



**C 264**

**South Dakota  
Farmland  
Market Trends  
1991-2000**

**Results from the 2000  
SDSU South Dakota  
Farm Real Estate Survey**

**South Dakota State University • Agricultural Experiment Station  
U.S Department of Agriculture**

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**Results from the 2000 SDSU South Dakota Farm Real Estate Survey**

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South Dakota State University  
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U.S Department of Agriculture

## FOREWORD

Agricultural land values and cash rental rates in South Dakota, by region and by state, are the primary topics of this report, which is written for farmers and ranchers, landowners, agricultural professionals (lenders, rural appraisers, professional farm managers, extension educators, and educators), and policy makers interested in agricultural land market trends. This report contains the results of the 2000 SDSU South Dakota Farm Real Estate Market Survey, the tenth annual SDSU survey developed to estimate agricultural land values and cash rental rates by land use in different regions of South Dakota.

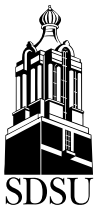
This survey would not have been possible without the leadership of Dr. Larry L. Janssen. He has conducted this survey since 1991.

We wish to thank our reviewers for their constructive comments on an earlier draft of this report. The reviewers are Dr. Richard Shane, Department head, and Dr. Don Peterson, extension farm management specialist, of the SDSU Economics Department and Mary Brashier, Agricultural Communications, SDSU.

We also thank Janet Wilson and Penny Stover for developing and maintaining the mailing list, administering the survey, and formatting the reports and Todd Lee for data input.

General funding for this project is from the SDSU Agricultural Experiment Station project H - 127: Economic analyses of agricultural land markets and land management practices in South Dakota.

Finally, we wish to thank the 251 respondents who participated in the 2000 South Dakota Farm Real Estate Market Survey. Most of these people have also participated in one or more past annual land market surveys. Without their responses this report would not be possible.



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# South Dakota Farmland Market Trends 1991–2000

## Results from the 2000 SDSU South Dakota Farm Real Estate Survey

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### SUMMARY

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The 2000 SDSU Farm Real Estate Market Survey reports current agricultural land values and cash rental rates by land use in different regions of South Dakota and compares them with values of earlier years. Key findings are highlighted below.

- **The most recent annual change (1999 to 2000) in agricultural land values of 5.5% is a significant increase from last year's annual percentage increase of 1.9%.**

From 1999 to 2000, annual increases of 7% or more occurred in the north-central, northwest, northeast, and southeast regions. More modest increases were noted in the rest of the state.

- **Demand for South Dakota agricultural land for expansion, recreation, or for investment purposes is cited as a major reason for increases in land market values.**

Expansion of existing farming/ranching operations, investor interest, and hunting/recreation demands have contributed to increases in land market values. This finding is true for the 2000 survey as well as for those surveys conducted from 1991 to 2000.

- **Farmland values increased more than the rate of general price inflation from 1991 to 2000 in all regions and for all land uses in South Dakota.**

Statewide agricultural land values increased 54% from 1991 to 2000, which is considerably above the

general inflation rate during this 10-year period.

Land value increases varied from +38% in the north-east region to +76% in the north-central region.

Rangeland values increased at a greater percentage rate than cropland values during most of this period, with statewide increases of 68% for rangeland and 48% for nonirrigated cropland.

- **Agricultural land values differ greatly by region and land use.**

In each region, per-acre values are highest for irrigated land, followed in descending order by nonirrigated cropland, hayland or tame pasture, and native rangeland. For each land use, per-acre land values are highest in the southeast and lowest in western South Dakota.

The average value of nonirrigated agricultural land (as of February 2000) in South Dakota is \$343 per acre, ranging from \$788 per acre in the southeast to \$128 per acre in the northwest. Average nonirrigated cropland values vary from \$910 per acre in the southeast to \$436 per acre in the central region and \$208 per acre in the northwest. Average cropland values exceed \$1000 per acre in several counties of eastern South Dakota. Average rangeland values vary from \$456 per acre in the southeast to \$111 per acre in the northwest. Within each region, land productivity and land use account for substantial differences in per-acre values.

- **Average cash rental rates per acre also differ greatly by region and land use.**

Average rental rates are highest in the southeast and east-central regions and lowest in western South Dakota. In each region, cash rental rates are highest for cropland and lowest for pasture and rangeland. For example, average cash rental rates in 2000 for nonirrigated cropland are above \$75 per acre in a few counties of eastern South Dakota and are only \$18.70 per acre in western South Dakota. Average rangeland rental rates are \$31 per acre in the southeast region and an average \$6.80 per acre in northwest South Dakota.

- **Cash rental rates per acre did not change very much from 1999 to 2000 but increased considerably from 1991 to 2000.**

From 1999 to 2000, cash rental rates remained steady or increased in all regions across the state. From 1991 to 2000, average cash rental rates for cropland increased from a low of 18% in the southwest region to a high of 48% in the north-central region. Rangeland rental rates increased by nearly \$3 per acre (+55%) in northwest South Dakota and by nearly \$12 per acre (+61%) in the southeast.

- **Current average net rates of return on agricultural land in South Dakota are much lower than farmland mortgage interest rates.**

Respondents' estimates of net rates of return to farmland in their localities, given current land values, were 5.1% for all agricultural land, 5.5% for nonirrigated cropland, and 4.9% for rangeland. This implies that relatively large down payments are necessary before land purchases can cash flow from net returns. Continued caution in farm real estate debt financing is essential.

- **Throughout the 1990s, farm expansion has been the major reason for purchasing farmland, while retirement from farming and settling estates have been the major reasons for selling farmland.**

Over the years more respondents listed investment potential and hunting/recreation demand for farmland as major reasons for purchase, while fewer respondents gave farm production-related reasons as the major motivation for purchasing farmland.

- **Investor interest in farmland purchases was cited more often than any other item as a positive factor in the current (2000) farmland market. Financial difficulties (cash flow pressure, liquidation, and low profits) were cited as major reasons for selling farmland.**

More respondents cited financial pressure as the major reason for selling farmland than in past years. These statements are based on results from the current survey.

# South Dakota Farmland Market Trends 1991–2000

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The 2000 SDSU Farm Real Estate Market Survey is the tenth annual survey of agricultural land values and cash rental rates by land use in different regions of South Dakota. Publication of survey findings is a response to numerous requests by farmland owners, renters, appraisers, lenders, and others for detailed information on farmland markets in South Dakota.

The 2000 estimates are based on reports from 251 respondents to the SDSU 2000 South Dakota Farm Real Estate Market Survey. Respondents are agricultural lenders, rural appraisers, assessors, realtors, professional farm managers, and agricultural extension educators. All are familiar with farmland market trends in their localities.

The survey, requesting information on cash rental rates and agricultural land values as of February 2000, was mailed in February and March 2000. Response rates, respondent characteristics, and estimation procedures are discussed in Appendix I.

For ease of comparison, results are presented in a format similar to surveys published by Janssen and Pflueger from 1991 through 2000. Regional level information on land values and cash rents by land use (crop, hay, range, pasture, and irrigated crop/hay) is given in each of these SDSU reports.

This overview of agricultural land values and cash rental rates across South Dakota may or may not reflect actual land values or cash rental rates unique to specific localities or specific properties. Use this information as a general reference and rely on local sources for more specific details.

County data on whole farm, cropland, and pasture land rents and values are provided by the South Dakota Agricultural Statistics Service (SDASS) in their

report, *South Dakota 2000 county level land rents and values*.<sup>2</sup> It is based on a telephone survey of South Dakota farm/ranch producers and is the sixth annual survey of county level land rents and values. A comparison of methods and results from the two farmland market surveys (SDASS and SDSU) is available in Janssen 1999.

## **CHANGING ECONOMIC CONDITIONS IN SOUTH DAKOTA AGRICULTURE**

Most renters, buyers, and sellers of farmland are local residents; few participants in the farmland real estate market come from outside of South Dakota. Consequently, land market participants are influenced by local social, financial, and economic factors, many of these related to changing national and international economic conditions.

Low inflation rates, declining to stable interest rates, and increasing export markets for grains, oilseeds, livestock, and meat products characterize most of the 1990s. Farm debt gradually increased and interest expense averaged between 9 and 10% of South Dakota farm production expenses. Net farm income trended upward from 1991 through 1996 but declined in 1997 and in 1998. Net farm income was higher in 1999, primarily due to governmental payments.

During the last few years a number of major events seriously affected the agricultural sector in South Dakota and the nation as a whole. The 1997-99 international financial crises led to currency depreciation, reduced economic growth, and higher interest

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<sup>2</sup> The SDASS report on county level rents and values can be obtained from the Sioux Falls office. The phone number is 605-330-4235 and the mailing address is South Dakota Agricultural Statistics Service, P.O. Box 5068, Sioux Falls SD 57117-5068.

rates in Far Eastern countries, in turn affecting the market for U.S. agricultural products. While the "Asian flu" is believed to have now passed, there remain other factors influencing the overall health of the agricultural sector.

Nationally, the effect of 4 years of bumper crops is reflected in U.S. farm income. Net farm income, as forecast by the Economic Research Service, will be \$40.4 billion in 2000, a decline of \$7.6 billion from the preliminary estimate for 1999. In 1998 and 1999, federal farm-assistance legislation helped to maintain farm income and temper financial hardship for many producers. Government payments reached an estimated record \$22.7 billion in 1999 and are forecasted to decline to \$17.2 billion in 2000. This impact has been reflected in South Dakota land prices.

The strong employment base in many South Dakota trade centers has provided off-farm employment for increasing numbers of South Dakota farm families. This offers greater economic stability and opportunities for persons involved in land market decisions. Investors, including farmland owners, also may have acquired capital gains from sale of stocks, land, or other investments that can be used for purchasing agricultural land. Credit, readily available in recent years, also has helped finance land purchases and farm operating expenses.

Average prices of principal South Dakota crops (feed grains, wheat, and soybeans) in the 1999 marketing year were the lowest recorded in the 1990s, while hay prices were the lowest since 1991. The 1999 marketing-year corn price averaged \$1.60 per bushel, only 50% of the all-time high average price in 1995 and 73% of the average price over the previous 9 years (1990 - 1998). Wheat in 1999 averaged \$2.70 per bushel, 58% of the 1995 average price and 79% of the previous 9-year average price. The 1999 soybean average price of \$4.40 per bushel was 62% of the 1996 price and 77% of the previous 9-year average price. All-hay prices tumbled from an average \$75 - \$80 per ton in 1996 and 1997 to an average of \$45.50 in 1999.

