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South Dakota Agricultural Land Market Trends: 1991-2001

Larry Janssen

South Dakota State University, larry.janssen@sdstate.edu

Burton Pflueger

South Dakota State University, burton.pflueger@sdstate.edu

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An aerial photograph of a rural landscape in South Dakota. The image shows a grid of agricultural fields, some of which are planted with crops. There are several farmsteads scattered throughout the landscape, each consisting of a cluster of buildings, including barns and houses, surrounded by trees. The overall scene is a typical representation of agricultural land in the region.

South Dakota Agricultural Land Market Trends 1991-2001

**Results from the 2001
SDSU South Dakota
Farm Real Estate Survey**

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

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South Dakota
**Agricultural Land
Market Trends**
1991–2001

Results from the 2001 SDSU South Dakota Farm Real Estate Survey

Larry Janssen and Burton Pflueger¹

¹Professors of agricultural economics, Department of Economics, South Dakota State University. Dr. Janssen has teaching and research responsibilities in economic development, agricultural finance, and farmland markets. Dr. Pflueger is Extension farm financial management specialist and also teaches an undergraduate course on agricultural cooperatives.

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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. People who will find this publication helpful are farmers and ranchers, landowners, agricultural professionals (lenders, rural appraisers, professional farm managers), and policy makers interested in agricultural land market trends. This report contains the results of the 2001 SDSU South Dakota Farm Real Estate Market Survey, the eleventh annual such 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. They are Richard Shane, Economics Department Head; Dr. Don Peterson, Extension farm management specialist; and Dr. Evert Vandersluis of the SDSU Economics Department.

We also wish to thank Janet Wilson for developing and maintaining the mailing lists, Penny Stover, Barbara Dininger, and Barbara Peterson for administering the survey, data input, and updating tables and charts. Janet Wilson, Penny Stover, and Barb Dininger are secretaries in the Economics Department. Barb Peterson graduated in May 2001 with a major in animal science and a minor in agricultural marketing.

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.

We especially wish to thank all of the 215 respondents who participated in the 2001 South Dakota Farm Real Estate Market Survey. Many 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 Agricultural Land Market Trends 1991–2001

Results from the 2001 SDSU South Dakota Farm Real Estate Survey

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SUMMARY

The 2001 SDSU Farm Real Estate Market Survey reports 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 (2000 to 2001) in agricultural land values of 8.7% is considerably above the average annual 5.3% rate of increase from 1991 to 2000.**

This annual rate of increase is the second highest of the past 10 years. From 2000 to 2001, annual increases of 10% or more occurred in the north-central, northwest, east-central, and southeast regions of the state. More modest increases were noted in the northeast and central regions, and little change was noted in the south-central and southwest regions.

- **Cash rental rates per acre increased in most regions from 2000 to 2001.**

In general, cash rental rate increases were strongest in those regions where substantial land value increases were also reported. In other words, land values rapidly respond to increases in cash rental rates which stem from record crop yields, record farm program payments, and favorable calf prices.

From 2000 to 2001, average cash rental rates for cropland increased from \$6 to \$12 per acre in several county clusters of eastern South Dakota. Strong increases in hayland cash rental rates of \$3 to \$7.50 per acre and rangeland cash rental rates of \$1.50 to \$5 per acre were also reported in eastern and central regions. More modest increases or slight decreases were noted in other regions.

- **Farmland value increases from 1991 to 2001 are supported by increases in cash rental rates during the same period.**

During this 10-year period, cropland cash rental rates increased an annual average 2.4% to 2.6% per year in western South Dakota compared to 4% in the east-central and southeast regions. Cropland values increased by an annual average 2.8% to 3.8% in western South Dakota compared to an annual average increase of 5.1% in the east-central and southeast regions.

- **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 or east-central region and lowest in western South Dakota.

The average value of nonirrigated agricultural land (as of February 2001) in South Dakota is \$373 per acre. Nonirrigated agricultural land varies from \$884 per acre in the southeast to \$141 per acre in the northwest. Average nonirrigated cropland values vary from \$1023 per acre in the southeast to \$456 per acre in the central region and \$223 per acre in the northwest.

This is the first year that average cropland values exceed \$1000 per acre in any region. Average cropland values are over \$1300 per acre in several counties of eastern South Dakota. Average rangeland values vary from \$488 per acre in the southeast to \$124 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 2001 for nonirrigated cropland are above \$90 per acre in a few counties of eastern South Dakota and only \$17.50 per acre in western South Dakota. Average rangeland rental rates are slightly above \$30 per acre in the southeast and east-central regions compared to an average of \$6 per acre in northwest South Dakota.

- **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 4.8% for all agricultural land, 5.4% for nonirrigated cropland, and 4.3% 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.

- **Economic conditions in South Dakota agriculture are viewed as the major reasons for increases in land market values.**

Farmland values have increased more than the rate of general price inflation from 1991 to 2001 in all regions and for all land uses. The cash rental rate increase provides underlying support for increases in land values. These two basic economic factors attract investors and farmers expanding their operations to make farmland purchases.

In the past 2 years, respondents indicated that investor interest, lower interest rates, crop yields substantially above long-term trends, government farm programs, improvements in livestock prices, and hunting and recreation demands have led to increases in land market values. However, many respondents are concerned about continued low grain and oilseed prices and the dependence of South Dakota agriculture on federal farm program payments.

- **Farm expansion continues to be the major reason for purchasing farmland, while retirement from farming and settling estates have been major reasons for selling farmland.**

In addition, investment potential and hunting and recreation demand for farmland have emerged as major forces for purchase during the past 5 to 7 years. Favorable sellers' market conditions and realization of capital gains compete with financial and cash flow pressure as other major reasons for selling farm and ranch properties.

South Dakota Agricultural Land Market Trends 1991–2001

The 2001 SDSU Farm Real Estate Market Survey is the eleventh annual survey of agricultural land values and cash rental rates by land use in different regions of South Dakota. We report the results of the survey and include a discussion of factors influencing buyer and seller decisions and positive and negative factors operating in the rural real estate market. Publication of survey findings is a response to numerous requests by landowners, renters, appraisers, lenders, and others for detailed information about farmland markets in South Dakota.

The 2001 estimates are based on reports from 215 respondents. Respondents are agricultural lenders, Farm Service Agency officials, rural appraisers, assessors, realtors, professional farm managers, and Extension agricultural educators. All are familiar with farmland market trends in their localities.

The survey was distributed in February and March 2001, requesting information on cash rental rates and agricultural land values as of February 2001. Response rates, respondent characteristics, and estimation procedures are in Appendix I.

Results are presented and compared to those of earlier years in a format similar to publications 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 crops or hay)² is emphasized in each of these SDSU reports.

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 2001 County Level Land Rents and Values*.³ This SDASS report is based on a telephone survey of South Dakota farmers and ranchers and is their seventh annual survey of county level 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 of the 1990s were characterized by low inflation rates, declining to stable interest rates, and increasing export markets for grains, oilseeds, livestock, and meat products. Farm debt gradually increased and interest averaged between 9% and 11% of South Dakota farm production expenses. Net farm income trended upward from 1990 to 1996, but has been lower since then. Average prices of principal crops (feed grains, wheat, and soybeans) in the 1999 and 2000 marketing years were the lowest recorded in the past 10 years. However, cattle and calf prices rose in 1999 and 2000, resulting in improved profit margins.

Crop yields in the past 4 years have been considerably above long-term trends, but value of principal crop production decreased for all commodities, primarily because of price decreases. Increased yields buffered some of the impact of crop price declines. The combined value of principal crops grown in South Dakota had steadily declined from \$2.87 billion in 1996 to \$2.02 billion in 1999 but rose to \$2.21 billion in 2000.

² A major purpose of this survey is to report land values and cash rental rates by major uses of privately owned agricultural land, excluding farm building sites. The major nonirrigated land uses reported are crops, hay, tame pasture, and range. Rangeland is native grass pasture while tame pasture is seeded to introduced grasses. Agricultural land typically used for production of alfalfa hay, other tame hay, or native hay is considered hayland in this report. Cropland is agricultural land typically used for crop production other than hay production. Since most irrigated land in South Dakota is used for crop or hay production, we report the value and rental rates of irrigated land used for these purposes. These major land uses comprise nearly 98% of privately owned land in farms in South Dakota (Janssen 1999).

³ The SDASS report on county level rents and values can be obtained from their Sioux Falls office. Call 605-330-4235 or write South Dakota Agricultural Statistics Service, P.O. Box 5068, Sioux Falls SD, 57117-5068.

Perhaps the most dramatic change in the composition of farm income has been the drastic increase in direct federal government payments to farmers and their landlords. Annual federal farm program payments increased from the 1995-97 levels of \$230 million to \$268 million to nearly \$430 million in 1998 and more than \$700 million in 1999 and 2000. Direct government payments⁴ increased from an average of 5% to 6.5% of gross farm income in South Dakota in the 1995-97 period to more than 15% of gross farm income in 1999 and 2000.

Farm asset values, especially land values, become dependent on government farm payments during periods of lower crop prices. A simple income-capitalization model for farm or ranch land suggests farmland values are a multiple of net cash returns to land. Net cash farm income received by farmers plus net rent received by non-operator landlords is a reasonable approximation.

