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## South Dakota Farmland Market Trends: 1991-1999

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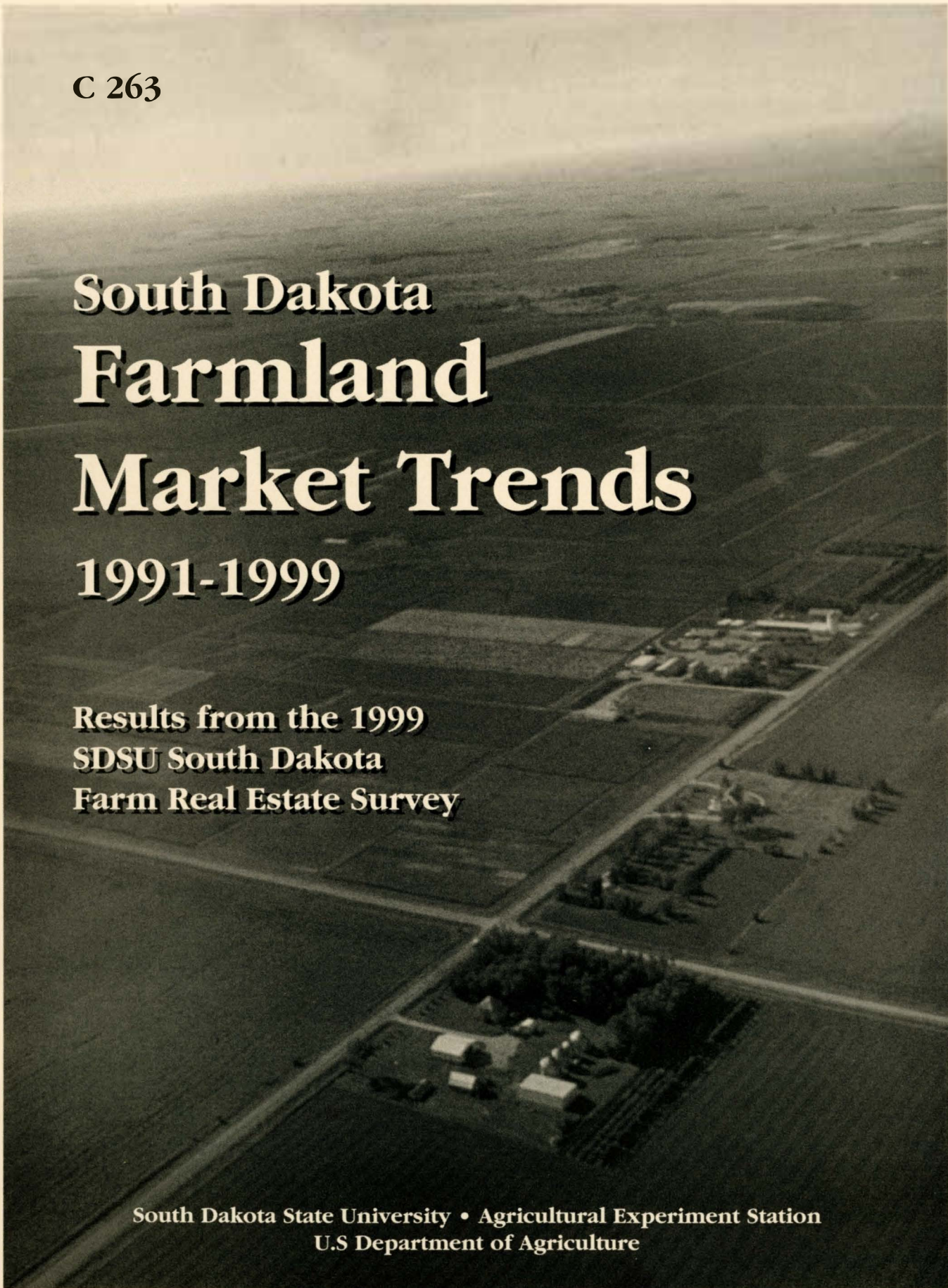
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An aerial photograph of a rural landscape, likely in South Dakota, showing a grid of agricultural fields, roads, and several farm buildings or small towns. The image is in black and white, with a slightly hazy or overcast sky. The text is overlaid on the left side of the image.

# **South Dakota Farmland Market Trends 1991-1999**

**Results from the 1999  
SDSU South Dakota  
Farm Real Estate Survey**

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

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June 1999

South Dakota  
**Farmland Market Trends**  
1991-1999

**Results from the 1999 SDSU South Dakota Farm Real Estate Survey**

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## 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 agents, and educators), and policy makers interested in agricultural land market trends. This report contains the results of the 1999 SDSU South Dakota Farm Real Estate Market Survey, the ninth annual SDSU survey developed to estimate agricultural land values and cash rental rates by land use in different regions of South Dakota.

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 Department, SDSU.

We wish to thank Economics secretarial staff for developing and maintaining mailing lists and helping to administer this survey.

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 all of the 256 respondents who participated in the 1999 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.

Larry Janssen  
Burton Pflueger  
Laura Longwood



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# South Dakota Farmland Market Trends 1991-1999

## Results from the 1999 SDSU South Dakota Farm Real Estate Survey

Dr. Larry Janssen, Dr. Burton Pflueger, and Laura Longwood

### SUMMARY

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The 1999 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 earlier years. Key findings are highlighted.

• **The most recent annual change (1998 to 1999) in agricultural land values of 1.9% is the lowest annual percentage increase in the 1990s.**

This represents an abrupt change from the 10% increase in land values recorded from 1997 to 1998 and the 4.8% annual rate of increase from 1991 to 1999. From 1998 to 1999, annual increases above 5% occurred for agricultural land values in the east-central, north-central, and southwest regions, while modest declines in land values occurred in the southeast and south-central regions.

• **Deteriorating economic conditions in South Dakota agriculture are viewed as the major reasons for declining rates of increase or actual declines in land market values.**

Average prices in 1998 for major South Dakota farm products (corn, wheat, soybeans, hay, and hogs) are the lowest recorded in the 1990s, following record high commodity prices in 1995 or 1996. Crop yields substantially above long-term trends in the past 3 years and modest improvements in calf prices have buffered some of the negative impacts.

• **Farmland values increased more than the rate of general price inflation from 1991 to 1999 in all regions and for all land uses in South Dakota.**

Statewide, agricultural land values increased 45% from 1991 to 1999, which is considerably above the general inflation rate of 20% during this 8-year period. Land value increases varied from +27% in the northeast region to +68% in the southwest region. Rangeland values increased at a greater percentage rate than cropland values during most of this period, with statewide increases of 59% for rangeland and 41% 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 1, 1999) in South Dakota is \$325 per acre, varying from \$735 per acre in the southeast to \$119 per acre in the northwest. Average nonirrigated cropland values vary from \$866 per acre in the southeast to \$435 per acre in the central region and \$202 per acre in the northwest. Average cropland values exceed \$1000 per acre in several counties of

eastern South Dakota. Average rangeland values vary from \$405 per acre in the southeast to \$102 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 1999 for nonirrigated cropland are above \$75 per acre in a few counties of eastern South Dakota and only \$17 to \$20 per acre in western South Dakota. Average rangeland rental rates are \$24.80 and \$26.80 per acre in the east-central and southeast regions compared to an average of \$6.20 to \$7.70 per acre in western South Dakota.

- **Cash rental rates per acre did not change very much from 1998 to 1999, but increased considerably from 1991 to 1999.**

From 1998 to 1999, cash rental rates declined in a few regions and remained steady or slightly increased in other regions. From 1991 to 1999, average cash rental rates for cropland increased from 20% in the northeast region to 47% in the north-central region. Rangeland rental rates increased nearly \$2 per acre (+40%) in western South Dakota and increased \$7.60 per acre (+40%) in the southeast.