Crop yields in the past 3 years have been considerably above long-term trends. The increased yields buffered some of the impact of crop price declines. However, value of principal crop production decreased for all commodities except soybeans due to price decreases. Value of principal crops grown in South Dakota declined 35% from 1997 to 1999.

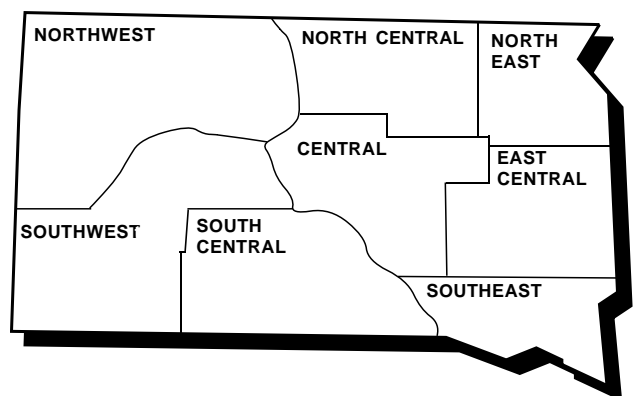
Hog prices during 1999 were lower than average hog prices from 1990 - 1998, due to changing supply and demand conditions. Calf and feeder cattle prices in 1999 were generally higher than average prices from 1991 - 1998, resulting in increased profit margins.

Land market trends usually lag behind changing conditions in the general and agricultural economy and are strongly influenced by land market participants' expectations of future trends and the availability of debt or equity financing for land-related purposes.

### **2000 SOUTH DAKOTA AGRICULTURAL LAND VALUES AND VALUE CHANGES**

Respondents to the 2000 South Dakota Farm Real Estate Market Survey estimated the per-acre value of nonirrigated cropland, hayland, rangeland, tame pastureland, and irrigated land in their home counties and the percent change in value from one year earlier. Responses for nonirrigated land uses are grouped into eight agricultural regions (Fig 1). The six regions in eastern and central South Dakota correspond with USDA crop reporting districts. In west-

Figure 1. Agricultural regions of South Dakota.





ern South Dakota, farmland values and cash rental rates are reported for the northwest and southwest regions. Due to few irrigated land reports in several regions, responses for irrigated land values and rental rates are regrouped into six regions: western, central/south-central, north-central, northeast, east-central, and southeast.

Average value per acre and percent change in value was obtained for each agricultural land use in each region. Regional and statewide all-land (nonirrigated land) value estimates are weighted averages based on the relative amount and value of each nonirrigated agricultural land use in each region of South Dakota (Appendix D).

As of February 2000, the South Dakota all-land average value was \$343 per acre, an estimated 5.5% increase in value from one year earlier (Fig 2, Table 1). This is a significant change from the 1.9% increase in land values recorded for 1998 to 1999 and is similar to the 4.9% annual rate of increase during the 1990s.

Regional differences in all-agricultural land values are primarily related to major differences in: (1) agricultural land productivity among regions, (2) per-acre values of cropland and rangeland in each region, and (3) the proportion of cropland and rangeland in each region. Native rangeland is the dominant land use in western South Dakota, while most agricultural land in eastern South Dakota is nonirrigated cropland. Re-

Table 1. Average reported value and annual percentage change in value of South Dakota agricultural land by type of land, by region, 1991-2000.

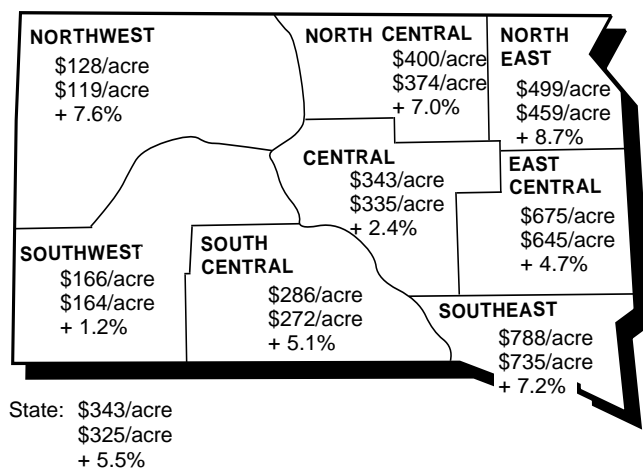
<i>Type of land</i>	<i>South-east</i>	<i>East-Central</i>	<i>North-east</i>	<i>North-Central</i>	<i>South-Central</i>	<i>South-west</i>	<i>North-west</i>	<i>STATE</i>	
<b>All agricultural land (nonirrigated)</b>									
	<i>dollars per acre</i>								
Average value, 2000	788	675	499	400	343	286	166	128	343
Average value, 1999	735	645	459	374	335	272	164	119	325
Average value, 1998	766	612	457	350	337	280	153	115	319
Average value, 1997	660	591	437	320	293	241	137	108	290
Average value, 1996	636	522	419	291	288	217	124	112	273
Average value, 1995	627	475	424	277	257	222	129	100	262
Average value, 1994	567	497	393	293	255	191	112	94	250
Average value, 1993	548	498	399	254	233	199	111	90	241
Average value, 1992	519	474	368	259	223	186	104	89	231
Average value, 1991	526	466	362	227	225	177	97	84	223
Av annual % change 00/91	4.6%	4.2%	3.6%	6.5%	4.8%	5.5%	6.2%	4.8%	4.9%
Annual % change 00/99	7.2%	4.7%	8.7%	7.0%	2.4%	5.1%	1.2%	7.6%	5.5%
<b>Nonirrigated cropland</b>									
	<i>dollars per acre</i>								
Average value, 2000	910	785	620	520	436	417	248	208	570
Average value, 1999	866	756	565	488	435	402	246	202	543
Average value, 1998	903	728	564	452	434	399	241	200	536
Average value, 1997	777	699	535	412	386	348	217	188	488
Average value, 1996	751	613	514	372	371	317	214	191	456
Average value, 1995	732	555	522	353	332	326	237	185	439
Average value, 1994	661	590	488	382	331	289	218	169	429
Average value, 1993	655	595	497	326	305	302	197	163	415
Average value, 1992	616	574	460	342	300	287	196	167	402
Average value, 1991	623	554	450	294	300	272	185	153	386
Av annual % change 00/91	4.3%	3.9%	3.6%	6.5%	4.2%	4.9%	3.3%	3.5%	4.4%
Annual % change 00/99	5.1%	3.8%	9.7%	6.6%	0.2%	3.7%	0.8%	3.0%	5.0%

Table 1 (continued). Average reported value and annual percentage change in value of South Dakota agricultural land by type of land, by region, 1991-2000.

Type of land	South-east	East-Central	North-east	North-Central	Central	South-Central	South-west	North-west	STATE
<b>Rangeland (native)</b>									
	<i>dollars per acre</i>								
Average value, 2000	456	417	297	253	265	235	143	111	183
Average value, 1999	405	386	276	241	255	220	143	102	173
Average value, 1998	408	346	274	226	256	231	130	98	167
Average value, 1997	364	354	268	204	214	197	116	92	151
Average value, 1996	336	311	250	194	214	177	100	97	143
Average value, 1995	354	303	247	184	197	180	101	83	136
Average value, 1994	319	283	228	184	190	149	85	80	125
Average value, 1993	283	276	232	169	175	157	89	76	122
Average value, 1992	271	267	209	163	159	145	80	74	114
Average value, 1991	268	271	205	147	163	137	74	69	109
Av annual % change 00/91	6.1%	4.9%	4.2%	6.2%	5.5%	6.2%	7.6%	5.4%	5.9%
Annual % change 00/99	12.6%	8.0%	7.6%	5.0%	3.9%	6.8%	0.0%	8.8%	5.8%
<b>Pasture (tame, improved)</b>									
	<i>dollars per acre</i>								
Average value, 2000	516	481	334	289	303	268	167	144	329
Average value, 1999	453	437	314	266	290	240	161	125	301
Average value, 1998	461	406	297	264	302	272	161	120	299
Average value, 1997	416	373	299	236	265	222	138	114	271
Average value, 1996	379	358	279	231	258	188	127	115	256
Average value, 1995	385	346	262	218	214	214	117	102	237
Average value, 1994	371	335	251	200	224	194	109	93	227
Average value, 1993	326	333	249	194	194	193	104	98	216
Average value, 1992	328	306	257	194	190	176	100	88	210
Average value, 1991	315	325	252	170	199	163	92	94	206
Av annual % change 00/91	5.6%	4.5%	3.2%	6.1%	4.8%	5.7%	6.8%	4.9%	5.3%
Annual % change 00/99	13.9%	10.1%	6.4%	8.6%	4.5%	11.7%	3.7%	15.2%	9.3%
<b>Hayland</b>									
	<i>dollars per acre</i>								
Average value, 2000	722	577	330	317	310	293	203	175	332
Average value, 1999	619	562	317	278	293	294	194	163	310
Average value, 1998	668	504	330	265	295	291	178	149	303
Average value, 1997	553	507	316	262	253	258	169	150	280
Average value, 1996	568	451	314	219	273	232	156	146	267
Average value, 1995	562	365	336	213	229	230	164	145	254
Average value, 1994	489	409	279	235	237	204	137	124	240
Average value, 1993	435	398	275	188	205	204	140	121	223
Average value, 1992	416	336	237	179	197	193	135	119	207
Average value, 1991	461	358	252	169	190	197	126	122	211
Av annual % change 00/91	5.1%	5.4%	3.0%	7.2%	5.6%	4.5%	5.4%	4.1%	5.2%
Annual % change 00/99	16.6%	2.7%	4.1%	14.0%	5.8%	-0.3%	4.6%	7.4%	7.1%

Source: 2000 and earlier South Dakota farm real estate market surveys

Figure 2. Average value of South Dakota agricultural land, February 1, 2000 and 1999, and percent change from one year ago.



Regional and statewide average values of agricultural land are the weighted averages of dollar value per acre and percent change by proportion of acres of each nonirrigated land use by region.

Top: Average per-acre value—February 1, 2000  
 Middle: Average per-acre value—February 1, 1999  
 Bottom: Annual percent change in per-acre land value

Source: 2000 South Dakota farm real estate market survey, SDSU.