Direct government payments have increased in relative importance. For example, the contribution of direct government payments to net cash farm income received by farmers and non-operator landlords rose from an average of 8% to 15% during the 1996-97 period to more than 30% in 1999 and 2000. This provides an upper bound estimate of the dependence of current farmland values on continued government payments.

Of course not all changes in net cash returns to land are capitalized into land value increases or decreases. Expectations about future net cash returns are also important determinants of land values and depend on other factors than current net cash returns or government payments. Nevertheless, there is a direct and powerful relationship between land values and net cash returns to land over time (Janssen 1999).

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.

A recent econometric study investigating the relationship between agricultural land values and direct government

⁴ Direct government payments to agricultural producers include production flexibility contract payments, loan deficiency payments, and emergency assistance payments. Direct government payments to U.S. farmers increased from \$7-\$8 billion each year from 1995-1997 to \$22.1 billion in 2000 and a projected \$14.1 billion in 2001. " In 2000, it is estimated that nonoperator landlords received about 12% of loan deficiency payments and about 15% of all other direct government payments (Morehart, Ryan, and Green. 2001. pp. 5).

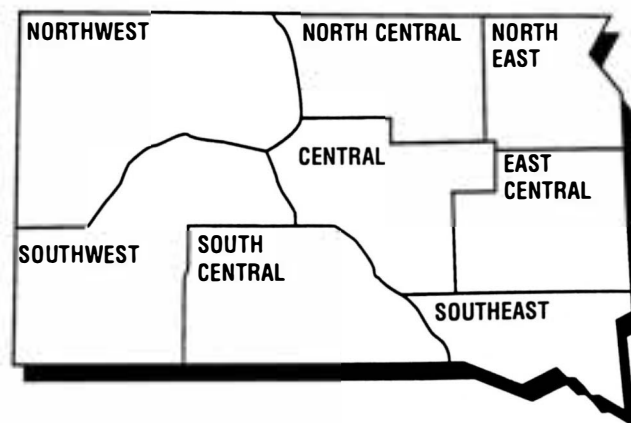
payments suggests Midwest (the North-Central region) cropland values would decline an average of 11% to 19% if government program payments were eliminated. Cropland values could decline as much as 22% in some regions of North Dakota and South Dakota that are more dependent on farm programs (Barnard et al. 2001).

Another factor that can influence the land market is the strong employment base in many South Dakota trade centers. It provides off-farm employment for increasing numbers of South Dakota farm families, permitting them greater economic stability and opportunities in the land market. Another factor is capital gains; many investors, including farmland owners, have received capital gains from sale of stocks, land, or other investments that can be used for purchasing agricultural land. Lastly, credit has been readily available in recent years to help finance land purchases and finance farm operating expenses.

2001 South Dakota agricultural land values and value changes

Respondents to the 2001 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 the small number of irrigated land reports, responses for irrigated land values and rental rates are regrouped into six regions: western, central/south-central, north-central, northeast, east-central, and southeast.

Fig 1. Agricultural regions of South Dakota.



The 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 I).

As of February 2001, the average value of all-agricultural land in South Dakota was \$373 per acre, an estimated 8.7% increase from one year earlier and considerably above the 5.3% annual rate of increase from 1991 to 2001 (Fig 2 and Table 1). The increase in value by \$30 per acre is the highest annual increase in value over the past 10 years, while the annual rate of increase (+8.7%) is the second highest during the same period.

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. Regional trends in all-agricultural land values, cropland values, and rangeland values from 1991-2001 are displayed in Figures 3, 5, and 7.

All-land average values are highest in the southeast and east-central regions, with per-acre values from \$884 in the southeast to \$784 in the east-central region, the regions with the most productive land in South Dakota. Cropland

Table 1. Average reported value and annual percentage change in value of South Dakota agricultural land by type of land, by region, 1991-2001.

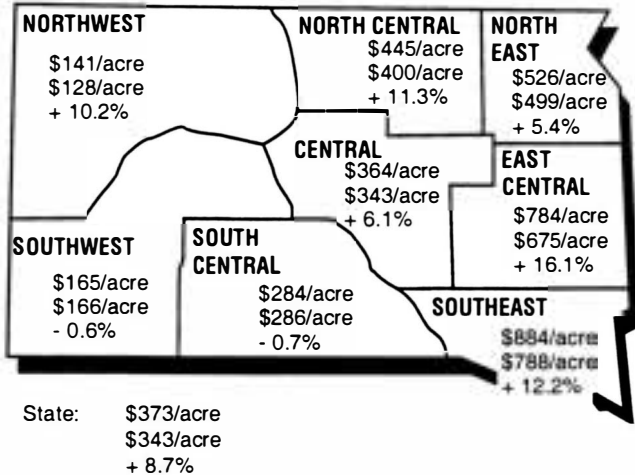
Type of land	South-east	East-Central	North-east	North-Central	Central	South-Central	South-west	North-west	STATE
All agricultural land (nonirrigated)									
	<i>dollars per acre</i>								
Average value, 2001	884	784	526	445	364	284	165	141	373
Average value, 2000	788	675	499	400	343	286	166	128	343
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 01/91	5.3%	5.3%	3.8%	7.0%	4.9%	4.8%	5.5%	5.3%	5.3%
Annual % change 01/00	12.2%	16.1%	5.4%	11.3%	6.1%	-0.7%	-0.6%	10.2%	8.7%
Nonirrigated cropland									
	<i>dollars per acre</i>								
Average value, 2001	1023	911	652	592	456	423	245	223	628
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 01/91	5.1%	5.1%	3.8%	7.3%	4.3%	4.5%	2.8%	3.8%	5.0%
Annual % change 01/00	12.4%	16.1%	5.2%	13.8%	4.6%	1.4%	-1.2%	7.2%	10.2%

Table 1 (continued). Average reported value and annual percentage change in value of South Dakota agricultural land by type of land, by region, 1991-2001.

Type of land	South-east	East-Central	North-east	North-Central	Central	South-Central	South-west	North-west	STATE
Rangeland (native)	<i>dollars per acre</i>								
Average value, 2001	488	478	315	270	284	232	143	124	193
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 01/91	6.2%	5.8%	4.4%	6.3%	5.7%	5.4%	6.8%	6.0%	5.9%
Annual % change 01/00	7.0%	14.6%	6.1%	6.7%	7.2%	-1.3%	0.0%	11.7%	5.5%
Pasture (tame, improved)	<i>dollars per acre</i>								
Average value, 2001	564	522	342	301	332	258	176	153	350
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 01/91	6.0%	4.9%	3.1%	5.9%	5.3%	4.7%	6.7%	5.0%	5.4%
Annual % change 01/00	9.3%	8.5%	2.4%	4.2%	9.6%	-3.7%	5.4%	6.3%	6.4%
Hayland	<i>dollars per acre</i>								
Average value, 2001	844	735	359	332	337	281	201	181	364
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 01/91	6.2%	7.5%	3.6%	7.0%	5.9%	3.6%	4.8%	4.0%	5.6%
Annual % change 01/00	16.9%	27.4%	8.8%	4.7%	8.7%	-4.1%	-1.0%	3.4%	9.6%

Source: 2001 and earlier South Dakota farm real estate market surveys

Fig 2. Average value of South Dakota agricultural land, February 1, 2001 and 2000, 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, 2001
 Middle: Average per-acre value—February 1, 2000
 Bottom: Annual percent change in per-acre land value

Source: 2001 South Dakota Farm Real Estate Market Survey, SDSU.

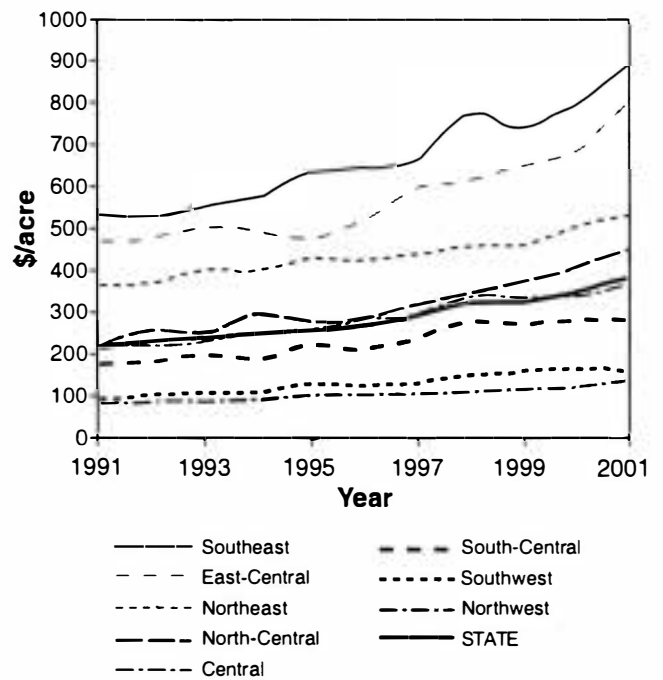
and hayland are their dominant land uses, comprising 73% and 76% of farmland acres in the east-central and southeast regions, respectively. During the past year (2000 to 2001), the east-central region had the highest rate of increase (+16.1%) in land values, followed by the southeast region with a 12.2% rate of increase. The dollar amount of increase per acre was \$89 (\$94) in the east-central (southeast) regions. From 1991-2001, both regions had the same annual average increase in land values (+5.3%) as the state of South Dakota as a whole.

