience in Grain Business							
0-5 Years	5%	13%	13%	16%	27%	0%	12%
6-10 Years	5%	0%	13%	16%	13%	0%	8%
11-15 Years	10%	0%	0%	11%	13%	15%	9%
16-20 Years	29%	6%	25%	0%	13%	15%	14%
More than 20 Years	52%	81%	50%	58%	33%	69%	58%
Total No. of Res	100%	100%	100%	100%	100%	100%	100%
Formal Education							
Some High School	0%	0%	0%	0%	7%	8%	2%
Graduated From HS	19%	60%	29%	35%	14%	31%	31%
Some College	57%	13%	43%	41%	14%	23%	33%
Graduated from College	24%	27%	29%	24%	64%	38%	33%
Total No. of Responses	100%	100%	100%	100%	100%	100%	100%

¹Include estimates for Northwest, West Central, Southwest, and South Central regions.

Table A.2. Elevator Operators' Training in Futures and Access to Information, 2005/06

	North central	North east	Central	East central	South east	West River ¹	South Dakota
.....number of respondents.....							
Has manager attended futures seminar during the last 3 year?							
More than once	16	8	6	13	8	10	61
Only once	2	2	0	2	3	2	11
No	3	6	2	5	3	0	19
Total No. of Responses	21	16	8	20	14	12	91
Has any employee attended futures seminar during the last 3 years?							
More than once	17	8	4	6	4	10	49
Only once	0	2	1	2	2	1	8
No	4	6	3	12	7	1	33
Total No. of Responses	21	16	8	20	13	12	90
Does the elevator have access to grain marketing data network?							
Yes	21	16	8	20	15	12	92
No	0	0	0	0	0	1	1
Total No. of Responses	21	16	8	20	15	13	93
Does the elevator have access to printed grain marketing information?							
Yes	24	10	6	14	8	1	60
No	0	6	2	6	6	12	32
Total No. of Responses	24	16	8	20	14	13	92
.....percent.....							
Has the manager attended futures seminar during the last 3 year?							
More than once	76%	50%	75%	65%	57%	83%	67%
Only once	10%	13%	0%	10%	21%	17%	12%
No	14%	38%	25%	25%	21%	0%	21%
Total No of responses	100%	100%	100%	100%	100%	100%	100%
Has any employee attended futures seminar during the last 3 years?							
More than once	81%	50%	50%	30%	31%	83%	54%
Only once	0%	13%	13%	10%	15%	8%	9%
No	19%	38%	38%	60%	54%	8%	37%
Total No of responses	100%	100%	100%	100%	100%	100%	100%
Does the elevator have an access to grain marketing data network?							
Yes	100%	100%	100%	100%	100%	92%	99%
No	0%	0%	0%	0%	0%	8%	1%
Total No. of Responses	100%	100%	100%	100%	100%	100%	100%
Does the elevator have an access to printed grain marketing information?							
Yes	100%	63%	75%	70%	57%	8%	65%
No	0%	38%	25%	30%	43%	92%	35%
Total No. of Responses	100%	100%	100%	100%	100%	100%	100%

¹Includes information for Northwest, West Central, Southwest, and South Central regions.

Table A.3. The Extent of Elevator Owned Grain Protected, 2005/06

	North central	North east	Central	East central	South east	West River ¹	South Dakota
	.....number of respondents.....						
Total No. of Respondents	22	16	9	20	15	13	95
Elevators Which Handled:							
Spring Wheat	19	15	5	8	6	12	65
Winter Wheat	17	9	5	10	11	13	65
Oats	8	12	3	15	11	7	56
Barley	2	1	0	1	0	3	7
Corn	19	15	7	19	15	9	84
Soybeans	19	15	6	19	15	4	78
Sunflower Seeds	11	0	3	0	2	8	24
Elevators Which Routinely Protected 100% of Elevator Owned:							
Spring Wheat	19	15	5	3	4	10	56
Winter Wheat	17	8	5	3	7	10	50
Oats	4	6	0	4	4	0	18
Barley	2	0	0	0	0	0	2
Corn	19	15	5	13	10	7	69
Soybeans	12	13	5	14	10	0	54
Sunflower Seeds	6	0	1	0	1	7	15
	.....percent.....						
Elevator Which Routinely Protected 100% of the Elevator Owned:							
Spring Wheat	100%	100%	100%	38%	67%	83%	86%
Winter Wheat	100%	89%	100%	30%	64%	77%	77%
Oats	50%	50%	0%	27%	36%	0%	32%
Barley	100%	0%	-	0%	-	0%	29%
Corn	100%	100%	71%	68%	67%	78%	82%
Soybeans	63%	87%	83%	74%	67%	0%	69%
Sunflower Seeds	55%	-	33%	-	50%	88%	63%

¹Includes estimates for Northwest, West Central, Southwest, and South Central regions.