Regional trends in all-agricultural land values, cropland values, and rangeland values from 1991 - 2000 are displayed in Figures 3, 5, and 7.

All-land average values are highest in eastern South Dakota, with per-acre values ranging from \$788 in the southeast to \$675 in the east-central and \$499 in the northeast region, the regions containing the most productive land in South Dakota. Cropland and hayland, 70% to 74% of farmland acres, are the dominant uses in each of these regions.

Agricultural land values in central and western South Dakota are much lower than in eastern South Dakota. Average value per acre ranges from \$286 in the south-central to \$343 and \$400 in the central and north-central regions. Cropland and hayland are a majority of farmland acres in the central and north-central regions, while rangeland and pasture occupy 69% of agricultural acres in the south-central region. Lowest average values for agricultural land are found in the northwest (\$128 per acre) and southwest regions (\$166 per acre). More than 80% of privately

owned agricultural acres in these western regions are in native rangeland and pasture.

Regional changes in agricultural land values this past year (early 1999 to early 2000) were primarily related to recent improvements in South Dakota's farm economy, especially the livestock sector, and to continued investor interest in rural land purchases in some localities. Compared to the previous year, the percentage change in land values increased considerably across the state.

Ten-year (1991 - 2000) trends in agricultural land values show increases above the rate of price inflation in all regions and generally lower rates of increases in the most crop-intensive regions. Highest rates of land value increases during this period were in the southwest and north-central regions with average annual increases of 6.2 % and 6.5% respectively. Lowest rates of land value increases occurred in northeast (3.6%) and east-central (4.2%) South Dakota. Total percentage change in land values from 1991 - 2000 varied from +38% in the northeast to +76% in the north-central region.

### LAND VALUES AND VALUE CHANGES BY TYPE OF LAND AND REGION

In each region, per-acre values are highest for irrigated land followed by nonirrigated cropland, hayland or tame pasture, and native rangeland. For each nonirrigated land use, per-acre land values are highest in the southeast and east-central regions and lowest in the northwest and southwest regions (Figs 4, 5, 6, 7; Tables 1, 1a). These regional differences in land values by land use have remained consistent over time and are closely related to climate patterns, crop / forage yields, and soil productivity differences across the state.

#### Cropland values

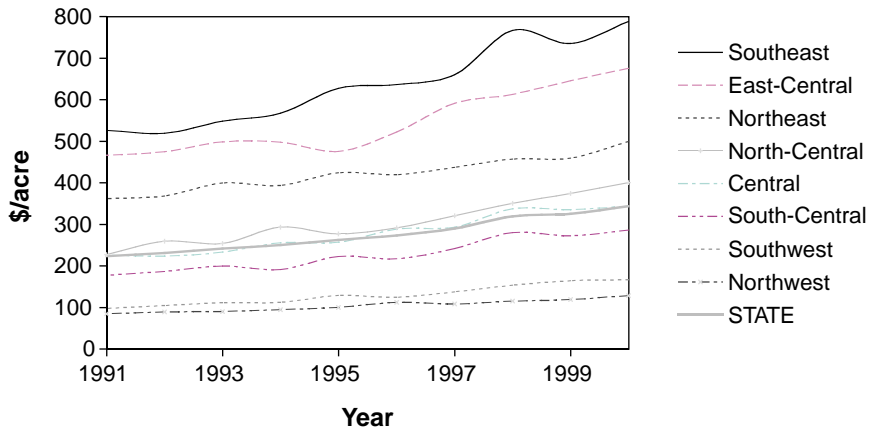
The weighted average value of South Dakota's nonirrigated cropland (as of February 2000) is \$570, a 5.0% increase from 1999 (Table 1). This occurred despite 2 to 3 years of deteriorating economic conditions in the

crop sector. Lower crop prices combined, however, with several years of excellent crop yields in many localities and with increasing government payments.

There is considerable regional variation in cropland value changes. Cropland values increased an estimated 9.7% in the northeast and 6.6 % in the north-central region but increased only 0.2% in the central and 0.8% in the southwest regions. Cropland values increased 3.0% or more in all other regions, a significant change from the declining rates of increases reported from 1998 to 1999. From 1991 to 2000, South Dakota cropland values increased above the rate of price inflation in all regions, with a statewide average annual increase of 4.4% and a total 10-year increase of 48%.

The southeast region has the highest average cropland values (\$910 per acre), followed by cropland in

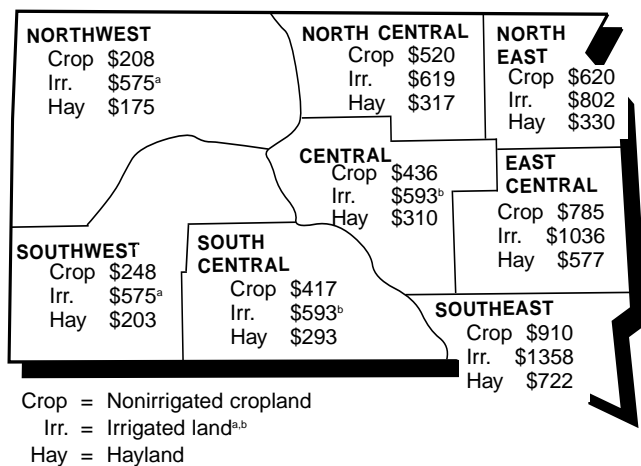
Figure 3. All ag-land value, statewide and regions, 1991-2000.



the east-central and northeast regions (Figs 4, 5; Table 1). These three eastern regions contain nearly 45% of South Dakota's cropland, and the major crops are corn, soybeans, wheat, and other small grains.

Wheat, other small grains, and soybeans are the predominant cropland uses in the central regions of South Dakota. Average cropland values in the north-central region (\$520 per acre) are higher than in the central (\$436 per acre) or south-central (\$417 per acre) regions. Lowest average cropland values are found in the northwest (\$208) and southwest (\$248) regions. Dominant cropland uses are spring wheat in the northwest and winter wheat in the southwest. Average per-acre values of cropland in the northwest region are about 23% of those in the southeast (Table 1).

Figure 4. Average value of South Dakota cropland, irrigated land, and hayland, by region, February 2000, dollars per acre.



<sup>a</sup>Irrigated land values shown for the northwest and southwest regions are based on the average value reported for gravity irrigated land in both western areas.

<sup>b</sup>Irrigated land values shown for the central and south-central regions are based on the average value reported in both regions.

Source: 2000 South Dakota farm real estate market survey, SDSU.

### Pasture and rangeland values

In February 2000, South Dakota native rangeland averaged \$183 per acre, while the average value of tame pasture was \$329 per acre (Table 1, Figs 6, 7). Native rangeland is much more concentrated in the western and central regions of South Dakota, while tame pasture is concentrated in the eastern regions.

The statewide average change in rangeland (pasture) values was +5.8% (+9.3%) during the past year (Feb 1999 to Feb 2000), compared to increases of less than 4% in the previous year. Based on survey re-

ports, rangeland and pastureland value increases were strongest in the southeast region, while in the southwest rangeland remained steady and pasture slightly increased in value (Table 1).

From 1991 to 2000, statewide rangeland values increased 68%, while tame pasture values increased 60% statewide. The highest percentage increases in rangeland (93%) and tame pasture (82%) values occurred in the southwest, while the smallest percentage increases were reported in the northeast.

Rangeland average values are highest in the southeast (\$456 per acre) and lowest in the northwest (\$111 per acre). In the central regions, average rangeland values are clustered from \$235 to \$265 per acre, compared to \$297 per acre in the northeast (Table 1, Fig 6). Across regions, average rangeland values varied between 77% and 88% of the average value of tame pastureland.

Depending on specific region, the average per-acre value of nonirrigated cropland is 1.6 to 2.2 times the average value of native rangeland. In all regions, per-acre average hayland and tame pasture values are considerably lower than nonirrigated cropland values and somewhat higher than native rangeland values.

### Hayland values

South Dakota hayland values averaged \$332 per acre as of February 2000, a 7.1% increase from one year earlier and a 57% increase from 1991. Strong annual increases in hayland values above 14% are reported in the southeast and north-central regions, while a

Figure 5. Cropland value, statewide and regions, 1991-2000.

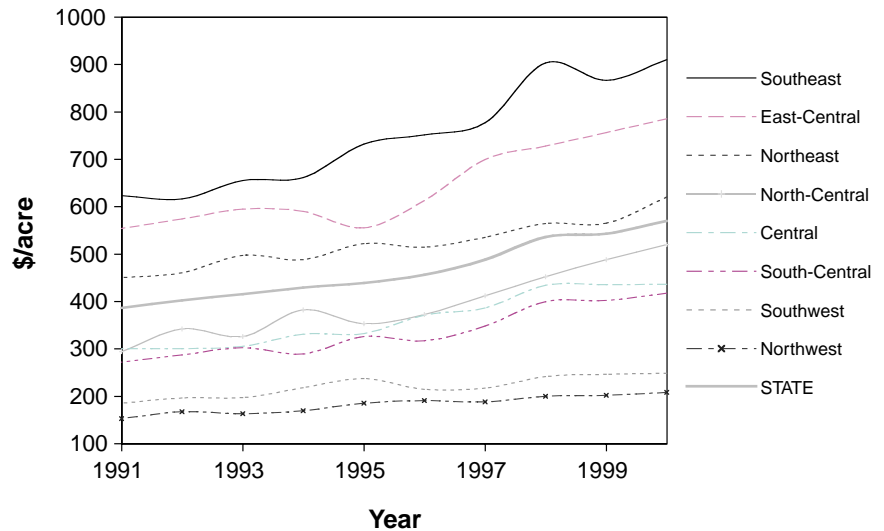
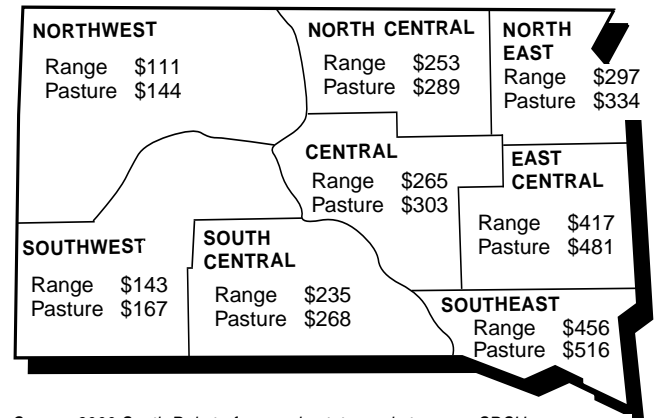
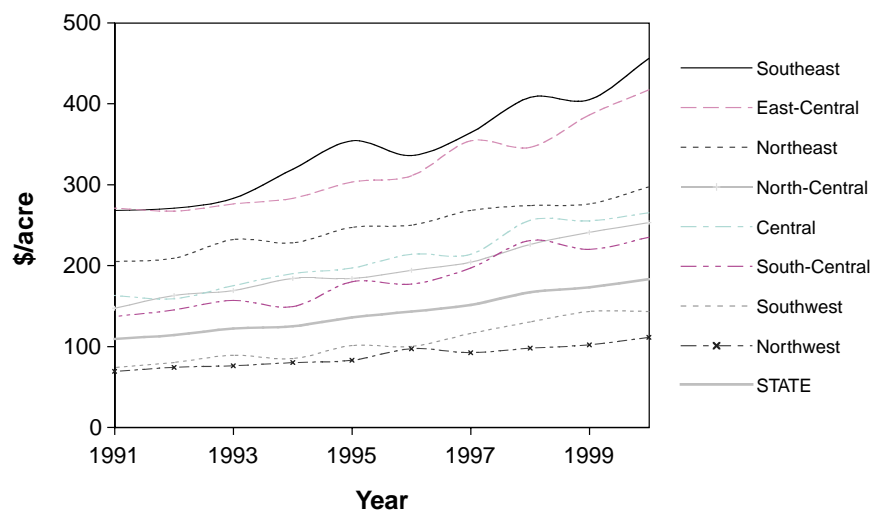