Agricultural land values in northeast and north-central South Dakota are considerably lower than in the east-central and southeast regions. Average per-acre values are \$526 in the northeast and \$445 per acre in the north-central region. Geographic location and land use differences are closely related to differences in reported value. Crops and hay make up 71% of farm acres in the northeast and 62% in the north-central region.

All-agricultural land values increased more rapidly during the past year (200-2001) in the north-central region (11.3%) than in the northeast region (6.1%).

From 1991 to 2001, the average annual rate of increase in South Dakota agricultural land values was greatest in the north-central region (7%) and least in the northeast

Fig 3. All ag-land value, statewide and regions, 1991-2001.



region (3.8%). During the past 10 years, much of the northeast region has been adversely affected by a wet weather cycle that has drastically raised water tables and made it very difficult or impossible to farm some cropland. This has dampened rates of increase in agricultural land values. Contributing to the more rapid increases in agricultural land values in the north-central region were increased rainfall and a major expansion of soybean production, especially in the James River valley.

Agricultural land values and land use in the central region closely reflect statewide averages. As of February 2001, the average value of all agricultural land was \$364 per acre in the central region, compared to \$373 per acre statewide. Fifty-two percent of the privately owned land is used for crops and hay in the central region, compared to 45% for all of South Dakota. Land value increases were smaller in the central region than statewide during the most recent year (6.1% vs. 8.7%) and slightly lower during the past 10 years (4.9% vs. 5.3%).

Agricultural land values are much lower west of the Missouri River than in the eastern and central regions of South Dakota. Average value per acre ranges from \$284 in the south-central region to \$165 and \$141 in the southwest and northwest. Rangeland and pasture are the dominant uses in both regions, varying from 65% of privately owned

land in the south-central to 77% (81%) of private farm or ranch land in the southwest (northwest) region.

Agricultural land values changed very little (-0.6% to -0.7%) in the southwest and south-central region during the past year, but increased 10.2% in the northwest region. Over the 1991-2001 period, the annual average increases in farm and ranch land values from 4.8% to 5.5% in western and south-central South Dakota were close to the statewide average of 5.3%. Rates of change in land values over the past 10 years have been similar in these regions, even though changes in the most recent year are quite different between the northwest region and the southwest or south-central region.

Ten-year (1991 to 2001) trends in agricultural land values show increases above the rate of price inflation in all regions. The highest (lowest) rates of land value increases during this period were in the north-central (northeast) region with average annual increases of 7.0% (3.8%). All other regions showed average annual increases from 4.8% to 5.5%, similar to the statewide increase of 5.3%. Total percentage change in land values from 1991-2000 ranged from increases of 45% in the northeast region to +68% in the northwest, east-central, and southeast regions, to +101% 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 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 and forage yields, and soil productivity differences across the state.

Cropland values

The weighted average value of South Dakota's nonirrigated cropland (as of February 2001) is \$628, a 10.2% increase from 2000 (Table 1). This is directly related to the importance of excellent crop yields and substantial federal crop program payments offsetting the negative impacts of poor crop prices in the past few years.

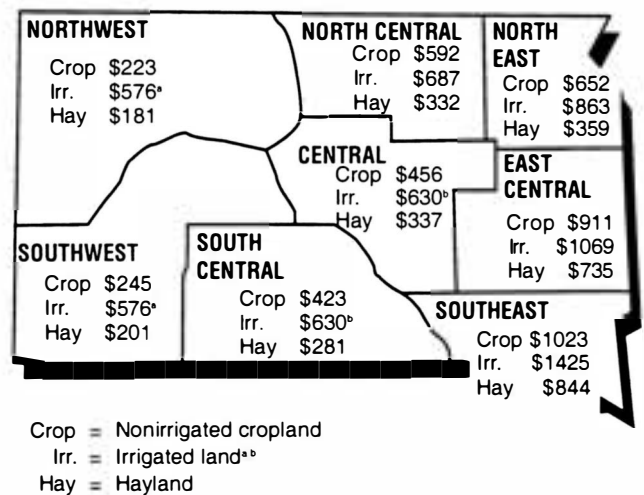
There is considerable regional variation in cropland value changes. For example, cropland values increased more

than 12% in the east-central, north-central, and southeast regions but changed less than 1.5% in the south-central and southwest regions between February 2000 and February 2001. Cropland values increased from 4.6% to 7.2% in the other regions over the same period. From 1991 to 2001, South Dakota cropland values increased above the rate of price inflation in all regions with a statewide average annual increase of 5% and a total 10-year increase of 63%.

The southeast and east-central regions have the highest average cropland values of \$1023 and \$911 per acre, respectively. This is the first time regional average cropland values exceed \$1000 per acre in the southeast and \$800 per acre in the east-central region (Fig 4 and 5, and Table 1). These two eastern regions contain 30% of the state's cropland, and corn and soybeans are the major crops in most counties of both regions.

Corn, soybeans, wheat, and other small grains are predominant cropland uses in most counties of the northeast and north-central regions. These two regions contain 34% of South Dakota's cropland acres. Average cropland values in the northeast (\$652 per acre) are higher than in the north-central (\$592 per acre) region. Statewide cropland values are closest to average cropland values reported in the north-central region.

Fig 4. Average value of South Dakota cropland, irrigated land, and hayland, by region, February 2001, dollars per acre.



*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.

**Irrigated land values shown for the central and south-central regions are based on the average value reported in both regions.

Source: 2001 South Dakota Farm Real Estate Market Survey, SDSU.

From 1991 to 1998, average cropland values in the north-central region were only slightly above cropland values reported for the central region. However, from 1999 to 2001, north-central region cropland values have been considerably higher than average values in the central region and have come closer to average cropland values in the northeast region.

During the past 10 years, average cropland values in the central region were similar to those reported in the south-central region, while those in the northwest were similar to cropland values in the southwest region. As of February 2001, cropland values average \$456 per acre in the central and \$423 per acre in the south-central region. The lowest cropland values, \$223 and \$245 per acre, are found in the northwest and southwest regions, respectively (Table 1). Wheat is the dominant cropland use in the western regions, while wheat, corn, and grain sorghum are important crops in the south-central region. Wheat, corn, soybeans, and sunflowers are the major cropland uses in the central region.

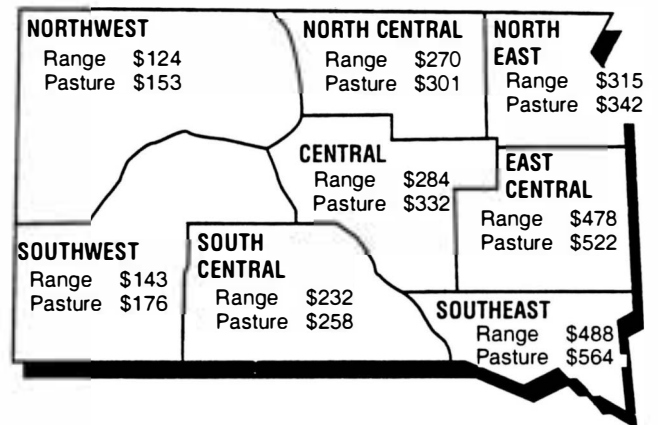
Hayland values

South Dakota hayland values averaged \$364 per acre as of February 2001, a 9.6% increase from one year earlier and a 72% increase from 1991. Strong annual increases in hayland values of 27.4% and 16.9% are reported in the east-central and southeast regions, respectively, while a

slight decline is shown in the south-central and southwest regions. Between 1991 and 2001, hayland value increases in all regions were above the rate of price inflation, with the strongest increases reported in the north-central and east-central regions (Table 1).

Per-acre hayland values follow the same regional patterns as cropland values, with the highest hayland values reported

Fig 6. Average value of South Dakota rangeland and tame pasture, by region, February 2001, dollars per acre.



Source: 2001 South Dakota Farm Real Estate Market Survey, SDSU.

Fig 5. Cropland value, statewide and regions, 1991-2001.