- **Current average net rates of return on agricultural land in South Dakota are much lower than farmland mortgage interest rates of 7.5% to 10%.**

Respondents' estimates of net rates of return to farmland in their localities, given current land values, were 4.6% for all ag land, 5.4% for nonirrigated cropland, and 4.0% for rangeland. This implies 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.**

During the 1990s more respondents are citing investment potential and hunting / recreation demand for farmland as major reasons for purchase, while fewer respondents are citing farm production related reasons as the major motivation for purchasing farmland. In the current (1999) survey, investor interest in farmland purchases was cited more often than any other item as a positive factor in the current farmland market. Respondents in 1999 were much more likely than respondents in past years to cite financial difficulties (cash flow pressure, liquidation, and low profits) as major reasons for selling farmland.

# South Dakota Farmland Market Trends 1991-1999

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The 1999 SDSU Farm Real Estate Market Survey is the ninth annual survey of agricultural land values and cash rental rates by land use in different regions of South Dakota. Publication of the 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 1999 estimates are based on reports from 256 respondents to the SDSU 1999 South Dakota Farm Real Estate Market Survey. Respondents are agricultural lenders, rural appraisers, assessors, realtors, professional farm managers, and local Extension educators. All are familiar with farmland market trends in their localities.

Copies of the survey were mailed in February and March 1999, requesting information on cash rental rates and agricultural land values as of February 1, 1999. Response rates, respondent characteristics, and estimation procedures are in Appendix I.

Results are presented in a format similar to that of surveys published by Janssen and Pflueger from 1991 through 1998. Regional level information on land values and cash rents by land use (crop, hay, range, pasture, and irrigated crop / hay) are emphasized in each of these reports. Current year findings are compared to these earlier data.

This report is an overview of agricultural land values and cash rental rates across South Dakota. It 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 1999 County Level Land Rents and Values,<sup>2</sup> which is based on a telephone survey of South Dakota farm / ranch operators and is their sixth annual survey of agricultural land rents and values. A comparison of methods and results from the two farmland market surveys (SDASS and SDSU) are available in Janssen, 1999.

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

Most renters, buyers, and sellers of farmland are local residents. Land market participants are influenced by many social, financial, and economic factors in their localities. Many of the more influential factors are related to changing economic conditions in agriculture. Land markets tend to reflect these changing economic conditions as land market participants adjust over time to current and prospective conditions.

Most of the 1990s has been characterized by low inflation rates, declining to stable interest rates, and increasing export markets for grains, oilseeds, livestock, and meat products. The amount of farm debt has gradually increased, and interest expense has averaged between 9 and 10% of South Dakota farm production expenses. Net farm income trended upward from 1991 - 1996 but declined in 1997 and in 1998.

The strong employment base in many South Dakota trade centers provides off-farm employment for increasing numbers of South Dakota farm families, bringing greater economic stability to the farm operation. Many investors, including farmland owners, have received capital gains from sale of stocks,

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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 mailing address is South Dakota Agricultural Statistics Service, P.O. Box 5068, Sioux Falls SD.



land, or other investments and are using them to purchase agricultural land. Credit has been readily available in recent years to help finance land purchases and finance farm operating expenses.

Yet, average prices of the principal South Dakota crops (feed grains, wheat, and soybeans) in the 1998 marketing year were the lowest recorded in the 1990s, while hay prices were the lowest since 1991. For example, the 1998 marketing year corn price averaged \$1.60 per bushel, only 50% of the all-time high average price in 1995 and 70% of the average price over the previous 8 years (1990 - 1997). The 1998 wheat price averaged \$2.85 per bushel, 60% of the 1995 average price and 75% of the previous 8-year average price. The 1998 soybean average price of \$4.90 per bushel was 70% of the 1996 price and 84% of the previous 8-year average price. All-hay prices tumbled from an average \$75 - \$80 per ton in 1996 and 1997 to an average of \$53.50 in 1998.

Offsetting these price declines were the crop yields of the last 3 years, which have been considerably above long-term trends. Many producers in eastern and central regions of South Dakota also have added soybeans to their cropping program. Together, the increased yield and more profitable crop mix changes buffered some of the impact of crop price declines. Nonetheless, the value of principal crops grown in South Dakota declined 20% from 1996 to 1998.

Hog prices during 1998 were much lower than average hog prices from 1990 - 1997, declining by late 1998 to their lowest level in over 30 years. Calf and feeder cattle prices in 1998 were generally lower than average prices from 1990 - 1997, resulting in slim profit margins.

The 1996 Federal Ag Improvement and Reform Act (FAIR) changed federal commodity income support from deficiency payments, which had varied inversely with crop prices, to a fixed, declining schedule of production flexibility payments for 7 years. The 1996 farm bill breaks the link between farm program payment amounts and good / poor market prices.

Production flexibility payments received in 1996 and 1997 were considerably above deficiency payments that would have been received under previ-

ous farm program rules. However, production flexibility payments are lower in 1998 and 1999 than in the previous 2 years and declines in feed grains and wheat prices will lead to reduced impacts of commodity programs on cropland prices. Some federal emergency disaster assistance has been allocated to agriculture, which may stem some of the adverse price / income prospects.

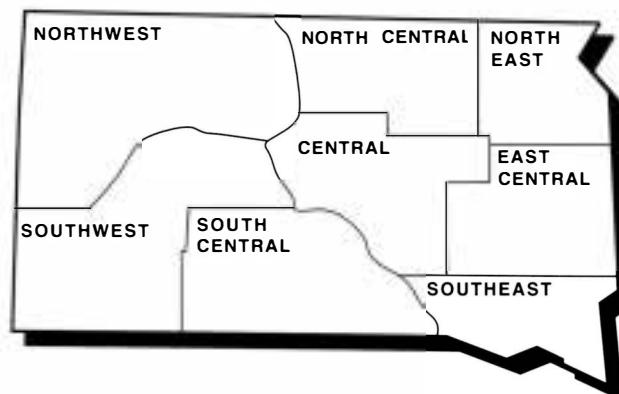
Land market trends usually lag changing conditions in the general and agricultural economy and are strongly influenced by land market participants' expectations of future trends and the availability of debt or equity financing for land-related purposes.

### 1999 SOUTH DAKOTA AGRICULTURAL LAND VALUES AND VALUE CHANGES

Respondents to the 1999 South Dakota Farm Real Estate Market Survey estimated the per-acre value of nonirrigated cropland, hayland, rangeland, tame pastureland, and irrigated land in their 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 Agricultural Statistics Districts. In western 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 re-

Fig 1. Agricultural regions of South Dakota.



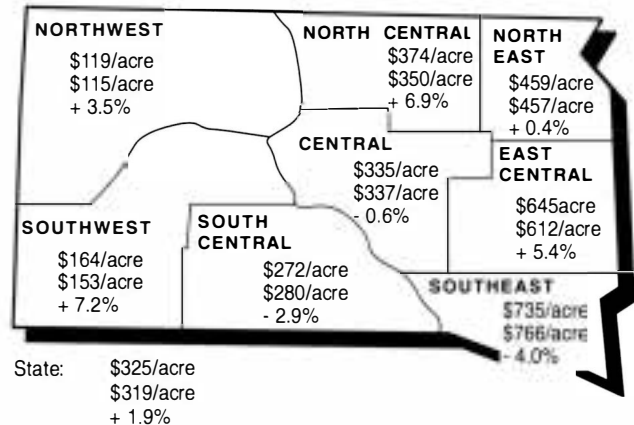
regions: western, central/south-central, north-central, northeast, east-central, and southeast.

The average value per acre and percent change in value were 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 I).

As of February 1, 1999, the South Dakota all-land average value was \$325 per acre, an estimated 1.9% increase in value from one year earlier (Fig 2, Table 1). This is the first time in the 1990s that South Dakota farmland values increased less than 2%, a major change from the 10% increase in land values recorded from 1997 to 1998 and the 4.8% annual rate of increase during the 1990s.

Regional differences in all-agricultural land values are primarily related to major differences in: (1)

Fig 2. Average value of South Dakota agricultural land, February 1, 1999 and 1998, 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, 1999  
 Middle: Average per acre value – February 1, 1998  
 Bottom: Annual percent change in per-acre land value

Source: 1999 South Dakota Farm Real Estate Market Survey, SDSU

Table 1. Average reported value and annual percentage change in value of South Dakota agricultural land by type of land by region, 1991-1999.