Figure 6. Average value of South Dakota rangeland and tame pasture, by region, February 2000, dollars per acre.



Source: 2000 South Dakota farm real estate market survey, SDSU.

Figure 7. Rangeland value, statewide and regions, 1991-2000.



slight decline is shown in the south-central region. From 1991 to 2000, hayland value increases in all regions were above the rate of price inflation, with the strongest increase reported in the north-central region (Table 1).

Per-acre hayland values follow the same regional patterns as cropland values, highest in the southeast (\$722 per acre) and lowest in the northwest (\$175 per acre). Alfalfa hay and other tame hay are the most common types of hay harvested in eastern South Dakota, while native hay is more common in central and western South Dakota.

### Irrigated land values

Irrigated land value reports are consolidated into six regions (Table 1a, Fig 4). Data from the central and south-central regions are combined because of few reports from either region. The northwest and southwest regions are combined into a western region because almost all irrigated land reports are for gravity-irrigated cropland in counties adjacent to the

Black Hills. In all other regions, the value of irrigated land was reported for center pivot irrigation systems, excluding the value of the center pivot.

We continue to caution readers that irrigated land-value data are less reliable than shown for other agricultural land uses. Irrigated land is not common (less than 1% of total acres) in most regions, and there are few sales of irrigated tracts. Consequently, only 41% of all respondents were familiar with and able to provide information on irrigated land values.

Based on only 104 responses, irrigated land value increases occurred in all except the north-central region. Statewide average irrigated land values are \$816 per acre, a 10.9% increase from a year earlier and 41% above 1991 reported values. Regional average irrigated land values are above the statewide average in the southeast (\$1358 per acre) and east-central (\$1036 per acre) regions. In western and central South Dakota, irrigated land values average \$575 to \$593 per acre (Table 1A, Fig 4).

Table 1a. Average reported value and annual percentage change in value of South Dakota irrigated land by region, 1991-2000.

Type of land	South-east	East-Central	North-east	North-Central	Central/South-Central	Western	STATE
<i>dollars per acre</i>							
<b>Irrigated land</b>							
Average value, 2000	1358	1036	802	619	593	575	816
High Productivity	1611	1243	921	523	676	801	—
Low Productivity	1120	857	696	676	454	439	—
Average value, 1999	1351	913	672	625	492	443	736
Average value, 1998	1245	950	686	676	549	508	752
Average value, 1997	1217	769	736	600	502	469	707
Average value, 1996	1083	714	662	504	460	453	642
Average value, 1995	1144	740	793	535	475	411	664
Average value, 1994	1043	790	683	568	520	433	655
Average value, 1993	979	765	583	547	506	491	640
Average value, 1992	985	844	641	450	470	451	622
Average value, 1991	942	665	563	433	460	419	580
Av annual % change 00/91	4.1%	5.0%	4.0%	4.1%	2.9%	3.6%	3.9%
Annual % change 00/99	0.5%	13.5%	19.3%	-1.0%	20.5%	29.8%	10.9%

Source: 2000 and earlier South Dakota farm real estate market surveys

## VARIATION IN LAND VALUES BY LAND PRODUCTIVITY AND COUNTY CLUSTERS

Within each region and for each nonirrigated agricultural land use, there is considerable variation in land values. In this section, we report February 2000 per-acre values of average quality, high-productivity, and low-productivity land by agricultural land use by region and county clusters within several regions (Table 2).

A county cluster is a group of counties within the same region that have similar agricultural land-use and value characteristics. Three county clusters are identified in each of the following regions: southeast, east-central, northeast, north-central, and central. Land values for county clusters in regions west of the Missouri River are not reported because there are too few reports from any county groupings. Nor is this survey designed to reflect the substantially higher nonirrigated land values near the Black Hills.

Substantial variation in per-acre land value occurs by land productivity for each land use in each region. For example, 2000 cropland values in the southeast vary from an average of \$717 per acre for low-productivity cropland to \$1237 per acre for high-productivity cropland. In the northwest, at the other extreme, the average value of low- (high-) productivity cropland values is \$163 (\$269) per acre. Across regions, average values of high-productivity cropland are 48% to 88% above average values of low-productivity cropland.

Rangeland values in the southeast vary from \$360 per acre for low-productivity rangeland to \$567 per acre for high-productivity rangeland. In the northwest, at the other extreme, the average value of low- (high-) productivity rangeland is \$81 (\$147) per acre. The average value of high-productivity rangeland varies by 34% to 58% above the average value of low-productivity rangeland across the central and southeastern regions of South Dakota and by 53% to 81% in the western and south-central regions where rangeland predominates (Table 2).

Average values of nonirrigated cropland exceed \$1150 per acre in two county clusters in eastern South Dakota: Minnehaha-Moody (\$1183 per acre) and Clay-Lincoln-Turner-Union (\$1196 per acre). This is the fourth consecutive year during the 1990s that the average value of nonirrigated cropland exceeds \$1000 in any county cluster. For comparison purposes, 1991 average values in the Minnehaha-Moody county clusters were \$809 per cropland acre and \$356 per rangeland acre.

Average land values are considerably lower in the other county clusters of the southeast and east-central regions. For example, the per-acre value of average-quality nonirrigated cropland is \$815 per acre in the Brookings-Lake-McCook and \$837 in the Bon Homme-Hutchinson-Yankton county clusters, and only \$579 to \$629 per acre in the western county clusters of these two regions. Similar patterns of per-acre values occur for other land uses (Table 2).

Value increases for all land uses occurred in all southeast county clusters and in all east-central county clusters, with the exception of Minnehaha-Moody rangeland and pasture values which declined slightly.

In the northeast, average nonirrigated cropland and hayland values in the Grant-Roberts county cluster are slightly higher than values reported in the Codington-Deuel-Hamlin county cluster and considerably higher than those reported in the Clark-Day-Marshall county cluster. A significant increase in Grant-Roberts and Clark-Day-Marshall county cluster values for rangeland and tame pasture narrowed the gap from the previous year between Codington-Deuel-Hamlin and the other northeast county clusters. Value changes were mixed across land uses and county clusters in the northeast region, resulting in minimal overall changes in farmland values.

In the north-central region, average land values in Brown and Spink counties are much higher than in other counties. Most land in Brown and Spink counties is located in the James River valley and is more productive than other land in this region. As an example, nonirrigated cropland values averaged

Table 2. Average reported value per acre of agricultural land by South Dakota region, county clusters, type of land, and land productivity, February 1, 2000.

		<i>Southeast</i>				<i>East-Central</i>			
		Clay	Bon Homme	Charles Mix		Minnehaha	Brookings	Sanborn	
		Lincoln	Hutchinson	Douglas		Moody	Lake	Davison	
		Turner	Yankton				McCook	Hanson	
		Union			All			Kingsbury	
								Miner	
<b>Agricultural land type and productivity</b>	All								
<b>Nonirrigated cropland</b>					<i>dollars per acre</i>				
Average	910	1196	837	579	785	1183	815	629	
High Productivity	1237	1609	1217	679	993	1567	1040	764	
Low Productivity	717	973	633	452	579	775	613	488	
<b>Rangeland (native)</b>									
Average	456	609	415	371	417	450	394	421	
High Productivity	567	786	516	434	486	610	453	469	
Low Productivity	360	492	334	271	345	360	318	357	
<b>Pastureland (tame, improved)</b>									
Average	516	671	456	417	481	506	461	486	
High Productivity	630	818	578	471	568	725	528	551	
Low Productivity	426	537	388	345	411	413	388	424	
<b>Hayland</b>									
Average	722	1044	655	434	577	1038	541	475	
High Productivity	929	1382	795	488	725	1494	678	518	
Low Productivity	599	875	525	340	459	713	459	396	
		<i>Northeast</i>				<i>North-Central</i>			
		Codington		Clark			Edmund	Campbell	
		Deuel	Grant	Day		Brown	Faulk	Potter	
		Hamlin	Roberts	Marshall	All	Spink	McPherson	Walworth	
<b>Agricultural land type and productivity</b>	All								
<b>Nonirrigated cropland</b>					<i>dollars per acre</i>				
Average	620	667	678	457	520	700	343	386	
High Productivity	808	830	923	600	703	970	421	518	
Low Productivity	453	498	448	388	375	479	272	299	
<b>Rangeland (native)</b>									
Average	297	325	288	269	253	313	222	204	
High Productivity	329	348	326	307	299	383	267	224	
Low Productivity	246	270	232	231	196	250	174	149	
<b>Pastureland (tame,improved)</b>									
Average	334	356	318	321	289	355	253	218	
High Productivity	367	388	354	355	335	417	295	241	
Low Productivity	285	309	263	278	234	288	213	170	
<b>Hayland</b>									
Average	330	332	370	261	317	386	246	274	
High Productivity	439	429	479	343	367	443	281	332	
Low Productivity	272	289	271	226	241	293	192	206	



Table 2 (continued). Average reported value per acre of agricultural land by South Dakota region, county clusters, type of land, and land productivity, February 1, 2000.