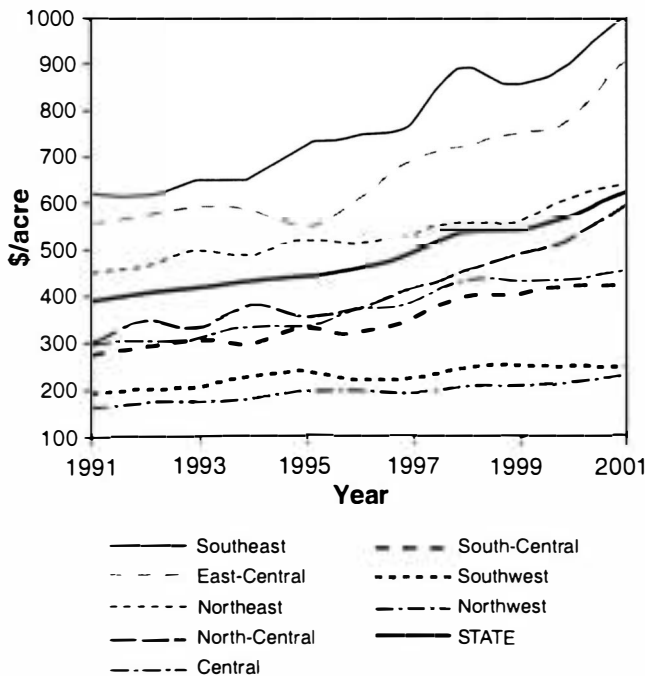
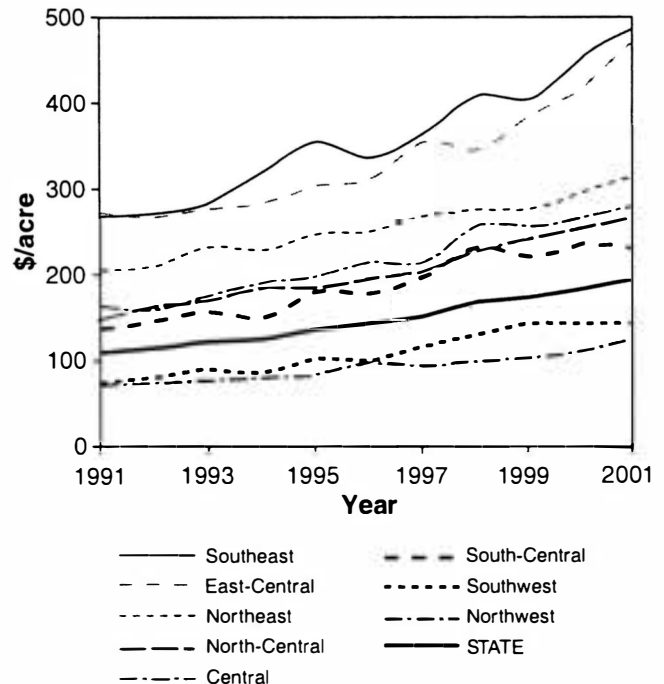


Fig 7. Rangeland value, statewide and regions, 1991-2001.



in the southeast (\$844 per acre) and the lowest in the northwest (\$181 per acre). Hayland values are clustered between \$281 and \$359 per acre in the south-central, central, north-central, and northeast regions. Alfalfa hay is the most common type 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 2001, the value of South Dakota native rangeland averaged \$193 per acre, while the average value of tame pasture was \$350 per acre (Table 1, Figs 6, 7). Native rangeland is much more concentrated in western and central South Dakota, while tame pasture is concentrated in the eastern regions.

The statewide average change in rangeland and tame pasture values increased 5.5% and 6.4%, respectively, during the past year (February 2000 to February 2001). Based on survey reports, rangeland value increases were strongest in the east-central and northwest regions while remaining steady in the southwest and south-central regions. Tame (improved) pastureland value increases were strongest in the southeast, east-central, and central regions.

During the period from 1991 to 2001, statewide rangeland and pasture values increased at an average annual rate of 5.9% and 5.4%, respectively. During this 10-year period, the strongest rates of increases were in the southwest, southeast, and north-central regions while the weakest rates of land value increases were in the northeast region.

Average rangeland values are highest in the southeast and east-central regions (\$488 and \$478 per acre) and lowest in the northwest region (\$124 per acre). In the north-central and central regions of South Dakota, average rangeland values are clustered between \$270 and \$284 per acre, compared to \$315 per acre in the northeast (Table 1; Fig 6). Across regions, average rangeland values vary between 81% and 92% of the average value of tame pastureland.

In the cropland-intensive regions of eastern South Dakota and in the north-central region, the average per-acre value of nonirrigated cropland is 1.9 to 2.2 times the average value of native rangeland. In the more rangeland-intensive central and western regions, average per-acre value of cropland value is 1.61 to 1.82 times the rangeland value. In all regions, tame (improved) pasture values are between rangeland values and hayland values. Pasture and hayland values are considerably lower than cropland values.

Table 1a. Average reported value and annual percentage change in value of South Dakota irrigated land by region, 1991-2001.

Type of land	South-east	East-Central	North-east	North-Central	Central/South-Central		STATE
					Central	Western	
<i>dollars per acre</i>							
Irrigated land							
Average value, 2001	1425	1069	863	687	630	576	856
High Productivity	1641	1225	975	838	757	918	—
Low Productivity	1199	813	682	534	463	411	—
Average value, 2000	1358	1036	802	619	593	575	816
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 01/91	4.2%	4.9%	4.4%	4.7%	3.2%	3.2%	4.0%
Annual % change 01/00	4.9%	3.2%	7.6%	11.0%	6.2%	0.2%	4.9%

Source: 2001 and earlier South Dakota farm real estate market surveys

Regional variations in rangeland values are lower than those for cropland or all-agricultural land. This has been a consistent pattern in each annual survey conducted between 1991 and 2001. In 2001, average per-acre values of rangeland and cropland in the northwest region are about 26% and 22%, respectively, of those in the southeast region. However, due to the changing proportion of crop-hayland and pasture-rangeland across the state, the average value of all-agricultural land in the northwest is only 16% of all-agricultural land values in the southeast (Table 1).

Irrigated land values

Irrigated land value reports are consolidated into six regions (Table 1A; Fig 4). The very few irrigated land reports from the central and south-central regions make it necessary to combine reports from these two regions. The northwest and southwest 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 data on land values 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 38% of all respondents were familiar with and able to provide information on irrigated land values.

Based on only 82 responses, irrigated land value increases were reported in all except the western region. Statewide average irrigated land values are \$856 per acre, a 4.9% increase from a year earlier and 48% above 1991 reported values. Regional average irrigated land values are above the statewide average in the southeast (\$1425 per acre) and east-central (\$1069 per acre) regions. In the western and central regions of South Dakota, irrigated land values average \$576 to \$687 per acre (Table 1A and Fig 4).

Variation in land values by land productivity and county clusters

Within each region and for each nonirrigated agricultural use, there is considerable variation in land values. In this section, we report the February 2001 per-acre values of average quality, high-productivity, and low-productivity land by agricultural land use by region and by 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. West of the Missouri River there are too few reports to cluster counties. This survey is not designed to reflect the substantially higher nonirrigated land values near the Black Hills.

Substantial variation in per-acre land value occurs by degree of land productivity for each land use in each region. For example, 2001 cropland values in the southeast region vary from an average \$802 per acre for low-productivity cropland to \$1279 per acre for high-productivity cropland. In the northwest region at the other extreme, the average value of low (high) productivity cropland values is \$167 (\$302) per acre. Across regions, average values of low-productivity cropland are 50% to 66% of the average values of high-productivity cropland.

Rangeland values in the southeast region vary from \$365 per acre for lower-productivity rangeland to \$581 for higher productivity rangeland. In the northwest region at the other extreme, the average value of low (high) productivity rangeland is \$100 (\$155) per acre. The average value of low-productivity rangeland varies from 56% to 70% of the average value of high-productivity rangeland (Table 2).

During the past year (February 2000 to February 2001), average values of cropland, rangeland, pasture, and hayland increased in all county clusters east of the Missouri River. In some county clusters, land values increased more than 20%.

Average values of nonirrigated cropland exceed \$1300 per acre in two county clusters in eastern South Dakota: Minnehaha-Moody (\$1422 per acre) and Clay-Lincoln-Turner-Union (\$1334 per acre). This is the fifth consecutive year that the average value of nonirrigated cropland exceeds \$1000 in any county cluster. For comparison purposes, 1991 average values in these two county clusters were \$809 to \$811 per cropland 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 \$897 in the Bon Homme-Hutchinson-Yankton county cluster and \$603 per acre in the Charles Mix-Douglas county cluster. Similar patterns of per-acre values occur for other land uses (Table 2). Pasture and rangeland values increased more rapidly in the western county clusters of these regions, while the rates of cropland

Table 2. Average reported value per acre of agricultural land by South Dakota region, county clusters, type of land, and land productivity, February 1, 2001.

Agricultural land type and productivity	All	Southeast			East-Central			Sanborn
		Clay Lincoln Turner Union	Bon Homme Hutchinson Yankton	Charles Mix Douglas	All	Minnehaha Moody	Brookings Lake McCook	Davison Hanson Kingsbury Miner
<i>dollars per acre</i>								
Nonirrigated cropland								
Average	1023	1334	897	603	911	1422	851	714
High Productivity	1279	1652	1160	733	1140	1825	1096	849
Low Productivity	802	1036	719	472	673	1025	610	552
Rangeland (native)								
Average	488	593	432	413	478	560	448	473
High Productivity	581	686	544	478	561	690	511	555
Low Productivity	365	442	348	276	375	440	339	381
Pastureland (tame, improved)								
Average	564	680	521	437	522	600	476	532
High Productivity	651	770	610	512	612	737	550	621
Low Productivity	453	532	431	354	409	412	378	430
Hayland								
Average	844	1105	730	486	735	1208	627	589
High Productivity	1003	1316	857	586	868	1400	735	713
Low Productivity	664	857	597	371	554	867	465	472
<i>dollars per acre</i>								
Agricultural land type and productivity	All	Northeast			North-Central			Campbell
		Codington Deuel Hamlin	Grant Roberts	Clark Day Marshall	All	Brown Spink	Edmund Faulk McPherson	Potter Walworth
<i>dollars per acre</i>								
Nonirrigated cropland								
Average	652	725	661	569	592	915	382	405
High Productivity	840	917	844	758	832	1338	488	552
Low Productivity	478	529	483	422	411	586	292	314
Rangeland (native)								
Average	315	365	308	267	270	343	246	199
High Productivity	362	419	350	310	323	412	281	256
Low Productivity	254	311	242	203	209	255	205	153
Pastureland (tame, improved)								
Average	342	383	335	312	301	398	267	201
High Productivity	385	414	384	359	357	472	310	250
Low Productivity	264	311	252	231	236	290	230	158
Hayland								
Average	359	425	383	299	332	456	245	242
High Productivity	433	521	467	353	397	554	292	277
Low Productivity	277	358	300	207	243	317	202	174

Source: 2001 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

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, 2001.