Type of Land	South-east	East-Central	North-east	North-Central	South-Central	South-west	North-west	STATE	
<b>All Agricultural Land (nonirrigated)</b>									
	<i>dollars per acre</i>								
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
Avg. annual % change 99/91	4.3%	4.1%	3.0%	6.4%	5.1%	5.5%	6.8%	4.5%	4.8%
Annual % change 99/98	-4.0%	5.4%	0.4%	6.9%	-0.6%	-2.9%	7.2%	3.5%	1.9%
<b>Nonirrigated Cropland</b>									
	<i>dollars per acre</i>								
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
Avg. annual % change 99/91	4.2%	4.0%	2.9%	6.5%	4.8%	5.0%	3.6%	3.5%	4.4%
Annual % change 99/98	-4.1%	3.8%	0.2%	8.0%	0.2%	0.8%	2.1%	1.0%	1.3%

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 nonirri-

gated cropland. Regional trends in all-agricultural land values, cropland values, and rangeland values from 1991 - 1999 are displayed in Figs 3, 5, and 7.

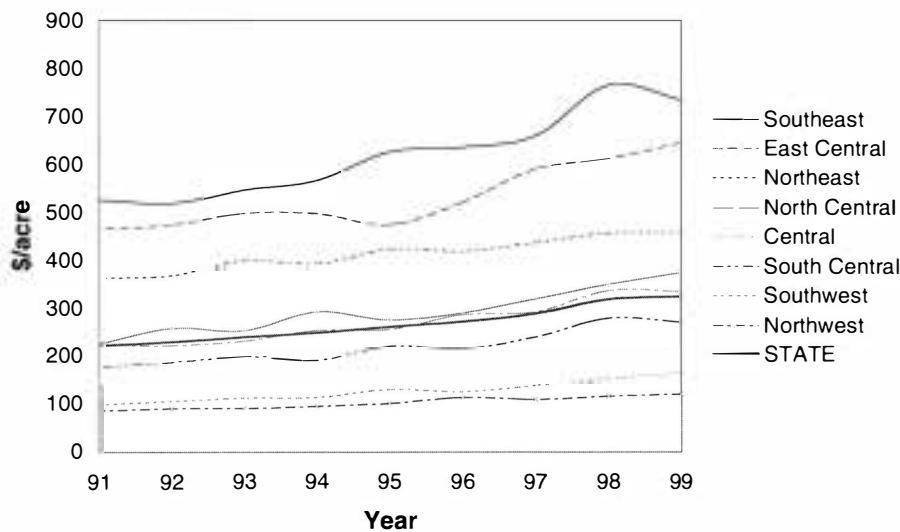
All-land average values are highest in eastern South Dakota, with per-acre values ranging from \$735 in the southeast to \$645 in the east-central and

Table 1 continued. Average reported value and annual percentage change in value of South Dakota agricultural land by type of land by region, 1991-1999.

Type of Land	South-east	East-Central	North-east	North-Central	South-Central	South-west	North-west	STATE	
<b>Rangeland (native)</b>	<i>dollars per acre</i>								
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
Avg. annual % change 99/91	5.3%	4.5%	3.8%	6.4%	5.8%	6.1%	8.6%	5.0%	5.9%
Annual % change 99/98	-0.7%	11.6%	0.7%	6.6%	-0.4%	-4.8%	10.0%	4.1%	3.6%
<b>Pasture (tame, improved)</b>	<i>dollars per acre</i>								
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
Avg. annual % change 99/91	4.6%	3.8%	2.8%	5.8%	4.8%	5.0%	7.2%	3.6%	4.9%
Annual % change 99/98	-1.7%	7.6%	5.7%	0.8%	-4.0%	-11.8%	0.0%	4.2%	0.7%
<b>Hayland</b>	<i>dollars per acre</i>								
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
Avg. annual % change 99/91	3.8%	5.8%	2.9%	6.4%	5.6%	5.1%	5.5%	3.7%	4.9%
Annual % change 99/98	-7.3%	11.5%	-3.9%	4.9%	-0.7%	1.0%	9.0%	9.4%	2.3%

Source: 1999 and earlier South Dakota Farm Real Estate Market Surveys

Fig 3. All ag-land value, statewide and regions, 1991-1999



\$459 in the northeast region. These three eastern regions contain the most productive land in South Dakota. Cropland and hayland, 70% to 74% of farmland acres, are the dominant uses in each region. Agricultural land values in central and western regions of South Dakota are much lower than in eastern South Dakota. The average value per acre ranges from \$272 in the south-central region to \$335 and \$374, respectively, 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 are 69% of agricultural acres in the south-central region.

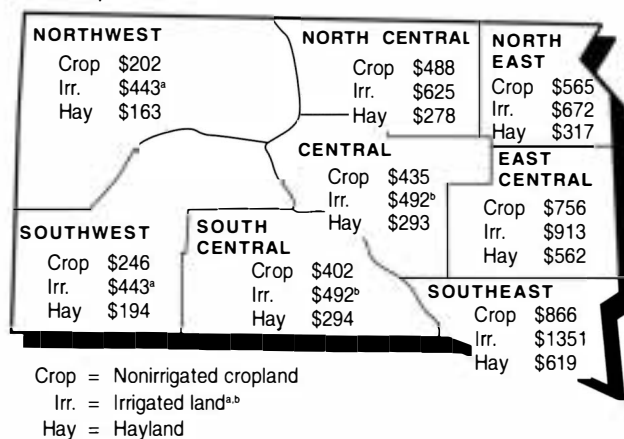
The lowest average values of agricultural land are found in the northwest (\$119 per acre) and southwest regions (\$164 per acre). More than 80% of privately owned agricultural acres in these western regions are in native rangeland and pasture.

Regional changes in agricultural land values this past year (early 1998 to early 1999) were primarily related to recent declines in the South Dakota farm economy, especially the crop sector, and to continued investor interest in rural land purchases in some localities. Compared to the previous year, the percentage change in land values was considerably lower in all except the east-central region. Land value declines from 1998 to 1999 are shown in the southeast and south-central regions, with minuscule changes shown in the northeast and central regions.

Eight-year (1991 - 1999) 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 cropland-intensive regions. During this period, the average annual rate of price inflation has been +2.3% for a total increase of 20%. The highest rates of land value increases during this period were in the north-central and southwest regions where average annual increases were 6.4% and 6.8%. The lowest rates of land value increases were in eastern

South Dakota where average annual increases varied from 3.0% in the northeast to 4.1% in the east-central region. Total percentage change in land values from 1991 - 1999 varied from +27% in the northeast region to +68% in the southwest region.

Fig 4. Average value of South Dakota cropland, irrigated land, and hayland, by region, February 1999, 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: 1999 South Dakota Farm Real Estate Market Survey, SDSU.

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

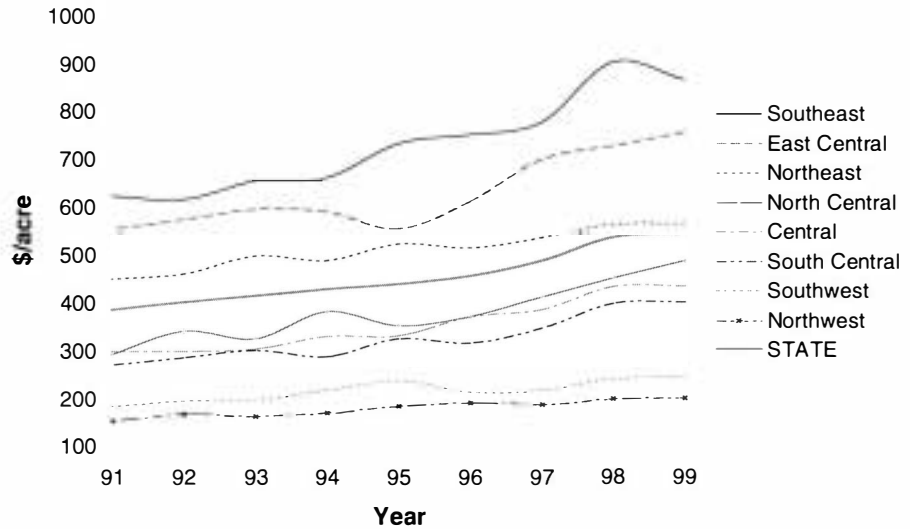
In each region, per-acre values are highest for irrigated land followed by nonirrigated cropland, hayland or tame pasture, and native rangeland. For each nonirrigated land use, per-acre land values are highest in the southeast and east-central regions and lowest in the northwest and southwest regions (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 1999) is \$543,

Fig 5. Cropland value, statewide and regions, 1991-1999



a 1.3% increase from 1998 and the lowest annual percentage change in the 1990s (Table 1). This is directly related to deteriorating economic conditions in the crop sector—the 2 to 3 years of substantial declines in crop prices even though coupled with excellent crop yields in many localities.