Appendix B: Estimates of Grain Handled by SD Elevators, by Sub-Regions

Table B.1. Distribution of South Dakota Elevators, by Sub-Region, 2005/06

Region/Sub-Region	All Elevators	Responding Elevators	Non-Responding Elevators	Average Capacity of Responding Elevators	Average Capacity of Non-Responding Elevators
	Numbers	Numbers	Numbers	Million Bu	Million Bu
Northwest	9	2	7	0.90	0.32
Northcentral-North ¹	19	12	7	1.79	1.21
Northcentral-South ²	18	10	8	1.40	0.74
Northeast-North ³	18	8	10	1.28	0.67
Northeast-South ⁴	19	8	11	1.09	0.48
West Central	9	6	3	0.32	0.88
Central	21	9	12	2.03	0.76
East Central	42	19	23	0.65	0.83
Southwest	3	1	2	0.09	1.29
South Central	14	4	10	0.49	0.66
Southeast-West ⁵	26	8	18	0.73	0.41
Southeast-East ⁶	26	7	19	2.85	1.80
South Dakota	224	94	130	1.24	0.85

¹NC-North includes Campbell, McPherson, Brown, Walworth, and Edmunds counties.

²NC-South includes Potter, Faulk and Spink counties.

³NE-North includes Marshall, Roberts, Day and Grant counties.

⁴NE-South includes Clark, Codington, Hamlin and Deuel counties.

⁵SE-West includes Douglas, Hutchinson, Bon Homme and Charles Mix counties.

⁶SE-East includes Lincoln, Union, Turner, Clay and Yankton counties.

Table B.2. Gross Quantities Handled by the Responding Elevators, by Sub-Region, 2005/2006

Region/Sub-Region	Responding Elevators	Responding Elevators Total Capacity	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds	
	Numbers	Million Bushels.....							Million Pounds
Northwest	2	1.80	3.88	0.96	0.05	0.00	0.12	0.03	18.18	
Northcentral-North ¹	12	21.45	8.88	2.70	0.17	0.04	23.10	12.25	8.05	
Northcentral-South ²	10	14.00	6.40	1.32	0.05	0.00	15.25	9.99	48.03	
Northeast-North ³	8	10.28	12.85	0.39	0.10	1.50	17.80	9.15	0.00	
Northeast-South ⁴	8	8.73	3.65	1.29	0.68	0.00	10.81	4.98	0.00	
West Central	6	1.90	0.99	6.30	0.07	0.01	0.29	0.01	95.50	
Central	9	18.31	4.15	7.79	0.09	0.00	19.68	5.92	24.06	
East Central	19	12.32	0.53	0.30	0.37	0.98	18.74	6.53	0.00	
Southwest	1	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.00	
South Central	4	1.96	0.40	2.32	0.31	0.00	0.34	0.03	104.50	
Southeast-West ⁵	8	5.88	0.22	2.05	0.31	0.00	6.86	3.49	3.33	
Southeast-East ⁶	7	22.57	0.16	3.09	0.34	0.00	29.28	9.34	0.00	
South Dakota	94	119.28	42.12	28.56	2.53	2.53	142.28	61.70	301.65	

¹NC-North includes Campbell, McPherson, Brown, Walworth, and Edmunds counties.

²NC-South includes Potter, Faulk and Spink counties.

³NE-North includes Marshall, Roberts, Day and Grant counties.

⁴NE-South includes Clark, Codington, Hamlin and Deuel counties.

⁵SE-West includes Douglas, Hutchinson, Bon Homme and Charles Mix counties.

⁶SE-East includes Lincoln, Union, Turner, Clay and Yankton counties.