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>							
Nonirrigated cropland							
Average	456	487	415	496	423	245	223
High Productivity	558	617	502	581	548	293	302
Low Productivity	349	372	312	394	293	195	167
Rangeland (native)							
Average	284	341	267	227	232	143	124
High Productivity	338	407	325	252	280	190	155
Low Productivity	222	279	195	187	170	107	100
Pastureland (tame, improved)							
Average	332	368	312	288	258	176	153
High Productivity	390	429	376	312	309	214	189
Low Productivity	265	296	248	225	200	141	122
Hayland							
Average	337	382	308	317	281	201	181
High Productivity	401	475	361	350	330	242	246
Low Productivity	269	307	245	250	218	156	139

Source: 2001 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.

value increases were higher in the eastern county clusters along the Iowa and Minnesota border.

In the northeast region, average values of all agricultural land uses were highest in the Codington-Deuel-Hamlin county cluster and lowest in the Clark-Day-Marshall county cluster. Average land values vary from \$725 per cropland acre to \$365 per rangeland acre in the Codington-Deuel-Hamlin cluster. Average land values are \$569 per cropland acre and \$267 per rangeland acre in the Clark-Day-Marshall county cluster.

In the north-central region, average land values in Brown and Spink counties are much higher than those found 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 \$915 per acre in the Brown-Spink county cluster compared to \$382 per acre in the Edmund-Faulk-McPherson county cluster. During the past 10 years, agricultural land values in the Edmund-Faulk-McPherson

county cluster have generally been the lowest reported for all county clusters in the north-central region.

In the central region, land values increased substantially in the Aurora-Beadle-Jerauld county cluster, while modest increases were generally reported in the other county clusters. Hay and forage land values are considerably higher in the Aurora-Beadle-Jerauld cluster than in the other county clusters. However, average values of cropland are similar (\$496 to \$487 per acre, respectively) in the Hughes-Sully and Aurora-Beadle-Jerauld county clusters and considerably higher than in the Buffalo-Brule-Hyde-Hand cluster.

During the past 3 years (February 1998 to February 2001) cropland values have soared in several county cluster regions of South Dakota. For example, cropland values have increased more than 30% in the Minnehaha-Moody and Brookings-Lake-McCook county clusters and nearly 50% in the Brown-Spink and Sanborn-Davison-Hanson-Kingsbury-Miner clusters. During the same period,

cropland values increased between 10% and 25% in most other county clusters.

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 north-west region. Values generally remained steady in the south-central and southwest regions.

Major reasons for purchase and sale of farmland

During each of the 11 years of this survey, respondents have been asked to provide major reasons for buying and selling farmland in their locality. Almost 90% of respondents provided one or two reasons in each category. For the eleven years, the top three or four most commonly cited reasons for purchase and sale have remained the same. However, their relative importance has changed.

Farm expansion continues as the most common reason (37% of responses) given for purchasing farmland (Fig 8). Investment potential of farmland and hunting and recreation

demand were the next most common: during the past 8 years, an increasing number of respondents have cited these as major reasons for purchasing farmland while fewer respondents are reporting farm production-related reasons for purchasing farmland.

For example, 23% of 1994 responses indicated investment or hunting and recreation as reasons for purchase compared to 38% of responses in 2001. The impacts of out-of-state buyers on farmland purchases are often cited in recent surveys. They were rarely mentioned in the early 1990s.

Other major reasons for farmland purchases were related to farm expansion decisions such as location of tract, availability of land in local area, and sale of leased land to former tenant. Government farm programs and tax-related reasons were also motivating factors for land purchases. Other respondents cited continued high crop yields and impacts of biotechnology on crop production as added reasons for land purchases.

Retirement from farming remains the most common reason (42% of responses) given for selling farmland (Fig 9). Favorable market conditions for selling and/or a desire to reap capital gains from the sale were cited more often (19% of responses) than in previous years.

Fig 8. Reasons for buying farmland.

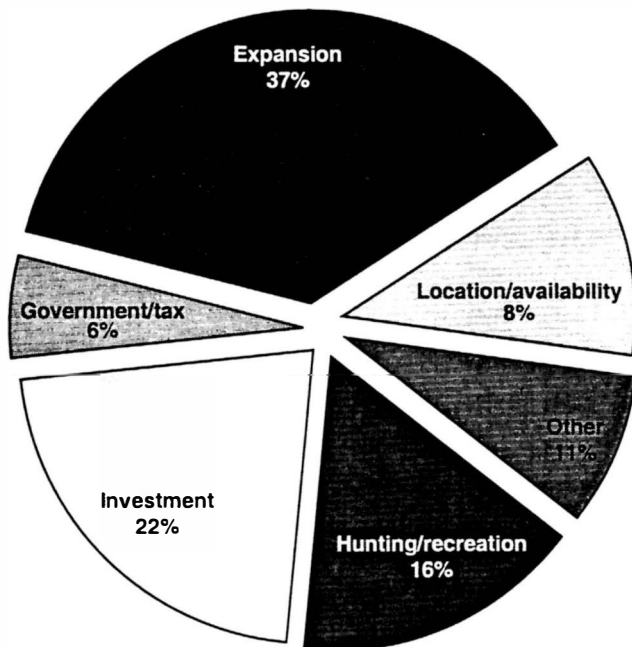
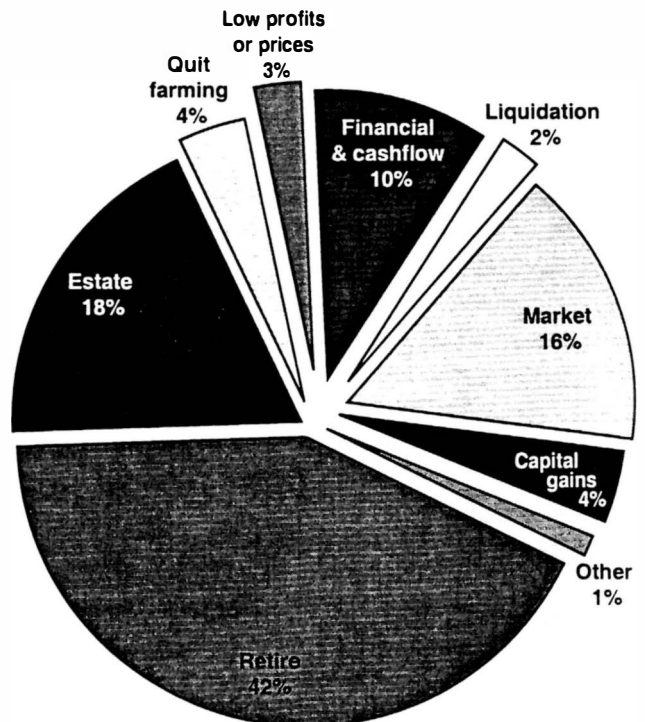


Fig 9. Reasons for selling farmland.



Settling estates was the third major reason for selling farmland (18% of responses). Financial and cash flow pressures, liquidation, or poor profit and rate of return prospects were other common reasons (14% of responses) for selling. This is the third year in a row that financial difficulty reasons were listed in 14% or more responses to this question.

2001 cash rental rates for 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 in their localities. Cash rental rates for pasture and rangeland were provided on a per-acre basis and, if possible, on a per AUM (Animal Unit Month)⁵ basis. Respondents were also asked to report cash rental rates for high-productivity and low-productivity land by different land uses. 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.

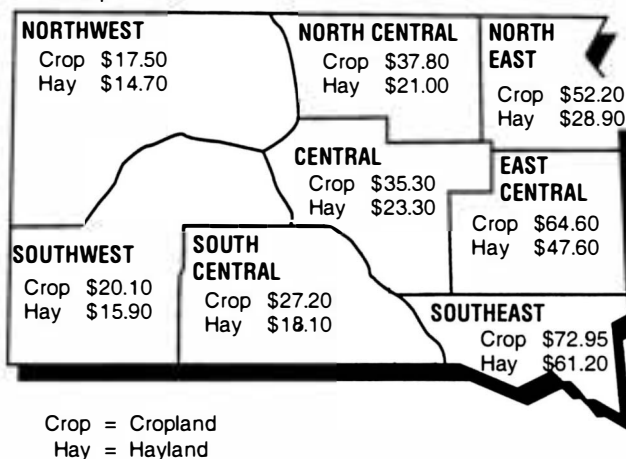
Cash rental rates differ by region and land use. For nonirrigated land uses, cash rental rates per acre are highest in the southeast and east-central regions and lowest in northwest and southwest South Dakota. In every region, cash rental rates are highest for cropland and lowest for rangeland and pasture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

Large increases in cropland cash rental rates for 2001 are reported in all regions east of the Missouri River. Strong increases in hayland cash rental rates are also reported in the east-central, southeast, and central regions, while rangeland cash rents increased considerably in the east-central and central regions.