Agricultural land type and productivity	All	Central			South-Central	South-west	North-west
		Aurora Beadle Jerauld	Buffalo Brule Hand Hyde	Hughes Sully	All	All	All
<b>Nonirrigated cropland</b>							
					<i>dollars per acre</i>		
Average	436	430	402	488	417	248	208
High Productivity	503	515	454	559	539	296	269
Low Productivity	338	364	295	375	307	200	163
<b>Rangeland (native)</b>							
Average	265	338	257	205	235	143	111
High Productivity	308	382	300	246	291	182	147
Low Productivity	104	289	176	162	190	107	81
<b>Pastureland (tame,improved)</b>							
Average	303	346	267	302	268	167	144
High Productivity	342	381	316	333	301	189	179
Low Productivity	263	308	227	258	216	129	110
<b>Hayland</b>							
Average	310	350	275	310	293	203	175
High Productivity	345	392	309	333	330	235	220
Low Productivity	247	313	204	240	229	155	129

Source: 2000 South Dakota farm real estate market survey, SDSU.

Irrigation land values are not reported in this table, due to insufficient number of reports in most county clusters.

\$700 per acre in the Brown-Spink county cluster compared to only \$343 per acre in the Edmund-Faulk-McPherson county cluster. During the past year, farmland values increased for all land uses in the Brown-Spink county cluster and generally held steady or increased in the Edmund-Faulk-McPherson and Campbell-Potter-Walworth county clusters. For the past ten years, agricultural land values in the Edmund-Faulk-McPherson county cluster are generally the lowest reported for all county clusters east of the Missouri River.

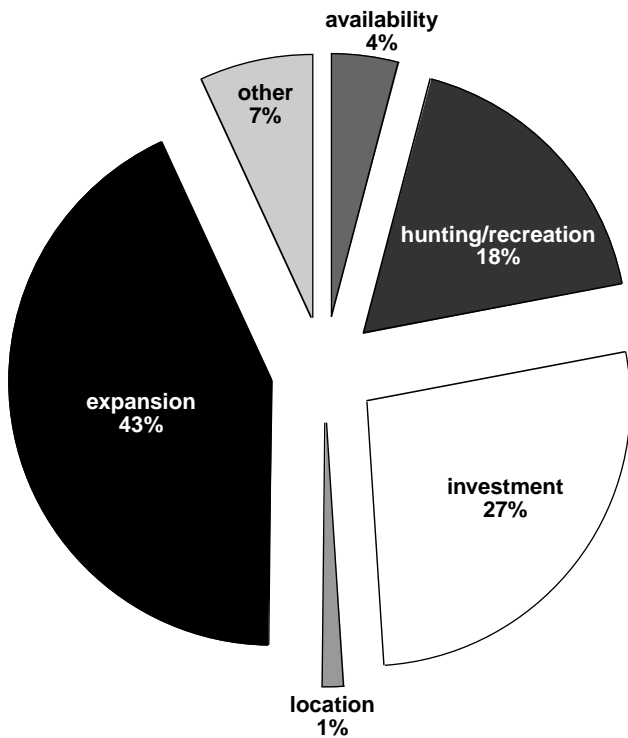
In the central region, per-acre values of cropland are relatively close in all county clusters, while hay and forage land values are higher in the Aurora-Beadle-Jerauld county cluster. Cropland values declined in the Aurora-Beadle-Jerauld county cluster and increased in the other county clusters, resulting in an increase for the entire central region.

For regions west of the Missouri River, average land values for each land use are highest in the south-central region and lowest in the northwest region. During the past year, land value increases were relatively strong in the northwest and south-central regions, while values increased or remained steady in the southwest region.

#### **MAJOR REASONS FOR PURCHASE AND SALE OF FARMLAND**

Respondents were asked to provide major reasons for any exchange in ownership of farmland in their localities. During the ten years the SDSU Farm Real Estate Market Survey has been conducted, the most commonly cited reasons for purchase and sale remain constant. However, the relative importance of some key factors has changed.

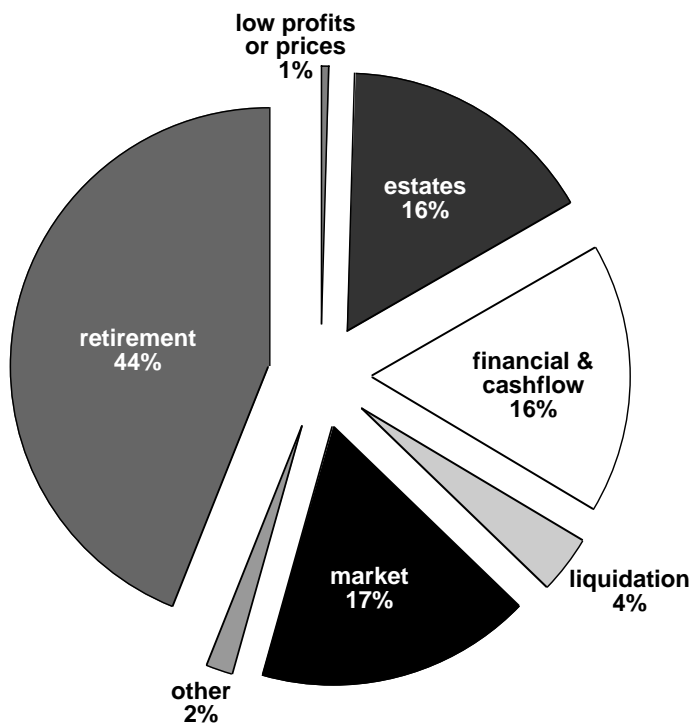
Figure 8. Reasons for buying farmland.



Farm expansion continues as the most common reason (43% of responses) given for purchasing farmland. Investment potential of farmland and hunting/recreation demand were the next most common reasons (Fig 8). During the past several years, more respondents are citing investment purposes and hunting/recreation purposes as major reasons for purchasing farmland, while fewer respondents are citing farm production-related reasons for purchasing farmland. For example, 23% of 1994 responses indicated investment or hunting/recreation reasons for purchase compared to 45% of responses in 2000.

Retirement from farming remains the most common reason (44% of responses) given for selling farmland (Fig 9). Financial/cash flow pressures, concern about future market conditions, and settling estates were the next three most common reasons. Additional reasons for selling include liquidation pressures and low profitability. During this past year, the proportion of respondents listing financial difficulty reasons (cash flow/ financial pressure, liquidation pressure, and low profits) for selling has remained steady.

Figure 9. Reasons for selling farmland.



### 2000 CASH RENTAL RATES OF SOUTH DAKOTA AGRICULTURAL LAND

The cash rental market provides important information on returns to agricultural land. Nearly three fourths of South Dakota farmland renters and three fifths of agricultural landlords are involved in one or more cash leases for agricultural land. A majority of cash leases are annual renewable agreements (South Dakota 1997 Census of Agriculture; Peterson and Janssen, 1988).

Respondents were asked about average cash rental rates per acre for nonirrigated cropland, irrigated land, and hayland. Cash rental rates for pasture/rangeland were provided on a per-acre basis and, if possible, on a per-AUM (Animal Unit Month) basis. Respondents were also asked to report cash rental rates for high-productivity and low-productivity land by different land uses in their localities. Cash rental rates by land use by region are summarized in Tables 3 and 3a and Figures 10 and 11. The

Table 3. Reported cash rental rates of South Dakota agricultural land by type of land by region, 1991-2000.

Type of Land	South-east	East-Central	North-east	North-Central	Central	South-Central	South-west	North-west
<b>Nonirrigated cropland</b>								
				<i>dollars per acre</i>				
Average 2000 rate	67.50	56.40	49.30	36.20	31.90	30.00	18.70	18.70
High Productivity	90.00	78.20	64.70	51.80	43.20	42.20	24.40	25.20
Low Productivity	48.10	40.30	35.10	23.70	22.60	20.10	14.40	14.10
Average 1999 rate	63.20	56.00	46.20	36.00	33.20	27.00	19.50	16.90
Average 1998 rate	65.20	55.00	45.30	34.70	30.90	25.90	19.00	17.90
Average 1997 rate	57.40	49.20	44.70	32.70	29.30	23.60	19.10	19.30
Average 1996 rate	54.70	45.30	41.50	28.70	26.30	21.60	17.00	16.00
Average 1995 rate	52.50	42.10	40.40	27.60	25.10	21.00	17.60	15.90
Average 1994 rate	51.90	45.10	40.30	29.80	25.00	22.10	17.60	14.90
Average 1993 rate	51.80	47.10	40.30	26.60	24.20	22.80	16.60	14.60
Average 1992 rate	48.00	45.70	39.70	25.50	22.70	21.40	17.70	15.10
Average 1991 rate	49.30	43.20	38.50	24.50	23.20	22.20	15.90	13.50
<b>Hayland</b>								
Average 2000 rate	57.80	40.10	28.80	20.30	21.10	19.40	15.10	14.30
High Productivity	72.90	53.10	38.30	26.40	28.40	25.10	18.70	19.20
Low Productivity	43.60	27.70	19.40	14.20	15.30	14.00	11.10	10.30
Average 1999 rate	48.50	40.10	22.80	20.40	20.60	19.60	14.80	15.40
Average 1998 rate	51.40	40.50	24.60	19.40	20.90	18.90	14.20	13.60
Average 1997 rate	46.10	36.80	28.20	18.70	19.90	16.70	14.90	14.60
Average 1996 rate	41.50	32.30	26.00	17.00	18.60	15.20	12.60	11.20
Average 1995 rate	43.80	28.20	25.30	16.70	16.10	14.90	11.10	11.10
Average 1994 rate	39.50	31.40	23.60	17.00	17.80	15.50	11.90	11.30
Average 1993 rate	35.60	32.10	22.00	14.70	16.40	16.00	11.30	9.50
Average 1992 rate	33.30	25.90	20.00	14.20	15.60	15.60	11.40	12.10
Average 1991 rate	38.50	30.90	22.30	14.20	15.70	14.80	12.10	10.40
<b>Pasture/Rangeland</b>								
				<i>dollars per acre</i>				
Average 2000 rate	31.00	26.80	20.60	17.40	18.50	15.40	8.00	6.80
High Productivity	39.80	36.70	26.70	23.70	23.10	19.50	10.30	9.10
Low Productivity	21.30	19.70	15.60	12.10	13.40	11.10	5.40	4.50
Average 1999 rate	26.80	24.80	19.70	16.60	17.80	14.70	7.70	6.20
Average 1998 rate	28.10	24.40	19.40	16.40	17.50	14.90	7.30	6.70
Average 1997 rate	25.70	23.60	19.50	15.20	16.80	13.00	6.60	6.80
Average 1996 rate	21.20	22.10	18.80	14.70	16.30	12.00	5.60	6.10
Average 1995 rate	21.90	21.60	18.60	14.90	14.80	11.20	6.10	6.30
Average 1994 rate	20.30	20.90	18.60	13.40	16.30	11.20	5.40	5.60
Average 1993 rate	20.30	20.10	17.00	12.70	15.20	10.10	5.60	5.10
Average 1992 rate	18.00	19.60	16.50	12.00	13.50	9.50	5.30	4.90
Average 1991 rate	19.20	18.60	16.30	12.50	13.80	9.90	5.30	4.40
				<i>dollars per Animal Unit Month</i>				
Average 2000 rate	18.70	17.90	19.80	15.50	17.40	19.20	16.20	16.70
High Productivity	21.50	21.40	23.70	21.00	21.90	23.80	19.50	20.90
Low Productivity	14.50	13.00	16.50	11.30	14.80	14.90	13.10	13.40
Average 1999 rate	18.50	15.80	18.80	15.40	16.30	18.50	16.50	16.40
Average 1998 rate	16.00	19.00	17.70	15.00	19.80	19.10	16.10	16.30
Average 1997 rate	17.60	18.00	16.20	13.40	17.00	17.30	15.90	16.10
Average 1996 rate	17.50	16.70	15.60	14.70	16.30	16.60	16.40	16.20
Average 1995 rate	17.30	16.70	13.60	15.00	16.10	16.80	16.40	15.50
Average 1994 rate	15.40	15.00	15.60	14.80	16.50	17.00	15.60	16.50
Average 1993 rate	15.60	13.90	14.25	13.25	14.90	16.40	15.40	14.50
Average 1992 rate	15.40	14.50	12.50	13.10	15.50	15.90	14.00	15.00
Average 1991 rate	13.70	15.90	15.50	12.80	14.80	15.20	14.30	13.00