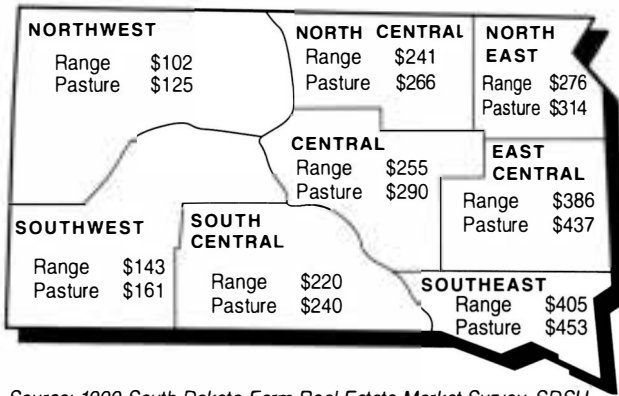
There is considerable regional variation in cropland value changes. For example, cropland values increased an estimated 8% in the north-central

Table 1a. Average reported value and annual percentage change in value of South Dakota irrigated land by region, 1991-1999.

Type of Land	South-east	East Central	North-east	North Central	Central	Central/South-western	STATE
<i>dollars per acre</i>							
Average value, 1999	1351	913	672	625	492	443	736
High Productivity	1583	1055	742	736	563	675	---
Low Productivity	1051	806	563	534	359	323	---
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
Avg. annual % change 99/91	4.6%	4.0%	2.2%	4.7%	0.8%	0.7%	3.0%
Annual % change 99/98	8.5%	-3.9%	-2.0%	-7.5%	-10.4%	-12.8%	-2.1%

Source: 1999 and earlier South Dakota Farm Real Estate Market Surveys

Fig 6. Average value of South Dakota rangeland and tame pasture, by region, February 1999, dollars per acre.



Source: 1999 South Dakota Farm Real Estate Market Survey, SDSU.

region and 3.8% in the east-central region, but declined (-4.1%) in the southeast region. Cropland values increased less than 2.5% in all other regions, a major decline from double digit rates of increases reported from 1997 to 1998. From 1991 to 1999, South Dakota cropland values increased above the rate of price inflation in all regions with a statewide average annual increase of 4.2% and a total 8-year increase of 39%.

The southeast region has the highest average cropland values (\$866 per acre), followed by cropland in the east-central and northeast regions (Fig 4 and 5, and Table 1). These three eastern regions contain nearly 45% of South Dakota's cropland, and the major crops are corn, soybeans, and wheat.

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 (\$488 per acre) are higher than in the central (\$435 per acre) or south-central (\$402 per acre) region. The lowest average cropland values, \$202 and \$246 per acre, are found in the northwest and southwest regions, respectively, where the 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 24% of those in the southeast (Table 1).

### Hayland values

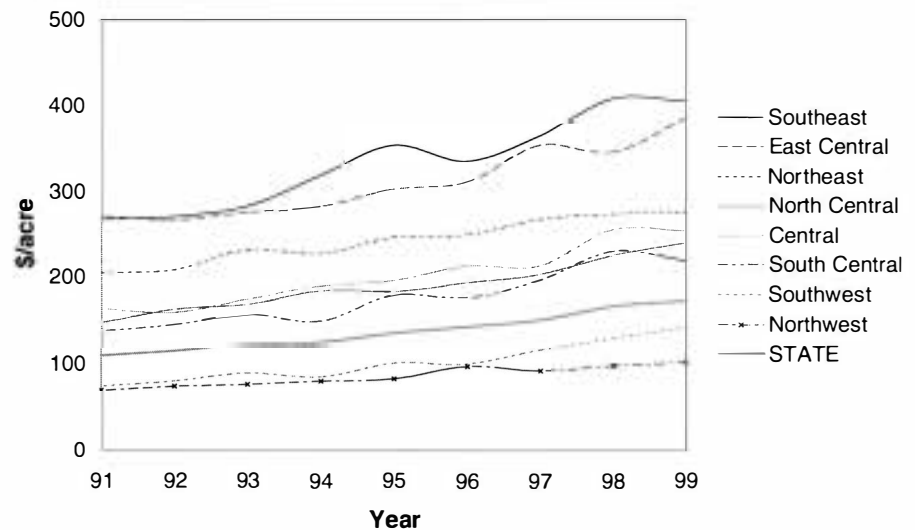
South Dakota hayland values averaged \$310 per acre as of February 1999, a 2.3% increase from one year earlier and a 47% increase from 1991. Strong annual increases in hayland values above 9% are reported in the southwest, northwest, and east-central regions, while declines are shown in the southeast and northeast regions. From 1991 to 1999, hayland value increases in all regions were above the rate of price inflation, with the strongest increases reported in the north-central, east-central, central, and southwest regions (Table 1).

Per-acre hayland values follow the same regional patterns as cropland values, highest in the southeast (\$619 per acre) and lowest in the northwest (\$163 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.

### Pasture and rangeland values

In February 1999, South Dakota native rangeland averaged \$173 per acre, while the average value of tame pasture was \$301 per acre (Table 1, Fig 6 and

Fig 7. Rangeland value, statewide and regions, 1991-1999



7). Native rangeland is 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 +3.8% (0.7%) during the past year (February 1998 to February 1999), compared to increases exceeding 10% in the previous year. Based on survey reports, rangeland and pastureland value increases were strongest in the east-central region, while slight to moderate declines in forage land values were recorded in the southeast, central and south-central regions (Table 1).

From 1991 to 1999, statewide rangeland values increased 59%, while tame pastureland values increased 46% statewide. The highest percentage increases (above 75%) in rangeland and tame pasture values occurred in the southwest region, while the smallest percentage increases were reported in the northeast region.

Rangeland average values are highest in the southeast region (\$405 per acre) and lowest in the northwest region (\$102 per acre). In central South Dakota, average rangeland values are clustered from \$220 to \$255 per acre, compared to \$276 per acre in the northeast (Table 1, Fig 6). Across regions, average rangeland values varied between 82% and 92% of the average value of tame pastureland.

Depending on specific region, the average per-acre value of nonirrigated cropland is 1.7 to 2.1 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.

### **Irrigated land values**

Irrigated land value reports are consolidated into six regions (Table 1A, Fig 4). Very few irrigated land reports were received from the central and south-central regions, making it necessary to combine the reports from these two regions. 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 irrigat-

ed 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 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 land tracts. Consequently, only 27% of all respondents were familiar with and able to provide information on irrigated land values.

Based on only 70 responses, irrigated land value decreases were reported in all except the southeast region. Statewide average irrigated land values are \$736 per acre, a 2.1% decrease from a year earlier and 27% above 1991 reported values. Regional average irrigated land values are above the statewide average in the southeast (\$1351 per acre) and east-central (\$913 per acre) regions. In central and western regions of South Dakota, irrigated land values average \$508 to \$549 per acre (Table 1A, Fig 4).

### **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 1999 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 are not reported by county clusters in regions west of the Missouri River because there are too few reports from any county groupings. This survey also is not 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, 1999 cropland values in the

Table 2. Average reported value per acre of agricultural land by South Dakota region, county clusters, type of land, and land productivity, February 1, 1999.