Table B.3. Net Quantities Handled by the Responding Elevators, by Sub-Region, 2005/2006

Region/Sub-Region	Responding Elevators	Responding Elevators Total Capacity	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds	
	Numbers	Million Bushels.....							Million Pounds
Northwest	2	1.80	3.37	0.82	0.05	0.00	0.12	0.02	18.16	
Northcentral-North ¹	12	21.45	7.28	2.33	0.17	0.04	19.61	9.40	8.05	
Northcentral-South ²	10	14.00	6.07	1.27	0.05	0.00	14.90	9.80	38.73	
Northeast-North ³	8	10.28	12.37	0.38	0.10	1.50	17.52	8.86	0.00	
Northeast-South ⁴	8	8.73	3.28	1.17	0.58	0.00	10.47	4.88	0.00	
West Central	6	1.90	0.99	6.30	0.07	0.01	0.29	0.01	95.50	
Central	9	18.31	4.05	7.54	0.09	0.00	19.56	5.92	23.88	
East Central	19	12.32	0.53	0.30	0.36	0.98	18.07	6.27	0.00	
Southwest	1	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.00	
South Central	4	1.96	0.40	2.32	0.31	0.00	0.34	0.03	104.50	
Southeast-West ⁵	8	5.88	0.22	2.05	0.27	0.00	6.46	3.49	3.33	
Southeast-East ⁶	7	22.57	0.16	1.29	0.34	0.00	26.23	8.54	0.00	
South Dakota	94	119.28	38.73	25.81	2.38	2.53	133.56	57.21	292.15	

¹NC-North includes Campbell, McPherson, Brown, Walworth, and Edmunds counties.

²NC-South includes Potter, Faulk and Spink counties.

³NE-North includes Marshall, Roberts, Day and Grant counties.

⁴NE-South includes Clark, Codington, Hamlin and Deuel counties.

⁵SE-West includes Douglas, Hutchinson, Bon Homme and Charles Mix counties.

⁶SE-East includes Lincoln, Union, Turner, Clay and Yankton counties.

Table B.4. Gross Quantities Handled by All South Dakota Elevators, by Sub-Region, 2005/2006

Region/Sub-Region	All Elevators	Total Capacity of All Elevators	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds
	Numbers	.....Million Bushels.....							Million Pounds
Northwest	9	4.01	8.65	2.15	0.11	0.00	0.27	0.06	40.48
Northcentral-North ¹	19	29.93	12.39	3.77	0.24	0.05	32.23	17.09	11.24
Northcentral-South ²	18	19.95	9.12	1.88	0.07	0.00	21.73	14.23	68.42
Northeast-North ³	18	15.60	19.51	0.59	0.16	2.28	27.03	13.89	0.00
Northeast-South ⁴	19	15.41	6.45	2.28	1.21	0.00	19.09	8.79	0.00
West Central	9	4.54	2.35	15.04	0.16	0.02	0.69	0.02	228.04
Central	21	27.43	6.22	11.67	0.13	0.00	29.48	8.86	36.04
East Central	42	31.51	1.36	0.76	0.95	2.52	47.96	16.70	0.00
Southwest	3	2.68	0.00	1.40	0.00	0.00	0.09	0.00	0.00
South Central	14	8.60	1.77	10.19	1.36	0.00	1.49	0.13	458.70
Southeast-West ⁵	26	12.82	0.48	4.46	0.67	0.00	14.94	7.61	7.25
Southeast-East ⁶	26	56.81	0.40	7.77	0.85	0.00	73.69	23.50	0.00
South Dakota	224	229.27	68.70	61.98	5.89	4.87	268.70	110.89	850.17

¹NC-North includes Campbell, McPherson, Brown, Walworth, and Edmunds counties.

²NC-South includes Potter, Faulk and Spink counties.

³NE-North includes Marshall, Roberts, Day and Grant counties.

⁴NE-South includes Clark, Codington, Hamlin and Deuel counties.

⁵SE-West includes Douglas, Hutchinson, Bon Homme and Charles Mix counties.

⁶SE-East includes Lincoln, Union, Turner, Clay and Yankton counties.

Table B.5. Net Quantities Handled by All South Dakota Elevators, by Sub-Region, 2005/2006

Region/Sub-Region	All Elevators	Total Capacity of All Elevators	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soybeans	Sunflower Seeds
	Numbers	.....Million Bushels.....							Million Pounds
Northwest	9	4.01	7.50	1.82	0.11	0.00	0.27	0.05	40.43
Northcentral-North ¹	19	29.93	10.16	3.25	0.24	0.05	27.37	13.12	11.24
Northcentral-South ²	18	19.95	8.65	1.81	0.07	0.00	21.22	13.96	55.17
Northeast-North ³	18	15.60	18.78	0.57	0.15	2.28	26.60	13.45	0.00
Northeast-South ⁴	19	15.41	5.80	2.07	1.03	0.00	18.49	8.61	0.00
West Central	9	4.54	2.35	15.04	0.16	0.02	0.69	0.02	228.04
Central	21	27.43	6.07	11.30	0.13	0.00	29.30	8.86	35.76
East Central	42	31.51	1.35	0.76	0.92	2.52	46.22	16.04	0.00
Southwest	3	2.68	0.00	1.40	0.00	0.00	0.09	0.00	0.00
South Central	14	8.60	1.77	10.19	1.36	0.00	1.49	0.13	458.70
Southeast-West ⁵	26	12.82	0.48	4.46	0.58	0.00	14.07	7.61	7.25
Southeast-East ⁶	26	56.81	0.40	3.24	0.85	0.00	66.02	21.49	0.00
South Dakota	224	229.27	63.32	55.92	5.60	4.87	251.83	103.34	836.60