⁵ 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 geographic areas of the state unless there are major differences in forage availability, forage quality, and demand of leased land.

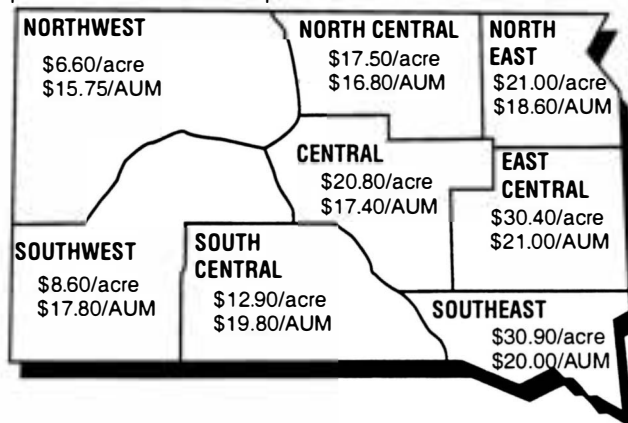
In general, cash rental rate increases were strongest in the same regions where substantial land value increases were also reported. In other words, land value increases are quickly reflecting increases in cash rental rates. In turn, strong increases in cropland cash rental rates in the corn-soybean and corn-wheat-soybean areas of eastern and central South Dakota are reflecting the influence of record federal farm program payments and record crop yields.

Fig 10. Average cash rental rate of South Dakota nonirrigated cropland and hayland, by region, 2001, dollars per acre.



Source: 2001 South Dakota Farm Real Estate Market Survey, SDSU.

Fig 11. Average cash rental rate of South Dakota rangeland and pastureland by region, 2001, dollars per acre and dollars per AUM.



Source: 2001 South Dakota Farm Real Estate Market Survey, SDSU.

Table 3. Reported cash rental rates of South Dakota agricultural land by type of land by region, 1991-2001.

Type of Land	South-east	East-Central	North-east	North-Central	Central	South-Central	South-west	North-west
Nonirrigated cropland								
					<i>dollars per acre</i>			
Average 2001 rate	72.95	64.60	52.20	37.80	35.30	27.20	20.10	17.50
High Productivity	99.75	86.00	68.60	51.70	48.40	39.30	26.90	23.10
Low Productivity	52.60	43.20	36.20	25.70	24.45	18.10	14.75	13.30
Average 2000 rate	67.50	56.40	49.30	36.20	31.90	30.00	18.70	18.70
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
Hayland								
Average 2001 rate	61.20	47.60	28.90	21.00	23.30	18.10	15.90	14.70
High Productivity	78.30	62.10	38.20	27.00	30.40	25.40	20.75	18.90
Low Productivity	43.60	32.10	23.10	14.75	17.90	13.50	12.80	10.90
Average 2000 rate	57.80	40.10	28.80	20.30	21.10	19.40	15.10	14.30
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
Pasture/Rangeland								
					<i>dollars per acre</i>			
Average 2001 rate	30.90	30.40	21.00	17.50	20.80	12.90	8.60	6.60
High Productivity	42.10	37.60	27.50	22.30	27.30	18.85	12.25	8.70
Low Productivity	21.30	20.30	15.40	13.10	14.80	10.00	5.80	4.70
Average 2000 rate	31.00	26.80	20.60	17.40	18.50	15.40	8.00	6.80
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 2001 rate	20.00	21.00	18.60	16.80	17.40	19.80	17.80	15.75
High Productivity	23.00	24.75	19.70	19.30	21.00	24.60	21.40	18.70
Low Productivity	16.70	17.00	17.30	13.30	13.90	15.40	14.30	13.00
Average 2000 rate	18.70	17.90	19.80	15.50	17.40	19.20	16.20	16.70
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: South Dakota Farm real Estate Market Surveys, SDSU, 2001 and earlier year reports.

Table 3a. Reported cash rental rates of South Dakota irrigated land by region, 1991-2001.

Type of Land	South-east	East-Central	North-east	North-Central	Central/South-Central	Western
Irrigated land	<i>dollars per acre</i>					
Average 2001 rate	106.00	84.40	77.00	65.00	67.10	48.00
High Productivity	129.40	108.10	93.50	80.60	87.10	66.50
Low Productivity	85.70	65.60	60.50	55.60	55.40	36.30
Average 2000 rate	104.80	84.00	75.00	61.80	55.60	46.60
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: South Dakota Farm Real Estate Market Surveys, SDSU, 2001 and earlier year reports

Table 4. Reported cash rental rates of South Dakota agricultural land by region and county clusters, 2001 and 2000 rates.

	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
Nonirrigated Cropland	<i>dollars per acre</i>							
Average 2001 rate	72.95	93.80	64.30	46.90	64.60	84.30	65.90	54.90
High Productivity	99.75	124.60	88.70	70.00	86.00	116.40	87.90	71.10
Low Productivity	52.60	68.40	46.40	32.30	43.20	58.60	43.80	35.90
Average 2000 rate	67.50	87.40	60.70	44.80	56.40	72.50	63.10	45.60
Hayland								
Average 2001 rate	61.20	81.90	55.00	36.05	47.60	69.20	47.30	36.10
High Productivity	78.30	102.30	71.40	48.75	62.10	92.50	63.10	44.45
Low Productivity	43.60	59.60	39.10	23.75	32.10	48.30	32.50	22.65
Average 2000 rate	57.80	79.70	50.40	31.30	40.10	62.50	40.20	33.20
Pasture/rangeland								
Average 2001 rate	30.90	37.70	28.60	24.00	30.40	33.60	30.20	29.30
High Productivity	42.10	50.80	39.10	33.10	37.60	41.00	39.40	34.55
Low Productivity	21.30	25.30	20.60	16.25	20.30	22.00	22.50	17.55
Average 2000 rate	31.00	41.80	27.50	22.40	26.80	29.40	28.70	24.30

Table 4 (continued). Reported cash rental rates of South Dakota agricultural land by region and county clusters, 2001 and 2000 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
Nonirrigated cropland	<i>dollars per acre</i>							
Average 2001 rate	52.20	53.70	57.70	45.40	37.80	50.70	30.10	30.10
High Productivity	68.60	73.30	74.40	58.10	51.70	68.50	41.90	41.30
Low Productivity	36.20	37.80	39.40	31.40	25.70	35.40	19.20	20.80
Average 2000 rate	49.30	53.10	53.00	39.20	36.20	44.10	28.80	27.90
Hayland								
Average 2001 rate	28.90	36.70	29.20	21.80	21.00	26.05	17.40	18.25
High Productivity	38.20	50.70	37.50	27.90	27.00	34.10	22.20	22.70
Low Productivity	23.10	32.60	21.70	15.90	14.75	17.70	13.10	12.30
Average 2000 rate	28.80	36.30	26.10	22.00	20.30	23.00	19.80	16.00
Pasture/rangeland								
Average 2001 rate	21.00	23.00	20.55	19.25	17.50	20.15	17.20	14.35
High Productivity	27.50	31.30	27.00	23.60	22.30	27.00	20.80	18.00
Low Productivity	15.40	17.70	14.70	13.50	13.10	15.60	12.45	10.40
Average 2000 rate	20.60	24.40	18.60	18.70	17.40	20.40	17.20	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	
Nonirrigated cropland	<i>dollars per acre</i>							
Average 2001 rate	35.30	40.40	32.70	31.50	27.20	20.10	17.50	
High Productivity	48.40	58.75	42.80	41.75	39.30	26.90	23.10	
Low Productivity	24.45	26.75	22.40	25.00	18.10	14.75	13.30	
Average 2000 rate	31.90	34.50	29.10	33.10	30.00	18.70	18.70	
Hayland								
Average 2001 rate	23.30	24.25	23.20	21.30	18.10	15.90	14.70	
High Productivity	30.40	31.90	30.25	26.70	25.40	20.75	18.90	
Low Productivity	17.90	18.25	17.75	17.30	13.50	12.80	10.90	
Average 2000 rate	21.10	24.10	21.20	16.30	19.40	15.10	14.30	
Pasture/rangeland								
Average 2001 rate	20.80	23.40	20.85	15.75	12.90	8.60	6.60	
High Productivity	27.30	30.60	27.65	20.00	18.85	12.25	8.70	
Low Productivity	14.80	17.60	13.90	11.75	10.00	5.80	4.70	
Average 2000 rate	18.50	21.80	19.10	13.80	15.40	8.00	6.80	

Source: South Dakota Farm Real Estate Market Surveys, SDSU, 2000 and 2001.

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.