Source: 2000 and earlier South Dakota farm real estate market surveys

Table 3a. Reported cash rental rates of South Dakota irrigated land by region, 1991-2000.

Type of Land	South-east	East-Central	North-east	North-Central	Central/South-Central	Western
<b>Irrigated land</b>	<i>dollars per acre</i>					
Average 2000 rate	104.80	84.00	75.00	61.80	55.60	46.60
High Productivity	123.50	106.00	94.60	75.50	66.60	62.40
Low Productivity	85.60	66.00	63.20	47.50	40.60	31.10
Average 1999 rate	100.00	63.80	69.50	63.80	45.20	40.00
Average 1998 rate	99.30	76.10	63.80	70.00	44.30	39.00
Average 1997 rate	100.20	72.20	63.00	59.30	46.40	42.00
Average 1996 rate	85.40	61.90	68.70	46.40	43.90	33.80
Average 1995 rate	89.50	68.00	76.70	65.40	45.80	44.00
Average 1994 rate	91.90	71.70	66.00	53.80	48.50	***
Average 1993 rate	87.20	68.60	60.00	57.80	53.40	44.00
Average 1992 rate	65.20	70.00	69.20	58.50	49.80	47.50
Average 1991 rate	82.70	69.00	59.00	***	***	37.50

\*\*\* Insufficient number of reports

Source: 2000 and earlier South Dakota farm real estate market surveys

same information is summarized by region and county cluster in Table 4.

Cash rental rates differ greatly by region and land use. For nonirrigated land uses, cash rental rates per acre are highest in the southeast and east-central regions and lowest in northwest and southwest South Dakota. In every region, cash rental rates are highest for cropland and lowest for rangeland and pasture (Table 3; Figs 10, 11).

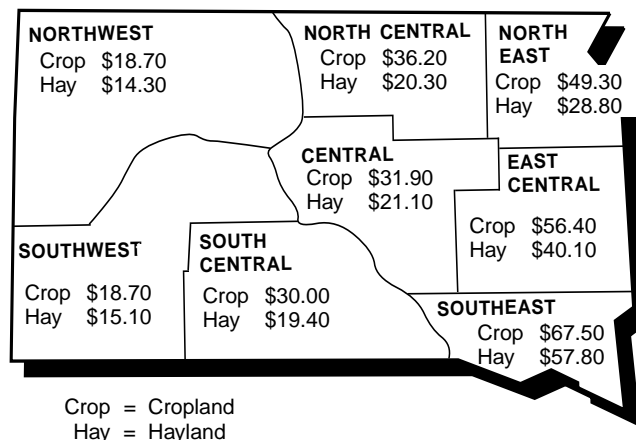
**Cash rental rates: cropland, hayland, and irrigated land**

Average cash rental rates in 2000 for nonirrigated cropland vary from \$18.70 per acre in the northwest to \$56 per acre in the east-central region and \$67.50 per acre in southeastern South Dakota (Fig 10; Table 3). Average cash rental rates are highest (\$87.40 per acre) in the Clay-Lincoln-Turner-Union county cluster and next highest (\$72.50 per acre) in the Minnehaha-Moody county cluster (Table 4).

Within each region and county cluster, cash rental rate averages for low-productivity cropland are con-

siderably lower than for high-productivity cropland. For example, reported average cash rent for nonirrigated cropland in the southeast region is \$48.10 per acre for low-productivity cropland and \$90.00 per acre for high-productivity cropland. In the northwest region, low-productivity cropland cash rents for \$14.10 per acre and high-productivity cropland for an average \$25.20 per acre (Table 4).

Figure 10. Average cash rental rate of South Dakota nonirrigated cropland and hayland, by region, 2000, dollars per acre.

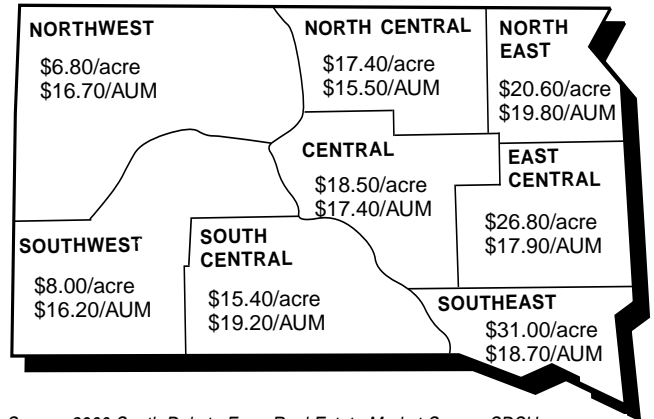


Source: 2000 South Dakota Farm Real Estate Market Survey, SDSU.

Hayland cash rental rates in 2000 vary from an average of nearly \$14.30 per acre in northwestern South Dakota to \$40.10 per acre in the east-central region and \$57.80 per acre in the southeast region. Within the east-central and southeast regions, average cash rental rates for hayland vary from \$79.70 per acre in the Clay-Lincoln-Turner-Union cluster and \$62.50 per acre in the Minnehaha-Moody county cluster to \$30 - \$50 per acre in the other southeastern and east-central county clusters and the Codington-Deuel-Hamlin cluster in the northeast. In all other county clusters, average hayland cash rental rates vary from \$14 to \$30 per acre.

Within each region and county cluster, there are considerable differences in average cash rental rates of low-productivity and high-productivity hayland. For example, the average value of high- (low-) productivity hayland in the Clay-Lincoln-Turner-Union cluster is \$103.40 (\$60.00). In most regions, the

Fig 11. Average cash rental rate of South Dakota rangeland and pastureland by region, 2000, dollars per acre and dollars per AUM.



Source: 2000 South Dakota Farm Real Estate Market Survey, SDSU.

Table 4. Reported cash rental rates of South Dakota agricultural land by region and county clusters, 2000 and 1999 rates.

	<i>Southeast</i>				<i>East-Central</i>			
	All	Clay Lincoln Turner Union	Bon Homme Hutchinson Yankton	Charles Mix Douglas	All	Minnehaha Moody	Brookings Lake McCook	Sanborn Davison Hanson Kingsbury Miner
<b>Nonirrigated Cropland</b>								
				<i>dollars per acre</i>				
Average 2000 rate	67.50	87.40	60.70	44.80	56.40	72.50	63.10	45.60
High Productivity	90.00	116.10	80.70	61.40	78.20	102.50	83.40	66.20
Low Productivity	48.10	62.80	43.20	31.20	40.30	54.20	44.60	32.20
Average 1999 rate	63.20	81.70	54.80	43.30	56.00	75.80	58.40	43.80
<b>Hayland</b>								
Average 2000 rate	57.80	79.70	50.40	31.30	40.10	62.50	40.20	33.20
High Productivity	72.90	103.40	63.10	40.00	53.10	90.00	52.30	45.30
Low Productivity	43.60	60.00	36.70	23.00	27.70	40.00	29.60	22.30
Average 1999 rate	48.50	66.10	45.60	30.80	40.10	58.90	38.40	30.30
<b>Pasture/rangeland</b>								
Average 2000 rate	31.00	41.80	27.50	22.40	26.80	29.40	28.70	24.30
High Productivity	39.80	54.30	34.80	29.00	36.70	39.00	38.10	34.70
Low Productivity	21.30	27.30	19.60	16.30	19.70	22.00	21.00	18.00
Average 1999 rate	26.80	33.40	25.20	22.20	24.80	29.40	23.60	23.50

Table 4 (continued). Reported cash rental rates of South Dakota agricultural land by region and county clusters, 192000 and 1999 rates.