¹NC-North includes Campbell, McPherson, Brown, Walworth, and Edmunds counties.

²NC-South includes Potter, Faulk and Spink counties.

³NE-North includes Marshall, Roberts, Day and Grant counties.

⁴NE-South includes Clark, Codington, Hamlin and Deuel counties.

⁵SE-West includes Douglas, Hutchinson, Bon Homme and Charles Mix counties.

⁶SE-East includes Lincoln, Union, Turner, Clay and Yankton counties.

Appendix C: Elevator Survey Schedule

SOUTH DAKOTA GRAIN MARKETING STUDY: ELEVATORS SURVEY SCHEDULE

Economics Department, South Dakota State University, Scobey Hall, Box 504, Brookings, SD 57707-0895

1. Name of your grain elevator? _____
2. Location of your grain elevator? _____
3. What is the storage capacity of your elevator (in 1,000 bushels?) _____
4. What is your best estimate of quantities of each type of grain handled by your firm during the last two crop years 2004/05 and 2005/06 (in 1,000 bushels?)

Type of Grain	Quantity during 2004/05	Quantity during 2005/06
a. Spring Wheat (in 1,000 bushels)		
b. Winter Wheat (in 1,000 bushels)		
c. Oats(in 1,000 bushels)		
d. Barley (in 1,000 bushels)		
e. Corn (in 1,000 bushels)		
f. Soybeans (in 1,000 bushels)		
g. Sunflower (in 1,000 pounds)		

5. During crop years 2004/05 and 2005/06, what quantities of different grains were purchased by your elevator from other grain dealers? If none of the grain was purchased from other grain dealers during the period, then go to the next question.

Type of Grain	Quantity during 2004/05	Quantity during 2005/06
a. Spring Wheat (in 1,000 bushels)		
b. Winter Wheat (in 1,000 bushels)		
c. Oats(in 1,000 bushels)		
d. Barley (in 1,000 bushels)		
e. Corn (in 1,000 bushels)		
f. Soybeans (in 1,000 bushels)		
g. Sunflower (in 1,000 pounds)		

6. For each type of grain sold by your elevator, what proportion of sales (during crop year 2005/06) can be attributed to each of the following types of buyer? (Please ensure that entries in each column add to 100%).

SALES TO	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soy- beans	Sun- flower
	..... as % of 2005/06 sales for each grain						
LOCAL (Within 30 Miles):							
a. Farmers as Feed							
b. Feed Mills							
c. Ethanol Producers							
d. Other Processors							
IN S.D.(beyond 30 Miles):							
e. Feed Mill							
f. Ethanol Producers							
g. Other Processors							
MINNEAPOLIS AREA:							
h. Spot (Cash) Market							
i. Grain Dealers							
j. Feed Mills							
k. Ethanol Producers							
l. Other Processors							
m. Terminals							
SIOUX CITY AREA:							
n. Feed Mills							
o. Ethanol Producers							
p. Other Processors							
q. Terminals							
OTHER DESTINATIONS:							
r. Pacific Northwest Terminals							
s. Duluth Terminals							
t. Foreign Buyers							
u. Other Destinations							
TOTAL FOR (2005/06)	100%	100%	100%	100%	100%	100%	100%

7. During crop year 2005/06, what proportion of each type of grain purchased by your elevator can be attributed to each of the methods of purchase listed below? Please fill in the information for only the grains which your elevator purchased during the crop year, and make sure the entries in each filled column add to 100%.

METHOD OF GRAIN PURCHASE	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soy-Beans	Sun-flower
	..... as % of 2005/06 purchase for each grain						
a. Cash Purchase							
b. Delayed Pricing							
c. Basis Contract							
d. Hedged to Arrive							
e. Minimum Price Contract							
f. Cash Forward Contract							
Others (Please list):							
g.							
h.							
TOTAL	100%	100%	100%	100%	100%	100%	100%

8. During crop year 2005/06, what proportion of each type of grain sold by your elevator can be attributed to each of the methods of sale listed below? Please fill in the information for only the grains your elevator sold during the crop year, and make sure the entries in each filled column add to 100%.