Agricultural Land Type and Productivity	Southeast				East Central			
	All	Clay Lincoln Turner Union	Bon Homme Hutchinson Yankton	Charles Mix Douglas	All	Minnehaha Moody	Brookings Lake McCook	Sanborn Davison Hanson Kingsbury Miner
<i>dollars per acre</i>								
<b>Nonirrigated Cropland</b>								
Average	866	1179	771	570	756	1142	776	539
High Productivity	1104	1494	1049	651	949	1427	985	664
Low Productivity	648	877	569	443	586	850	591	439
<b>Rangeland (native)</b>								
Average	405	502	340	340	386	511	369	348
High Productivity	480	618	389	389	442	600	416	395
Low Productivity	315	398	265	265	312	394	309	282
<b>Pastureland (tame, improved)</b>								
Average	453	558	450	377	438	575	394	380
High Productivity	542	663	560	432	508	680	450	439
Low Productivity	375	447	385	312	356	420	344	326
<b>Hayland</b>								
Average	619	945	566	400	562	873	505	410
High Productivity	719	1093	675	446	665	1105	563	464
Low Productivity	496	761	454	315	436	655	394	330
Agricultural Land Type and Productivity	Northeast				North-Central			
	All	Codington Deuel Hamlin	Grant Roberts	Clark Day Marshall	All	Brown Spink	Edmunds Faulk McPherson	Campbell Potter Walworth
<i>dollars per acre</i>								
<b>Nonirrigated Cropland</b>								
Average	565	605	653	480	488	643	325	388
High Productivity	747	767	880	648	659	898	408	504
Low Productivity	415	435	460	311	345	425	261	294
<b>Rangeland (native)</b>								
Average	276	320	251	260	241	280	223	193
High Productivity	316	368	302	287	284	335	268	215
Low Productivity	220	255	207	203	183	212	177	138
<b>Pastureland (tame,improved)</b>								
Average	314	381	270	290	266	328	234	212
High Productivity	361	428	346	326	303	367	276	238
Low Productivity	247	284	234	229	200	231	193	160
<b>Hayland</b>								
Average	317	339	344	288	278	345	230	239
High Productivity	380	411	420	338	332	399	273	292
Low Productivity	245	259	272	222	212	252	180	180



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, 1999.

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
<i>dollars per acre</i>							
<b>Nonirrigated Cropland</b>							
Average	435	452	395	448	402	246	203
High Productivity	526	568	468	518	518	310	257
Low Productivity	327	348	261	361	312	181	158
<b>Rangeland (native)</b>							
Average	255	307	225	203	220	143	102
High Productivity	290	345	259	233	270	173	132
Low Productivity	192	239	161	148	170	104	74
<b>Pastureland (tame,improved)</b>							
Average	290	318	242	278	240	161	125
High Productivity	343	362	325	308	285	191	155
Low Productivity	232	248	200	233	197	124	95
<b>Hayland</b>							
Average	293	318	266	280	294	194	163
High Productivity	334	368	304	304	354	225	201
Low Productivity	223	265	171	210	216	139	124

Source: 1999 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

southeast region vary from an average of \$648 per acre for low-productivity cropland to \$1104 per acre for high-productivity cropland. At the other extreme, in the northwest region the average value of low (high) productivity cropland is \$158 (\$257) per acre. Across regions, average values of high-productivity cropland were 60% to 90% above average values of low-productivity cropland.

Rangeland values in the southeast vary from \$315 per acre for lower-productivity rangeland to \$480 per acre for higher productivity rangeland. Again at the other extreme, in the northwest region the average value of low (high) productivity rangeland is \$74 (\$132) per acre. The average value of high-productivity rangeland varies from 42% to 54% above the average value of low-productivity range-

land across the eastern and central regions of South Dakota and 58% to 66% in the south-central and western regions where rangeland predominates (Table 2).

Average values of nonirrigated cropland exceed \$1100 per acre in two county clusters in eastern South Dakota: Minnehaha-Moody (\$1142 per acre) and Clay-Lincoln-Turner-Union (\$1179 per acre). This is the third consecutive year during the 1990s that the average value of nonirrigated cropland exceeds \$1000 in any county cluster. Also, 1999 was the first year that average rangeland values exceeded \$500 per acre in these two county clusters. 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 region. For example, the per-acre value of average quality nonirrigated cropland is about \$770 in the Brookings-Lake-McCook and Bon Homme-Hutchinson-Yankton county clusters and only \$539 to \$570 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 were shown in all east-central county clusters and in the Charles Mix-Douglas county cluster, while modest declines or no changes in land values were reported in the other clusters of the southeast region.

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 more than values reported in the Clark-Day-Marshall county cluster. However, rangeland and tame pastureland values are considerably higher in the Codington-Deuel-Hamlin county cluster than in the other two 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 average \$643 per acre in the Brown-Spink county cluster compared to only \$325 per acre in the Edmunds-Faulk-McPherson county cluster. During the past year, farmland values increased for all land uses in the Brown-Spink and Campbell-Potter-Walworth county clusters and generally held steady in the Edmunds-Faulk-McPherson county cluster. During the past 9 years, agricultural land values in the Edmunds-Faulk-McPherson county cluster have been 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 substantially higher in the

Aurora-Beadle-Jerauld county cluster. Land values generally declined in the Brule-Hand-Hyde county cluster and were mixed in the other county clusters, resulting in minor changes 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. This is the first year that average rangeland values have exceeded \$100 per acre in all regions and cropland values have exceeded \$400 per acre in the south-central region. During the past year, land value increases were relatively strong in the southwest region, while rangeland and pasture values decreased in the south-central region.

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

Respondents were asked to provide major reasons why buyers were purchasing and sellers were selling farmland in their locality. During the 9 years the SDSU Farm Real Estate Market Survey has been conducted, the most commonly cited reasons for purchase and sale have not changed. However, the relative importance of some key factors has changed.

Farm expansion continues as the most common reason (42% of responses) given for purchasing farmland. Investment potential of farmland, hunting / recreation demand, location, and availability of the land tract 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 36% of responses in 1999.

Retirement from farming remains the most common reason (42% of responses) given for selling farmland (Fig 9). Financial / cash flow pressures, settling estates, and concern about future market conditions were the next three most common reasons. Additional reason for selling farmland include

Fig 8. Reasons for buying farmland

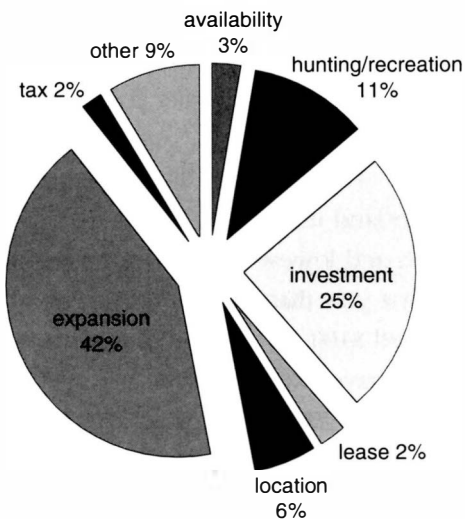
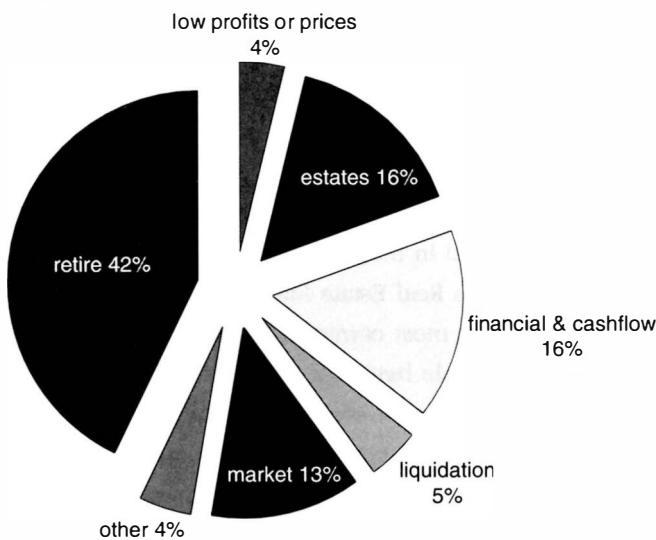


Fig 9. Reasons for selling farmland



liquidation pressures and low profitability. During this past year, the proportion of respondents' financial difficulty reasons (cash flow / financial pressure, liquidation pressure, low profits) for selling has increased considerably.