	<i>Northeast</i>				<i>North-Central</i>			
	All	Codington Deuel Hamlin	Grant Roberts	Clark Day Marshall	All	Brown Spink	Edmund Faulk McPherson	Campbell Potter Walworth
<b>Nonirrigated cropland</b>	<i>dollars per acre</i>							
Average 2000 rate	49.30	53.10	53.00	39.20	36.20	44.10	28.80	27.90
High Productivity	64.70	70.80	67.10	53.30	51.80	63.80	42.70	37.60
Low Productivity	35.10	39.60	35.80	28.20	23.70	29.80	17.70	17.50
Average 1999 rate	46.20	49.80	50.90	40.70	36.00	44.80	25.80	29.30
<b>Hayland</b>								
Average 2000 rate	28.80	36.30	26.10	22.00	20.30	23.00	19.80	16.00
High Productivity	38.30	46.40	38.80	29.00	26.40	27.20	27.00	24.10
Low Productivity	19.40	26.90	17.10	14.00	14.20	17.50	12.20	9.90
Average 1999 rate	22.80	23.70	23.90	21.60	20.40	24.00	15.90	19.00
<b>Pasture/rangeland</b>								
Average 2000 rate	20.60	24.40	18.60	18.70	17.40	20.40	17.20	13.00
High Productivity	26.70	31.50	23.80	24.60	23.70	26.70	24.70	18.40
Low Productivity	15.60	19.20	13.30	14.30	12.10	14.80	12.00	8.10
Average 1999 rate	19.70	21.30	18.90	19.10	16.60	18.80	15.00	13.00
		<i>Central</i>				<i>South-Central</i>	<i>South-west</i>	<i>North-west</i>
	All	Aurora Beadle Jerauld	Buffalo Brule Hand Hyde	Hughes Sully	All	All	All	
<b>Nonirrigated cropland</b>	<i>dollars per acre</i>							
Average 2000 rate	31.90	34.50	29.10	33.10	30.00	18.70	18.70	
High Productivity	43.20	51.60	38.60	41.00	42.20	24.40	25.20	
Low Productivity	22.60	25.30	19.60	24.00	20.10	14.40	14.10	
Average 1999 rate	33.20	37.30	27.10	30.70	27.00	19.50	16.90	
<b>Hayland</b>								
Average 2000 rate	21.10	24.10	21.20	16.30	19.40	15.10	14.30	
High Productivity	28.40	33.50	28.20	20.40	25.10	18.70	19.20	
Low Productivity	15.30	17.80	14.70	12.40	14.00	11.10	10.30	
Average 1999 rate	20.60	22.00	20.10	17.40	19.60	14.80	15.40	
<b>Pasture/rangeland</b>								
Average 2000 rate	18.50	21.80	19.10	13.80	15.40	8.00	6.80	
High Productivity	23.10	27.50	24.00	16.90	19.50	10.30	9.10	
Low Productivity	13.40	16.40	13.00	10.40	11.10	5.40	4.50	
Average 1999 rate	17.80	20.40	17.20	12.80	14.70	7.70	6.20	

Source: 2000 South Dakota farm real estate market survey, SDSU.

Irrigated cropland rental rates per acre and rangeland rental rates per AUM are not reported in this table, due to insufficient number of reports in most county clusters.

lower cash rental rates are reported for native hayland, while the higher rates are quoted for alfalfa or other tame hayland.

Cash rental rates for center pivot irrigated land in the north-central and eastern regions of South Dakota vary from an average of \$61.80 per acre in the north-central to \$104.80 per acre in the southeast. Average cash rental rate for gravity-irrigated land in western South Dakota is \$46.60 per acre, compared to \$55.60 per acre for irrigated land in the central and south-central regions (Table 3a).

### **Cash rental rates: rangeland and pasture**

More than three eighths of South Dakota's 26.6 million acres of rangeland and pasture acres are leased to farmers and ranchers. Several million acres of rangeland in western and central South Dakota are controlled by federal, state, or tribal agencies and are leased to ranchers using cash leases or grazing permits. However, a majority of leased rangeland and almost all leased pasture are cash rentals from private landlords (Cole *et al.* 1992). Respondents were asked to report 2000 cash rental rates per acre and per AUM<sup>3</sup> on privately owned rangeland and pastureland in their localities.

Average cash rental rates per acre reflect regional differences in productivity and carrying capacity of pasture and rangeland tracts. Average cash rental rates vary from \$6.80 to \$8.00 per acre in western South Dakota to \$26.80 per acre in the east-central region and \$31.00 per acre in southeast South Dakota. The ranges of typical cash rental rates for low-productivity and high-productivity rangeland vary from \$4.50 to \$9.10 per acre in the northwest region and from \$21.30 to \$39.80 per acre in the southeast region (Fig 11; Table 3).

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<sup>3</sup> Animal Unit Month (AUM) is defined as the amount of forage required to maintain a mature cow with calf for 30 days. An AUM is somewhat of a "generic" value and should be about equal across regions. Therefore, private cash lease rates quoted on a per AUM basis should be roughly equivalent in different areas of the state unless there are major differences in forage availability, forage quality, and demand for leased rangeland.

Rangeland rates per AUM in 2000 are fairly uniform across South Dakota, averaging \$15.50 per AUM in the north-central region to \$19.80 per AUM in the northeast region.

### **Changes in cash rental rates**

From 1999 to 2000, cash rental rates per acre for cropland increased in the southeast region by \$4.30 and increased for pasture and rangeland by \$4.20. In all other regions, cropland cash rental rate changes varied from -\$1.30 to +\$3.10 per acre, while changes in rangeland cash rental rates varied from +\$0.30 to +\$2.00 per acre. Hayland cash rental rates declined slightly in north-central, south-central, and northwest South Dakota, increased by \$9.30 in the southeast and \$6.00 in the northeast, and remained steady or increased slightly in the rest of the state (Table 3). Highly varied patterns in cash rental rates occurred in county clusters in the southeast, east-central and north-central regions.

From 1991 to 2000, average reported cash rental rates for cropland, hayland, and rangeland increased in all regions. Average cropland cash rental rates increased by 18% in the southwest to 48% in the north-central region. The average dollar amount of cropland cash rental rates increased by \$2.80 per acre in the southwest region to \$13.20 per acre in the east-central region. Cash rental rates for hayland increased by \$3.00 per acre in the southwest and by \$19.30 per acre in the southeast.

From 1991 to 2000, average cash rental rates for rangeland increased by nearly \$3.00 per acre in western South Dakota to \$11.80 per acre in the southeast. During this same period, average cash rental rates per AUM also increased in all regions. Average increases in AUM rental rates across regions varied from \$1.90 to \$5.00 per AUM.

Respondents' perception of percentage changes in cash rental rates from 1999 to 2000 are generally consistent with the minimal changes in dollar values of rental rates reported. A majority of respondents reported no changes in cash rental rates. More re-

spondents (57% of total) reported increases in cropland cash rents than reported increases in hay, range, or pasture cash rental rates (47% of total). In comparison, nearly 70% of respondents in 1998 reported increased cropland rental rates and 53% reported increased hay and pasture rental rates.

### **RATES OF RETURN TO SOUTH DAKOTA AGRICULTURAL LAND**

Two approaches are used to obtain information on current rates of return to agricultural land.

First, gross rent-to-value ratios (gross cash rent as a percent of land value) were calculated from respondents' reported cash rental rates and estimated value of leased land. This is a measure of the **gross rate of return** obtained by landlords before deduction of property taxes and other landlord expenses. For most respondents, the estimated gross rate of return varies from 5.0% to 13.7% for cropland, from 3.9% to 15% for hayland, and from 3.1% to 15% for rangeland.

The 2000 statewide average gross rate of return (rent-to-value ratio) is 7.8% for nonirrigated cropland, 7.5% for hayland, and 6.3% for rangeland. Average rent-to-value ratio by region varies from 6.2% in the southwest to 7.8% in the northeast. The 2000 average rent-to-value ratios were generally lower than the average calculated over the 1991 - 2000 period.

Next, respondents were asked to estimate the current **net rate of return** (percent) that landowners in their locality could expect, given current land values. Appraisers refer to the current annual net rate of return as the market-derived capitalization rate, which is widely used in the income approach to farmland appraisal. The net rate of return is a return to agricultural land ownership **after** deducting property taxes, real estate maintenance, and other ownership expenses.<sup>4</sup>

Average 2000 net rates of return were highest (5.5%) for nonirrigated cropland and lowest (4.9%) for hayland, rangeland, and pasture. Most respondents reported net rates of return ranging from 2.0% to 8.0 % for cropland and hayland and 2.0% to 8.0% for pasture / rangeland.

The statewide average estimated net rate of return in 2000 on all-agricultural land is 5.1%, which is lower than the ten-year average net rate of return of 5.4%. Net rates of return in 2000 for cropland and hayland were lower than their ten-year average net rate of return but slightly higher for rangeland (Table 5).

Average net rates of return by region in 2000 varied from 4.5% to 6.5%, except for the unusually low net rate of return (3.6%) reported by respondents in the southwest region. During the 1991 - 2000 period, average rates of return by region varied from 5.2% to 6.1%, except for the considerably lower rate of return (4.4%) in the southwest region.

During the 1991 - 2000 period, the difference between gross and net rates of return to agricultural land ownership has averaged 2.0 percentage points and varies from 1.6 to 2.6 percentage points across different regions and land uses (Table 5). Most of the difference between gross returns and net returns is caused by property tax levies.

The current average net rate of return of 5.1% on all agricultural land in South Dakota is much lower than farmland mortgage interest rates. This implies that large down payment requirements are necessary before farmland purchases can be expected to cash flow from net returns. Major caution in real estate debt financing is necessary in today's economic environment for production agriculture.

### **RESPONDENTS' ASSESSMENT OF FACTORS INFLUENCING FARMLAND MARKETS IN SOUTH DAKOTA**

Respondents listed major positive and negative factors (Figs 12, 13) affecting the farm real estate mar-

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<sup>4</sup> The range of reported net rates of return and calculated rent-to-value ratios is shown for the middle 90% of responses for each land use. This represents the practical range of reported net and gross rates of return.



Table 5. Estimated rates of return to South Dakota agricultural land by type of land and by region, 1991-2000.