Cash rental rates: cropland, hayland, and irrigated land

Average cash rental rates in 2001 for nonirrigated cropland vary from \$17.50 per acre in the northwest region to \$64 per acre in the east-central region and \$73 per acre in southeastern South Dakota (Fig 10; Table 3). Average cash rental rates are highest (\$93.80 per acre) in the Clay-Lincoln-Turner-Union cluster and next highest (\$84.30 per acre) in the Minnehaha-Moody county cluster (Table 4).

Within each region and county cluster, cash rental rate for low-productivity cropland are considerably lower than those reported for high-productivity cropland. For example, reported average cash rent for nonirrigated cropland in the southeast region is \$52.60 per acre for lower-productivity cropland and \$99.75 per acre for higher-productivity cropland. In the northwest region, the average cash rent for lower-productivity cropland is \$13.30 per acre while cash rents for higher-productivity cropland average \$23.10 per acre (Table 4).

Hayland cash rental rates in 2001 vary from an average \$14.70 to \$15.90 per acre in western South Dakota to \$47.60 per acre in the east-central region and \$61.20 in the southeast region. In other regions, average cash rental rates for hayland varies from \$18.70 in the south-central region to \$28.90 per acre in the northeast region (Table 3 and Figure 10).

In eastern South Dakota, average cash rental rates for hayland vary from highs of \$81.90 per acre in the Clay-Lincoln-Turner-Union cluster and \$69.20 in the Minnehaha-Moody cluster to about \$36 in the western county clusters of the southeast and east-central region and in the Codington-Deuel-Hamlin cluster of the northeast region. In the remaining county clusters of the northeast, north-central, and central regions, average cash rental rates for hayland vary from a low of \$17.40 per acre in the Edmund-Faulk-McPherson county cluster to \$29.20 per acre in the Grant-Roberts county cluster.

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 and low productivity hayland in the Minnehaha-Moody cluster are \$92.50 and \$48.30, respectively. 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 eastern regions of South Dakota vary from an average

\$77 per acre in the northeast to \$106 per acre in the southeast. Average cash rental rate for gravity-irrigated land in western South Dakota is \$48 per acre, compared to \$67 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 2001 cash rental rates per acre and per-AUM on privately owned rangeland and pastureland in their locality.

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 \$6.60 to \$8.60 per acre in western South Dakota to about \$30 per acre in the east-central and southeast regions. Typical cash rental rates for low-productivity and high-productivity rangeland vary from \$4.70 to \$8.70 per acre in the northwest and from \$21.30 to \$42.10 per acre in the southeast region (Fig 11 and Table 3).

Rangeland rates per AUM in 2001 are fairly uniform across South Dakota, averaging \$15.75 per AUM in the north-central region to \$20 to \$21 per AUM in the southeast and east-central regions.

Changes in cash rental rates

Between 2000 and 2001, cropland cash rental rates per acre increased in almost all county clusters and all regions east of the Missouri River. Average cash rental rates for cropland increased from \$8 to \$12 per acre in several east-central counties and from \$4.70 to \$6.60 in several county clusters in the northeast, north-central, and central regions, especially in or near the James River valley. In most other county clusters, cropland cash rental changes varied from \$0.60 to \$2.20 per acre.

Hayland cash rental rates also increased in most county clusters and in all regions east of the Missouri River, with relatively large increases of \$3 to \$7.50 per acre reported in county clusters of the east-central and southeast regions. Similar increases were also reported in the Hughes-Sully and Brown-Spink clusters. In other county clusters, hayland

cash rental rate increases or decreases were less than \$2.70 per acre (Table 4).

Rangeland cash rental rates increases were greatest in the east-central and central regions with increases from \$1.50 to \$5 per acre across county clusters. Mixed patterns of modest increases or decreases in rangeland cash rental rates occurred across county clusters in the southeast, northeast, and north-central regions.

West of the Missouri River, cash rental rates increased for all land uses in the southwest and declined for all land uses in the south-central region. Cropland and rangeland cash rental rates decreased slightly in the northwest region. It is important to note that reported annual land value and cash rental estimates in these regions are based on reports from comparatively few respondents relative to the number of responses in all regions east of the Missouri River.

Respondents' perception of percentage changes in cash rental rates from 2000 to 2001 are generally consistent with the changes in dollar values of rental rates reported. A majority of respondents reported increases in cash rental rates. More respondents (59% of total respondents) reported increases in cropland cash rents than reported increases in hay, range, or pasture cash rental rates (46% of the total). The highest percentage increases in cropland rental rates were reported by respondents in the east-central and southeast regions, while the highest percentage increases in pasture and rangeland rental rates were reported in the east-central and central regions. Most respondents from west of the Missouri River reported minimal changes or declines in cash rental rates.

From 1991 to 2001, the average reported cash rental rates for cropland, hayland, and rangeland increased in all regions. During this period, average cash rental rates for cropland increased from 22% to 35% in the south-central, western, and northeast regions and from 48% to 54% in the other eastern and central regions of South Dakota. The average dollar amount of cropland cash rental rates increased from \$4 to \$5 per acre in the south-central and western regions, from \$12 to \$14 per acre in the central, north-central, and northeast regions, and \$21 to \$24 per acre in the east-central and southeast regions. Overall, cropland cash rental rates increased at an annual average rate from 2 to 2.6% per year in western South Dakota compared to an average of 4 to 4.5% in much of eastern and central South Dakota.

From 1991 to 2001, average cash rental rates per acre of rangeland increased by nearly \$3 per acre in western

South Dakota and nearly \$12 per acre in the east-central and southeast region. During this same period, average cash rental rates per AUM also increased in all regions. Average increases in AUM rental rates across regions varied by \$2.60 to \$6.30 per AUM.

Thus, increases in agricultural land values from 1991 to 2001 are supported by increases in cash rental rates during the same period. For example, during this 10-year period, cropland cash rental rates increased by an annual average of 2.4% to 2.6% in western South Dakota compared to 4% in the east-central and southeast regions. Cropland values increased an annual average of 2.8% to 3.8% in western South Dakota compared to 5.1% in the east-central and southeast regions.

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 5.3% to 10% for cropland, from 4.2% to 9.4% for hayland, and from 5% to 10.8% for rangeland.⁶

The statewide average gross rate of return (rent-to-value ratio) is 7.5% for non-irrigated cropland, 7.3% for hayland, and 6.1% for rangeland. Regional average rent-to-value ratios vary from 6.1% in the northwest to 7.6% in the northeast. Across all regions and agricultural land uses, the 2001 average rent-to-value ratios were 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-

⁶ 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 rates of return and gross rates of return (rent-to-value ratio).

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.⁷

Average 2001 net rates of return were highest (5.4%) for nonirrigated cropland and lowest (4.3%) for rangeland and pasture. Most respondents reported net rates of return ranging from 2% to 9% for cropland and 2% to 8% for pasture, rangeland and hayland. It is interesting to note that average gross rates of return and net rates of return for rangeland and pasture have been lower than corresponding rates of return to cropland and hayland in each year the survey has been conducted.

The statewide average estimated net rate of return in 2001 on all agricultural land is 4.8%, which is lower than the

10-year average net rate of return of 5.4%. Net rates of return in 2001 for cropland, hayland, and pasture and rangeland were lower than their 10-year average net rates of return (Table 5).

Average net rates of return by region in 2000 varied from 4% to 6%. 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%) reported in the southwest region.

⁷ The market derived income capitalization rate used by appraisers is equal to net returns to land divided by its current market value. One widely used method of estimating net return to agricultural land is subtracting property taxes, land maintenance expense and other land ownership expenses from the gross cash rental rate for the same land. In each SDSU farmland market survey, respondents are requested to estimate this net rate of return by land use for agricultural land in their locality.

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

	2001	2000	Average			2001	2000	Average		
			1999	1998	1991-00			1999	1998	1991-00
<i>Type of land-statewide</i>	<i>GROSS rate of return (%)^a</i>					<i>NET rate of return (%)^b</i>				
All agricultural land ^c	6.7	6.9	7.0	7.1	7.3	4.8	5.1	4.6	5.1	5.4
Nonirrigated cropland	7.6	7.8	7.7	7.9	8.0	5.4	5.5	5.4	6.0	6.0
Rangeland & pastureland	6.1	6.3	6.4	6.5	6.8	4.3	4.9	4.0	4.4	4.8
Hayland	7.3	7.5	7.6	7.7	7.9	5.1	4.9	5.1	5.3	5.5
<i>Region^d</i>	<i>GROSS rate of return (%)</i>					<i>NET rate of return (%)</i>				
Southeast	7.2	7.1	7.2	7.1	7.4	5.4	5.2	4.9	5.9	5.8
East-Central	6.9	7.3	7.5	7.9	7.6	5.5	5.5	5.3	5.5	5.5
Northeast	7.6	7.8	7.9	8.0	8.1	5.6	5.5	6.0	6.0	6.1
North-Central	6.5	7.4	7.4	7.5	7.9	6.1	6.5	5.6	6.0	6.1
Central	7.5	7.4	7.3	7.2	7.7	4.6	4.5	4.5	5.3	5.3
South-Central	6.6	6.4	6.8	6.5	6.9	4.6	4.9	4.3	5.4	5.2
Southwest	6.7	6.2	6.8	6.2	6.7	4.0	3.6	3.5	3.8	4.4
Northwest	6.1	6.7	6.4	7.1	7.1	4.0	5.6	4.6	4.3	5.2

^aGROSS rate of return (percent) is calculated by dividing the average gross cash rental rate by reported value of rental land.