### 1999 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 1992 Census of Agriculture; Peterson and Janssen, 1988).

Respondents were asked about average cash rental rates per acre for nonirrigated cropland, irrigated land, and hayland in their locality. 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 locality. Cash rental rates by land use by region are summarized in Tables 3 and 3A and Figs 10 and 11. The 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 and 11).

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

Average cash rental rates in 1998 for nonirrigated cropland varied from \$16.90 (\$19.50) per acre in the northwest (southwest) region to \$56 per acre in the east-central region and \$63.20 per acre in southeastern South Dakota (Fig 10, Table 3). Average cash rental rates are highest (\$81.70 per acre) in the Clay-Lincoln-Turner-Union county cluster and next highest (\$75.80 per acre) in the Minnehaha-Moody county cluster (Table 4).

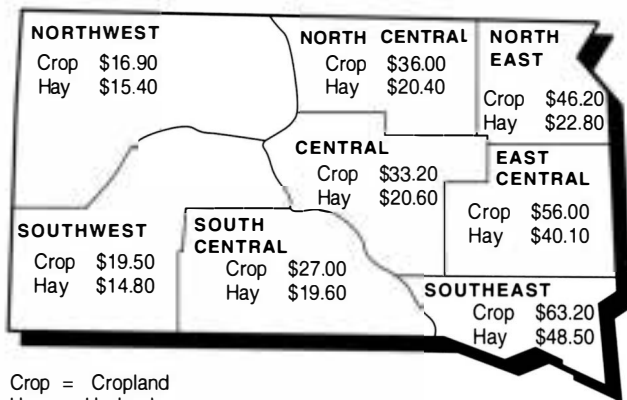
Within each region and county cluster, cash rental rate averages for low-productivity cropland are considerably lower than cash rental rates for high-productivity cropland. For example, reported average cash rent for nonirrigated cropland in the southeast region is \$45.80 per acre for lower-productivity cropland and \$87.60 per acre for higher-productivity cropland. In the northwest region, lower-productivity cropland cash rents for \$12 per acre and higher-productivity cropland rents at an average \$23.30 per acre (Table 4).

Table 3. Reported cash rental rates of South Dakota agricultural land by type of land by region, 1991-1999.

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 1999 rate	63.20	56.00	46.20	36.00	33.20	27.00	19.50	16.90
High Productivity	87.60	74.80	60.10	50.50	44.50	36.30	26.00	23.30
Low Productivity	45.80	41.50	33.20	24.70	23.40	18.60	14.80	12.00
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 1999 rate	48.50	40.10	22.80	20.40	20.60	19.60	14.80	15.40
High Productivity	61.30	51.90	30.50	26.10	26.70	24.00	19.90	20.50
Low Productivity	36.10	28.30	16.00	15.20	14.90	14.40	10.90	10.30
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 1999 rate	26.80	24.80	19.70	16.60	17.80	14.70	7.70	6.20
High Productivity	34.20	32.40	24.50	21.00	23.60	18.70	10.30	8.80
Low Productivity	19.70	17.80	14.20	12.40	12.80	10.40	5.10	3.90
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 Mmonth</i>							
Average 1999 rate	18.50	15.80	18.80	15.40	16.30	18.50	16.50	16.40
High Productivity	21.10	18.90	24.80	18.40	19.30	23.40	19.70	20.10
Low Productivity	14.40	12.20	12.80	12.10	14.30	14.00	13.60	13.10
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: South Dakota Farm real Estate Market Surveys, SDSU, 1999 and earlier year reports.

Fig 10. Average cash rental rate of South Dakota nonirrigated cropland and hayland, by region, 1999, dollars per acre.



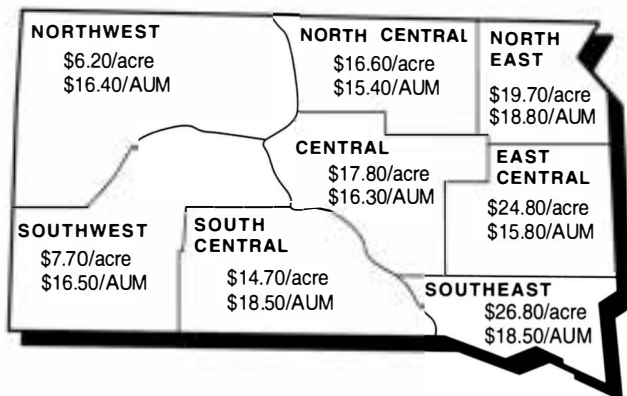
Crop = Cropland  
Hay = Hayland

Source: 1999 South Dakota Farm Real Estate Market Survey, SDSU.

Hayland cash rental rates in 1999 vary from an average of nearly \$15 per acre in western South Dakota to \$40.10 per acre in the east-central region and \$48.50 per acre in the southeast region. Within the east-central and southeast regions, average cash rental rates for hayland vary from \$66.10 per acre in the Clay-Lincoln-Turner-Union cluster and \$58.90 per acre in the Minnehaha-Moody county cluster to \$30 - \$31 per acre in the western county clusters. In all other county clusters, average hayland cash rental rates vary from \$15 to \$24 per acre.

Within each region and county cluster, there are considerable differences in average cash rental rates

Fig 11. Average cash rental rate of South Dakota rangeland and pastureland by region, 19989, dollars per acre and dollars per AUM.



Source: 1999 South Dakota Farm Real Estate Market Survey, SDSU.

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 \$83.60 (\$51.80). In most regions, the 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 \$63.80 per acre in the east-central and north-central regions to \$100 per acre in the southeast region. Average cash rental rates for gravity-irrigated land in western South Dakota is \$40.00 per acre, compared to \$45.20 per acre for irrigated land in the central and south central regions (Table 3A).

### Cash rental rates: rangeland and pastureland

More than three eighths of South Dakota's 26.6 million acres of rangeland and pastureland 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 1999 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 \$6.20 to \$7.70 per acre in western South Dakota to \$24.80 per acre in the east-central region and \$26.80 per acre in southeast South Dakota. The ranges of typical cash rental rates for low-productivity and high-productivity rangeland vary

<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 a somewhat "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.

Table 3a. Reported cash rental rates of South Dakota irrigated land by region, 1991-1999

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 1999 rate	100.00	63.80	69.50	63.80	45.20	40.00
High Productivity	123.50	73.90	87.00	80.00	53.70	58.10
Low Productivity	80.75	52.80	58.00	48.70	39.00	31.90
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: South Dakota Farm Real Estate Market Surveys, SDSU, 1999 and earlier year reports.

Table 4. Reported cash rental rates of South Dakota agricultural land by region and county clusters, 1999 and 1998 rates.

	Southeast				East Central			Sanborn Davison Hanson Kingsbury Miner
	All	Clay Lincoln Turner Union	Bon Homme Hutchinson Yankton	Charles Mix Douglas	All	Minnehaha Moody	Brookings Lake McCook	
<b>Nonirrigated Cropland</b>	<i>dollars per acre</i>							
Average 1999 rate	63.20	81.70	54.80	43.30	56.00	75.80	58.40	43.80
High Productivity	87.60	109.60	77.80	63.80	74.80	96.70	77.10	61.60
Low Productivity	45.80	61.30	39.80	27.30	41.50	57.90	44.00	30.90
Average 1998 rate	65.20	81.90	56.70	39.40	55.00	77.00	51.80	38.90
<b>Hayland</b>								
Average 1999 rate	48.50	66.10	45.60	30.80	40.10	58.90	38.40	30.30
High Productivity	61.30	83.60	58.80	37.20	51.90	75.00	49.60	40.00
Low Productivity	36.10	51.80	34.60	18.90	28.30	40.00	28.50	21.10
Average 1998 rate	51.40	70.10	47.00	27.10	40.50	64.70	35.30	28.60
<b>Pasture/Rangeland</b>								
Average 1999 rate	26.80	33.40	25.20	22.20	24.80	29.40	23.60	23.50
High Productivity	34.20	41.10	32.50	29.20	32.40	36.70	30.00	32.10
Low Productivity	19.70	26.60	17.90	15.11	17.80	20.20	17.20	17.20
Average 1998 rate	28.10	33.60	25.10	22.40	24.40	27.60	23.90	22.40