Type of land	Average					Average				
	2000	1999	1998	1997	1991-00	2000	1999	1998	1997	1991-00
<i>Statewide<sup>a</sup></i>	<i>GROSS rate of return (%)<sup>b</sup></i>					<i>NET rate of return (%)<sup>c</sup></i>				
All agricultural land	6.9	7.0	7.1	7.3	7.3	5.1	4.6	5.1	5.2	5.4
Nonirrigated cropland	7.8	7.7	7.9	8.1	8.0	5.5	5.4	6.0	6.3	6.0
Rangeland & pastureland	6.3	6.4	6.5	6.6	6.8	4.9	4.0	4.4	4.4	4.8
Hayland	7.5	7.6	7.7	8.1	7.9	4.9	5.1	5.3	5.5	5.5
<i>Region<sup>d</sup></i>	<i>GROSS rate of return (%)</i>					<i>NET rate of return (%)</i>				
Southeast	7.1	7.2	7.1	7.2	7.4	5.2	4.9	5.9	5.9	5.8
East-Central	7.3	7.5	7.9	7.4	7.6	5.5	5.3	5.5	5.4	5.5
Northeast	7.8	7.9	8.0	8.1	8.1	5.5	6.0	6.0	6.3	6.1
North-Central	7.4	7.4	7.5	8.1	7.9	6.5	5.6	6.0	6.3	6.1
Central	7.4	7.3	7.2	7.7	7.7	4.5	4.5	5.3	5.7	5.3
South-Central	6.4	6.8	6.5	6.6	6.9	4.9	4.3	5.4	5.3	5.2
Southwest	6.2	6.8	6.2	6.3	6.7	3.6	3.5	3.8	4.1	4.4
Northwest	6.7	6.4	7.1	7.3	7.1	5.6	4.6	4.3	4.4	5.2

<sup>a</sup>State level GROSS and NET rate of return estimates are calculated by weighting regional estimates by proportion of acres of each land use by region.

<sup>b</sup>GROSS rate of return (percent) is calculated by dividing the average gross cash rental rate by reported value of rental land.

<sup>c</sup>NET rate return is the reporter's estimate of the percentage rate of return to ownership given current land values. Appraisers often refer to this measure as the market capitalization rate.

<sup>d</sup>Regional level GROSS and NET rate of return estimates are calculated by weighting rate of return estimates for each land use by proportion of the region agricultural acres in each land use.

Source: 2000 South Dakota farm real estate survey, SDSU

ket in their localities. These factors help explain changes in the amount of farmland for sale, sale prices, and rental rates.

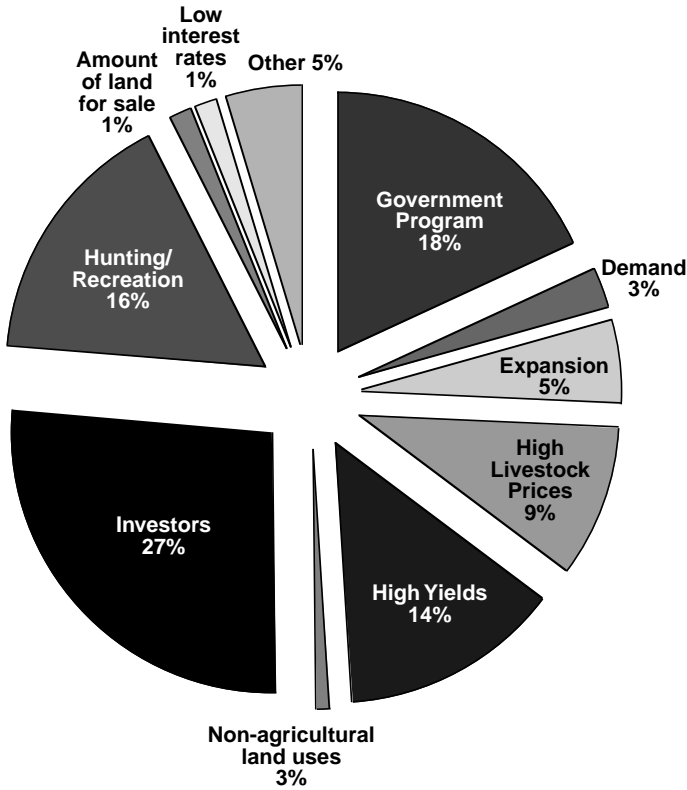
No specific item dominated respondents' list of positive factors. Investor interest, high crop yields, low interest rates, farm expansion, and hunting/ recreation were the top five positive factors listed, accounting for 63% of responses.

Again this year, investors were listed as a positive factor more frequently (27% of responses) than any other item. Investor interest was more than one third of responses from those located in the western and central regions. Many respondents commented

that investor interest in and ability to purchase farmland was an important factor maintaining farmland prices in their localities. However, some other respondents (7% of negative responses) viewed investors as a negative factor because they were able to outbid local farmers expanding their operation and to shut out many beginning farmers from purchasing farmland.

Governmental programs ranked second (18%) among positive factors. Identification by respondents of governmental programs as a positive factor influencing the agricultural real estate market is understandable, given the level of governmental assistance provided to farmers over the past years.

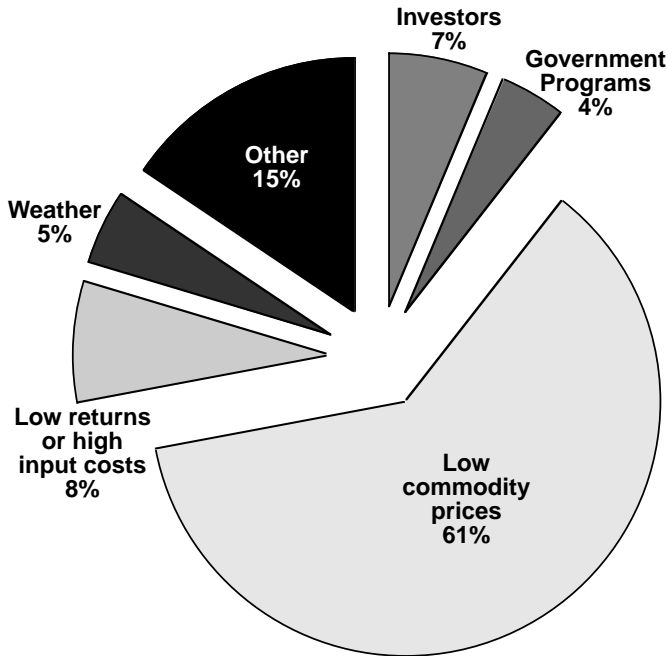
Figure 12. Positive factors in the farm real estate market.



Hunting/recreation (16%) and the level of crop yields (14%) continue to be listed as positive factors by many respondents. However, in past years farm expansion was usually the most common factor listed. Other major positive factors listed by respondents include livestock prices and expansion.

Low commodity prices was the principal negative factor affecting farmland markets, according to 61% of responses (Fig 13). Other economic and financial items (low returns and high input costs) were also listed as negative factors. This is the second survey in the 1990s where general economic and financial factors were the predominant negative responses. In past years, specific industry factors (low cattle prices) or weather-related factors (flooding, prevented planting, etc.) were often given as negative factors.

Figure 13. Negative factors in the farm real estate market.



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## APPENDIX I

### Survey methods and respondent characteristics

The primary purpose of the 2000 South Dakota Farm Real Estate Market Survey was to obtain regional and statewide information on: (1) year 2000 per-acre agricultural land values by land use and land productivity, and (2) 2000 cash rental rates by agricultural land use and land productivity.

Copies of this survey were mailed to potential respondents about February 4 with a follow-up mailing on March 2. Potential respondents were persons employed in one of the following occupations: (1) agricultural lenders (senior agricultural loan officers of commercial banks, Farm Service Agency, or Farm Credit Banks), (2) Cooperative Extension Service agricultural educators and farm management field staff, and (3) licensed appraisers. Appraisers were realtors, assessors, or professional farm managers.

The total response rate was 53% of 493 persons contacted. Usable survey response rate was 51%. The distribution of 251 respondents by location and reported occupation is shown in Appendix Table 1. Forty-nine percent of Extension educators, 62% of agricultural lenders, and 46% of licensed appraisers provided usable responses.

Over half (53%) of the respondents were from the three eastern regions of South Dakota, 31% were from the three regions of central South Dakota, and 16% were from western South Dakota. Most respondents were able to supply land value and cash rental rate information for nonirrigated cropland, rangeland, and hayland in their localities. However, only

41% of respondents provided data on irrigated land values and 32% provided data on irrigated land cash rental rates and rangeland AUM rental rates.

The overall pattern of response rates, respondent location and occupation, and proportion of respondents supplying various types of land market information has not changed very much in recent years.

Regional average land values by land use are simple average (mean) values of usable responses. All-agricultural statewide and regional land values and statewide average land values by land use are weighted by the relative number of acres in each agricultural land use. This approach has important implications in the derivation of statewide average land values and regional all-land values. For example, the two western regions of South Dakota with the lowest average land values have nearly 61% of the state's rangeland acres, 39% of all-agricultural land acres, and only 16% of cropland acres. Our approach increases the relative importance of western South Dakota land values in the final computations and results in lower statewide average land values.

The weighting factors used to develop statewide average land values are based on estimates of agricultural land use for privately owned nonirrigated farmland in South Dakota. Excluded is agricultural land (mostly rangeland) leased from tribal or federal agencies, which primarily occurs in the western and central regions of the state. Irrigated land is also excluded from regional and statewide all-land values. The land-use weighting factors were developed from county-level data in the 1997 South Dakota Census of Agriculture and other sources.

Appendix Table 1. Selected characteristics of respondents, 2000.

Number of respondents = 251

**Respondents:**

<i>Reporting location</i>	<i>N</i>	<i>%</i>	<i>Primary Occupation</i>	<i>N</i>	<i>%</i>
Southeast	56	22.3%	Banker/loan officer	118	47.0%
East-Central	43	17.1%	Assessor	17	6.8%
Northeast	34	13.5%	Appraiser/realtor	52	20.7%
North-Central	32	12.7%	Extension agents	35	13.9%
Central	28	11.2%	Other	29	11.6%
South-Central	18	7.2%			
Southwest	19	7.6%		251	100.0%
Northwest	21	8.4%			
	251	100.0%			

**Response rates:**

<i>Land values</i>	<i>N</i>	<i>%</i>	<i>Cash Rental Rates</i>	<i>N</i>	<i>%</i>
Nonirrigated cropland	242	96.4%	Nonirrigated cropland	237	94.4%
Irrigated cropland	104	41.4%	Irrigated cropland	79	31.5%
Hayland	204	81.3%	Hayland	198	78.9%
Rangeland (native)	227	90.4%	Rangeland (acre)	214	85.3%
Pastureland (tame)	190	75.7%	Rangeland (AUM)	71	28.3%

Source: 2000 South Dakota farm real estate market survey