METHOD OF GRAIN SALE	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soy-Beans	Sun-flower
	..... as % of 2005/06 sale for each grain						
a. Cash Sale							
b. Delayed Pricing							
c. Basis Contract							
d. Hedged to Arrive							
e. Minimum Price Contract							
f. Cash Forward Contract							
Others (Please list):							
g.							
h.							
TOTAL	100%	100%	100%	100%	100%	100%	100%

9. Is your elevator located on a railway line with rail service? Yes _____ No _____

If yes, what type of loading facility does your elevator have?

a. Under 25 cars loading facility _____b. 25-27 unit train loading facility _____

c. 54 unit car train loading facility _____d. 110 unit car shuttle loading facility _____

10. During the crop year 2005/06, did your elevator ship any grain by rail?

No _____ Yes _____ If no, please go to the next question.

If yes, please list the quantities (in 1,000 bushels) of each grain shipped by rail to different destinations during the crop year 2005/06.

DESTINATIONS:	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soy- Beans	Sun- flower
	..... in 1,000 bushels						
a. Minneapolis Area							
b. Sioux City Area							
c. Pacific Northwest Area							
d. Duluth Area							
Others (Please list):							
g.							
h.							

11. Has the Manager of your elevator attended a seminar or a short course on grain price risk management utilizing commodity futures and their options during the last three years?
Yes, more than once _____ Yes, only once _____ No _____

12. Has any employee (other than Manager) from your elevator attended a seminar or a short course on grain price risk management utilizing commodity futures and their options during the last three years?
Yes, more than once _____ Yes, only once _____ No _____

13. Does your elevator follow a risk management strategy? No _____ Yes _____
If no, please go to question number 16.
If yes, what is the goal of this strategy? _____

14. Who is responsible for setting risk management strategy for your elevator? Please check all that applies to your situation.

- a) Elevator manager _____ b) Coop. board _____ c) Corporate HQ _____
 d) Marketing consultant _____ e) Commodity Broker _____ f) Others (Pl. specify) _____

15. Who is responsible for implementing risk management strategy for your elevator? Please check all that applies to your situation.

- a) Elevator manager _____ b) Coop. board _____ c) Corporate HQ _____
 d) Marketing consultant _____ e) Commodity Broker _____ f) Others (Pl. specify) _____

16. What percentage of the **elevator owned** grain, you handled during the 2005/06 crop year, **was protected** from price risk through various risk management methods?

METHOD OF RISK MANAGEMENT	Spring Wheat	Winter Wheat	Oats	Barley	Corn	Soy-Beans	Sun-flower
	.. as % of each grain (owned by the elevator) during the crop yr 2005/06 ..						
a. Using Commodity Futures							
b. Using Options on Commodity Fut.							
c. Using Cash Forward Sale Contracts							
Others (Please list):							
d.							
e.							
TOTAL (%) OF THE ELEVATOR OWNED GRAIN PROTECTED							

17. Does your elevator have access to a grain marketing data network service (like DTN?)

Yes _____ No _____

18. Does your elevator subscribe to any printed grain market information service?

Yes _____ No _____

19. In your opinion, what are the two most pressing problems faced by grain elevators in the area of transportation?

1. _____

2. _____

20. In your opinion, what are the two most pressing problems faced by grain elevators in the area of grain quality and grading?

1. _____

2. _____

21. In your opinion, what are the two most pressing problems (other than transportation, quality, and grading) faced by grain elevators in your area?

1. _____

2. _____

22. How many years have you been the manager of this elevator? _____

23. How many years of experience do you have as a grain elevator manger? _____

24. How many years of experience do you have in the grain business? _____

25. What was the last year of school you completed? (Please check one)

Some High School _____

Graduated from High School _____

Some College or Technical School _____

Graduated from College _____

26. Would you like to receive a summary of survey results?

Yes _____ No _____

If yes, please print your name and address.

NAME: _____

ADDRESS: _____

End of questionnaire. Please return the completed survey in the enclosed self addressed envelope or mail it to the Grain Marketing Project, Economics Department, Scobey Hall, Box 504, South Dakota State University, Brookings, SD 57007-0895.

We really appreciate your cooperation and time. **Thank you!**