Table 4 continued. Reported cash rental rates of South Dakota agricultural land by region and county clusters, 1999 and 1998 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 1999 rate	46.20	49.80	50.90	40.70	36.00	44.80	25.80	29.30
High Productivity	60.10	64.40	65.30	53.60	50.50	62.80	37.20	39.30
Low Productivity	33.20	37.10	35.00	29.30	24.70	30.60	18.20	19.80
Average 1998 rate	45.30	50.90	50.20	36.70	34.70	44.20	25.30	28.90
<b>Hayland</b>								
Average 1999 rate	22.80	23.70	23.90	21.60	20.40	24.00	15.90	19.00
High Productivity	30.50	29.50	37.10	28.00	26.10	29.90	20.80	26.00
Low Productivity	16.00	17.90	15.40	15.00	15.20	18.20	11.80	12.80
Average 1998 rate	24.60	27.40	26.70	21.20	19.40	22.60	18.10	16.00
<b>Pasture/Rangeland</b>								
Average 1999 rate	19.70	21.30	18.90	19.10	16.60	18.80	15.00	13.00
High Productivity	24.50	25.80	24.20	23.70	21.00	23.40	19.30	17.60
Low Productivity	14.20	15.70	12.80	14.00	12.40	14.40	11.20	9.00
Average 1998 rate	19.40	20.00	19.00	20.00	16.40	18.50	15.10	14.10
		<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 1999 rate	33.20	37.30	27.10	30.70	27.00	19.50	16.90	
High Productivity	44.50	51.30	36.30	38.90	36.30	26.00	23.30	
Low Productivity	23.40	26.20	18.30	22.60	18.60	14.80	12.00	
Average 1998 rate	30.90	32.80	29.40	30.80	25.90	19.00	17.90	
<b>Hayland</b>								
Average 1999 rate	20.60	22.00	20.40	17.40	19.60	14.80	15.40	
High Productivity	26.70	28.80	25.80	22.60	24.00	19.90	20.50	
Low Productivity	14.90	15.90	14.70	12.80	14.40	10.90	10.30	
Average 1998 rate	20.90	23.70	22.00	15.20	18.90	14.20	13.60	
<b>Pasture/Rangeland</b>								
Average 1999 rate	17.80	20.40	17.20	12.80	14.70	7.70	6.20	
High Productivity	23.60	26.40	24.80	16.50	18.70	5.10	8.80	
Low Productivity	12.80	14.80	12.20	9.00	10.40	10.30	3.90	
Average 1998 rate	17.50	20.90	17.80	13.20	14.90	7.30	6.70	

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.

Source: South Dakota Farm Real Estate Market Surveys, SDSU, 1998 and 1999

from \$3.90 to \$8.80 per acre in the northwest region and from \$19.70 to \$34.20 per acre in the southeast region (Fig 11, Table 3).

Rangeland rates per AUM in 1999 are fairly uniform across South Dakota, averaging \$15.40 per AUM in the north-central region to \$18.80 per AUM in the northeast region.

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

From 1998 to 1999, cash rental rates per acre declined modestly in the southeast region for cropland (-\$2.00) and pasture land (-\$1.30). In all other regions, cropland cash rental rate changes varied from -\$1.00 to +\$2.30 per acre while changes in rangeland cash rental rates only varied from -\$0.50 to +\$0.40 per acre. Hayland cash rental rates declined slightly in eastern South Dakota and remained steady or increased slightly in the rest of the state (Table 3).

Highly varied patterns by county clusters in the southeast, east-central, and central regions were evident. Steady to declining cash rental rates for all ag land uses are shown in several county clusters, while other county clusters in the same region(s) showed strong increases in cash rental rates.

From 1991 to 1999, average reported cash rental rates for cropland, hayland, and rangeland increased in all regions. During this period, average cash rental rates for cropland increased by 20% in the northeast region to 47% in the north-central region. The average dollar amount of cropland cash rental rates increased from \$3.40 to \$4.80 per acre in the south-central and western regions to \$12.80 per acre in the east-central region. Cash rental rates for hayland increased from less than \$3 per acre in the northeast and southwest regions to \$10 per acre in the southeast region.

From 1991 to 1999, average cash rental rates per acre of rangeland increased from nearly \$2 per acre in western South Dakota to \$7.60 per acre in the southeast region.

During this same period, average cash rental rates per AUM also increased in all except the east-central region. In most regions, average increases in AUM rental rates varied from \$1.50 to \$3.50 per AUM.

Respondents' perception of percentage changes in cash rental rates from 1998 to 1999 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 respondents (42% of total) reported increases in cropland cash rents than reported increases in hay, range, or pasture cash rental rates (27% 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 5.9% to 10% for cropland, from 5.4% to 10% for hayland, and from 4.6% to 9% for rangeland.<sup>4</sup>

The statewide average gross rate of return (rent-to-value ratio) is 7.7% for nonirrigated cropland, 7.6% for hayland, and 6.4% for rangeland. Average rent-to-value ratio by region varies from 6.4% in the northwest to 7.9% in the northeast. The 1999 average rent-to-value ratios were generally lower than the average calculated over the 1991 - 1999 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

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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.



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.

Average 1999 net rates of return were highest (5.4%) for nonirrigated cropland and lowest (4%) for rangeland. Most respondents reported net rates of return ranging from 1.5% to 8.5% for cropland and hayland, and 1.5% to 7.6% for pasture / rangeland.

The statewide average estimated net rate of return in 1999 on all agricultural land is 4.6%, which is lower than the 9-year average net rate of return of 5.4% and is the lowest annual rate reported in this 9-year period. Net rates of return in 1999 for cropland, hayland, and rangeland were lower than their 9-year average net rate of return (Table 5).

Average net rates of return by region in 1999 varied from 4.3% to 6%, except for the unusually low net rate of return (3.5%) reported by respondents in the southwest region. During the 1991 - 1999 period, average rates of return by region varied from 5.1% to 6.2%, except for the considerably lower rate of return (+4.4%) reported in the south-central region.

During the 1991 - 1999 period, the difference between gross and net rates of return to agricultural land ownership has averaged 2.0 percentage points and varies from 1.5 percentage points to 2.4 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.

Table 5. Estimated rates of return to South Dakota agricultural land by type of land and by region, 1991-1999.

	Average				Average			
	1999	1998	1997	1991-99	1999	1998	1997	1991-99
<i>Type of land-statewide</i>	<i>GROSS rate of return (%)<sup>a</sup></i>				<i>NET rate of return (%)<sup>b</sup></i>			
All agricultural land	7.0	7.1	7.3	7.4	4.6	5.1	5.2	5.4
Nonirrigated cropland	7.7	7.9	8.1	8.0	5.4	6.0	6.3	6.1
Rangeland & pastureland	6.4	6.5	6.6	6.8	4.0	4.4	4.4	4.8
Hayland	7.6	7.7	8.1	8.0	5.1	5.3	5.5	5.6
<i>Region<sup>d</sup></i>	<i>GROSS rate of return (%)</i>				<i>NET rate of return (%)</i>			
Southeast	7.2	7.1	7.2	7.4	4.9	5.9	5.9	5.9
East-Central	7.5	7.9	7.4	7.6	5.3	5.5	5.4	5.5
Northeast	7.9	8.0	8.1	8.1	6.0	6.0	6.3	6.2
North-Central	7.4	7.5	8.1	7.9	5.6	6.0	6.3	6.1
Central	7.3	7.2	7.7	7.7	4.5	5.3	5.7	5.3
South-Central	6.8	6.5	6.6	6.9	4.3	5.4	5.3	5.2
Southwest	6.8	6.2	6.3	6.7	3.5	3.8	4.1	4.4
Northwest	6.4	7.1	7.3	7.1	4.6	4.3	4.4	5.1

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

<sup>b</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>c</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>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: 1999 South Dakota Farm Real Estate Survey, SDSU

The current average net rate of return of 4.6% on all agricultural land in South Dakota is much lower than farmland mortgage interest rates of 7.5% to 10%. 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 affecting the farm real estate market in their localities. These factors help explain changes in the amount of farmland for sale, sale prices, and rental rates.

No specific item dominated the positive factors. Investor interest, high crop yields, low interest rates, farm expansion, and hunting / recreation were the top five positive factors listed, accounting for 74% of responses (Fig 12).

For the first time, investors were listed as a positive factor more frequently (24% 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 locality.

Other respondents (5% of negative responses) viewed investors as a negative factor because they were able to outbid local farmers expanding their operations, thus shutting out many beginning farmers from purchasing farmland. In this case, their response was based on a negative assessment of changing land ownership patterns on family farming and is not an assessment of declining land values.

High crop yields was the second ranked positive factor and was primarily listed by respondents in north-central and eastern regions of South Dakota where crop yields in recent years in many counties have been considerably above long-term averages. Many respondents wrote that higher crop yields had partly offset declining prices and helped stabilize land market conditions.

Relatively low interest rates and farm expansion continue to be listed as positive factors by many respondents. However, in past years farm expansion was usually the most common factor listed. Hunting / recreation uses were often listed as positive factors by respondents located in east-central, south-central and central regions of the state.

Low commodity prices was the principal negative factor affecting farmland markets, according to 68% of response (Fig 13). Other economic and financial items (low returns, higher input costs, no funds available) were also listed as negative factors.

This is the first 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 listed as negative factors.

Fig 12. Positive factors in the farm real estate market

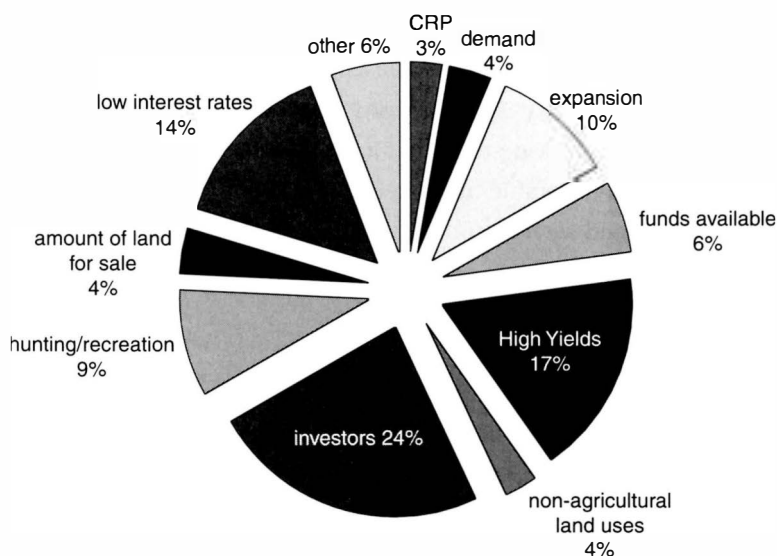
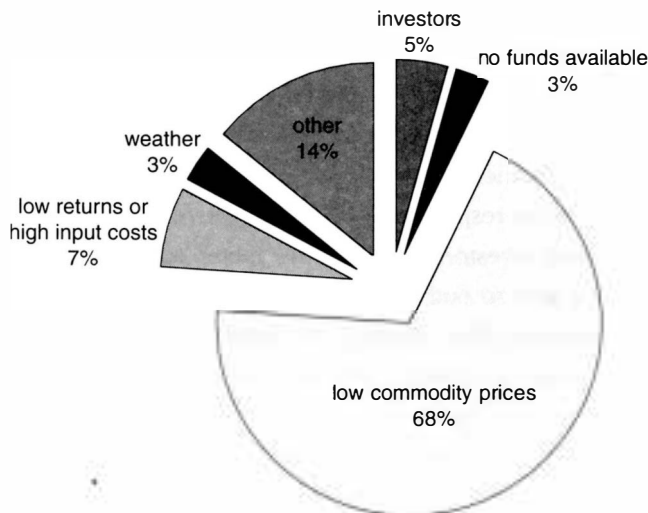


Fig 13. Negative factors in the farm real estate mar-



### AGRICULTURAL LAND MARKET EXPECTATIONS, PAST AND PROSPECTIVE

In each survey, respondents were asked to estimate the percentage change in land values during the previous year and to forecast percentage changes in land values for the following year.

During the past year, respondents' estimated percentage increases in land values averaged 4.3% for cropland, 3.6% for pasture / rangeland, and 3.2% for hayland. These estimated changes from 1998 to 1999 are very similar to projected forecasts for the same period as reported in Janssen and Pflueger (1998).

About two thirds of respondents reported increasing cropland values and 55% reported increases in hayland or pasture/ rangeland values. The remainder reported no change or slight declines in land values in their locality. In general, respondents' perceptions of percentage changes in land values were similar to or higher than the percentage

changes calculated from "actual" dollar values.

Respondents are not optimistic about land value increases in the next 12 months. Only 30% of respondents expect agricultural land values to increase in 1999, and most expected 1% to 5% increases. Compared to the past 8 years of survey responses, this is the lowest proportion of respondents expecting land value increases in the next 12 months, a dramatic reversal from the 1998 survey when three fourths (three fifths) of respondents projected increasing cropland (rangeland) values in the next 12 months.

A majority of respondents project no change in land values during 1999. Nearly 15% (8%) of respondents forecast declining cropland (rangeland) values during 1999. Modest declines in cropland values are projected by respondents in several regions, while rangeland values are expected to hold steady or increase slightly in all regions. Overall, the average (mean) projected change in agricultural land values during 1999 is only +0.5%.

In summary, respondents to the 1999 survey are not very optimistic about current or prospective farmland market conditions in the next 12 months. This is a major reversal from prevailing optimistic responses in the past 3 to 5 years. However, the overall strength of the general economy (low inflation rates, interest rates, high employment rates) may help many land market participants withstand the current downturn in the farm economy.

Many respondents continue to comment that current commodity prices and operator net returns cannot sustain present land values and rental rates, especially if near-record yields in many localities revert to long-term average yields. Overall, there is considerable apprehension about farm economic and land market conditions in the next few years.

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## APPENDIX I

### Survey Methods and Respondent Characteristics

The primary purpose of the 1999 South Dakota Farm Real Estate Market Survey was to obtain regional and statewide information on: (1) 1999 per-acre agricultural land values by land use and land productivity, and (2) 1999 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 agents and farm management field staff, and (3) licensed appraisers. Some appraisers were realtors, assessors, or professional farm managers.

The total response rate was 47% of 580 persons contacted. The useable survey response rate was 44%. The distribution of 256 respondents by location and reported occupation is shown in Appendix Table 1. Fifty percent of Extension agents, 45% of agricultural lenders, and 40% of licensed appraisers contacted provided usable responses.

Almost half (49%) of the respondents were from the three eastern regions of South Dakota, 37% 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 non-irrigated cropland, rangeland, and hayland in their locality. However, only 29% of respondents provided data on irrigated land

values, 27% 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 land values, statewide and regional, 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 non-irrigated farmland in South Dakota. It excludes 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 1992 South Dakota Census of Agriculture and other sources.

Appendix Table 1. Selected characteristics of respondents, 1999

Number of respondents = 256

**Respondents:**

<i>Reporting location</i>	<i>N</i>	<i>%</i>	<i>Primary Occupation</i>	<i>N</i>	<i>%</i>
Southeast	41	16.0%	Banker/loan officer	151	59.0%
East-Central	57	22.3%	Appraiser/realtor	70	27.3%
Northeast	38	14.8%	Extension agents	35	13.7%
North-Central	32	12.5%			
Central	27	10.5%			
South-Central	20	7.8%			
Southwest	15	5.9%			
Northwest	26	10.2%			
	256 100.0%			256 100.0%	

**Response rates:**

<i>Land values</i>	<i>N</i>	<i>%</i>	<i>Cash Rental Rates</i>	<i>N</i>	<i>%</i>
Nonirrigated cropland	246	96.1%	Nonirrigated cropland	240	93.8%
Irrigated cropland	74	28.9%	Irrigated cropland	70	27.3%
Hayland	207	80.9%	Hayland	199	77.7%
Rangeland (native)	234	91.4%	Rangeland (acre)	234	91.4%
Pastureland (tame)	183	71.5%	Rangeland (AUM)	70	27.3%

Source: 1999 South Dakota Farm Real Estate Market Survey