^bNET 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.

^cState level GROSS and NET rate of return estimates are calculated by weighting regional estimates by proportion of acres of each land use by region.

^dRegional 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: 2001 South Dakota farm real estate survey, SDSU

During the 1991-2000 period, the difference between **gross** and **net** rates of return to agricultural land ownership has averaged 2 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 declines in gross cash rates of return and net rates of return in recent years reflect the fact that land values have been increasing at a faster pace than cash rental rates. Thus farmland investors are in a market where an increasing proportion of total returns are from expectations of capital appreciation instead of current cash returns. Nonetheless, cash rental rates are increasing, especially for cropland that experienced several years of near-record crop yields and federal farm program payments.

The current average net rate of return of 4.8% on all agricultural land in South Dakota is considerably 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' assessments of factors influencing farmland markets in South Dakota

Respondents were asked to list major positive factors 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. Almost 80% of respondents listed one or two reasons in each category.

Government farm program payments (25% of responses) were listed most often as a positive factor influencing cash rents and land values. Many respondents provided specific comments on the speed with which government payments were capitalized into higher cash rents and land values. Others cited the vulnerability of the rising dependence of agriculture on federal farm programs as a negative factor in the farm real estate market.

Investor interest and hunting and recreation interest in farm or ranch land were also listed as important positive factors (26% of positive responses) and negative factors (10% of negative responses) in the farm real estate market.

During the 1990s, these two factors increased in relative importance and are now cited by several respondents in each region of South Dakota.

Many respondents commented that investor or hunting and recreation interest in and ability in purchasing farm or ranch land were important factors increasing or maintaining farmland prices in their locality. However, a growing number of respondents in the past 3 years now view investors as a negative factor because investors can often outbid local farmers starting or expanding their operation.

Excellent crop yields, favorable livestock prices, strong demand for land, lower interest rates, and farm expansion were the next five positive factors influencing farmland markets. In the early to mid-1990s, farm expansion was much more likely to be listed as a contributing positive factor.

Low crop prices continue as the principal negative factor affecting farmland markets, according to 46% of responses (Fig 13). Uncertainty about the direction of the general economy and agricultural economy along with low returns and higher input costs were also listed as important negative factors. This is the third year in a row in which general economic and financial factors were the predominant negative responses. Numerous respondents cited the combination of low crop prices and record farm program payments as an unsound foundation for continued increases in cash rents and land values.

Agricultural land market expectations, past and prospective

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 6.3% for cropland, 5.6% for rangeland, and 5.4% for hay land. Nearly three fourths of respondents reported increases in cropland and rangeland values, while two thirds reported increases in hay or tame pasture land values.

Respondents in the east-central, north-central, central, and southeast regions reported considerably higher percentage

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

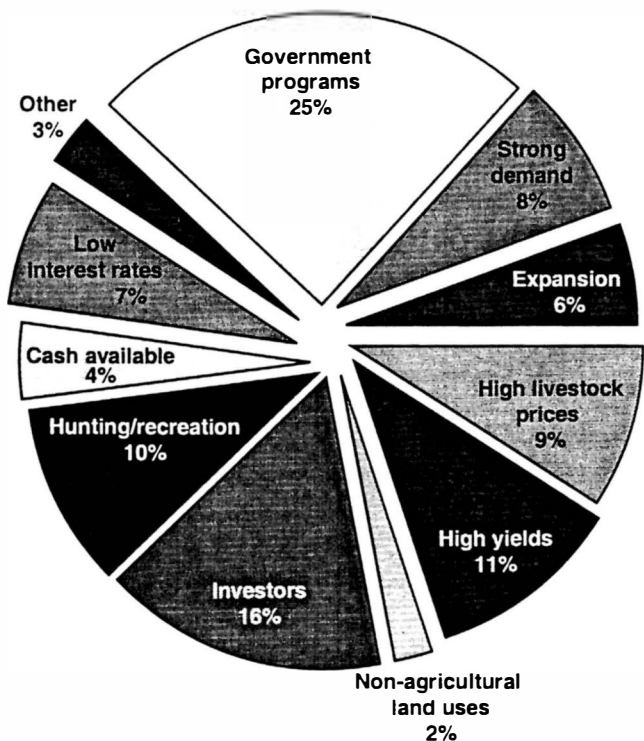
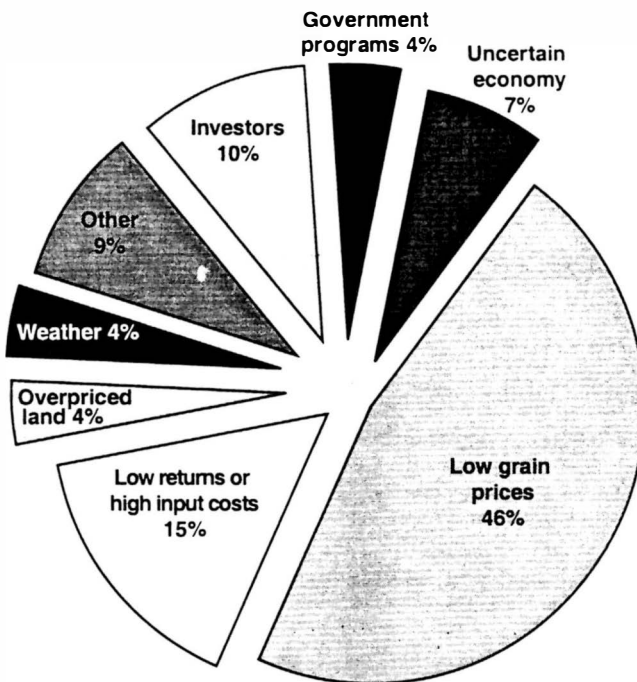


Fig 13. Negative factors in the farm real estate market.



increases in land values than respondents in other regions. In general, respondents' perceptions of percentage changes in land values were similar to or higher than percentage changes calculated from "actual" dollar values.

A majority of respondents (55% to 60%, depending on land use) expect land values to increase in the next 12 months. Most other respondents expect no change in land values and a few respondents expect declines. The average forecast percentage increase in land values varies from 2.5% for hayland to 3% for rangeland. Somewhat higher percentage changes are projected in regions east of the Missouri River.

In summary, respondents to the 2001 survey are fairly optimistic about prospective farm and ranch land market

conditions in the next 12 months. Farmland values have increased more than the rate of general price inflation from 1991 to 2001 in all regions and for all land uses in South Dakota. Cash rental rate increases provide underlying support for increases in land values. These basic economic factors attract interest in farmland purchases by investors and by farmers expanding their operation. Respondents indicate that investor interest, lower interest rates, crop yields substantially above long-term trends, government farm programs, improvements in livestock prices, and hunting and recreation demands have led to increases in land market values during the past 2 years. However, many respondents are concerned about continued low grain and oilseed prices and the dependence of South Dakota agriculture on federal farm program payments.

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Appendix I: Survey methods and respondent characteristics

The primary purpose of the 2001 South Dakota Farm Real Estate Market Survey was to obtain regional and statewide information on: (1) 2001 per-acre agricultural land values by land use and land productivity, and (2) 2001 cash rental rates by agricultural land use and land productivity. In addition, we obtained respondents' assessments of positive and negative factors influencing their local farm real estate market and motivations for buyer and seller decisions.

Copies of the survey were mailed February 8 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 or Farm Credit Bank), (2) loan officers or county directors of the USDA Farm Service Agency (FSA), (3) Cooperative Extension Service agricultural educators and farm management field staff, and (4) licensed appraisers and assessors. Some appraisers were also realtors or professional farm managers, while some lenders were also appraisers.

The total response rate was 41% of 608 persons contacted. The usable survey response rate was 35%. The distribution

of 215 respondents by location and reported occupation is shown in Appendix Table 1. Seventy-eight percent of Farm Service Agency officials, 36% of agricultural lenders and Extension educators, and 25% of licensed appraisers or assessors contacted provided usable responses. Over time, an increasing proportion of respondents have been agricultural lenders or FSA officials.

One half (50%) of the respondents were from the three eastern regions of South Dakota, 34% 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 38% of respondents provided data on irrigated land values, 35% provided data on irrigated land cash rental rates, and 26% provided data on rangeland AUM rental rates. The overall pattern of response rates and respondent location has not changed very much in recent years.

Regional average land values by land use are simple average (mean) values of usable responses. Statewide average land values by land use are weighted by the relative number of acres in each region in the same land use. All-agricultural land values, regional and statewide, are weighted by the relative number of acres in each agricultural land use. Thus all-agricultural land values

in this report are weighted average values by region and land use. This weighted average approach is analogous to the cost (inventory) approach to estimating farm real estate values in rural real estate appraisal.

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. 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 1997 South Dakota Census of Agriculture and other sources (Janssen 1999).

Appendix Table 1. Selected characteristics of respondents, 2001.

Number of respondents = 215

Respondents:

<i>Reporting location</i>	<i>N</i>	<i>%</i>	<i>Primary Occupation</i>	<i>N</i>	<i>%</i>
Southeast	41	19.1%	Banker/loan officer	104	48.4%
East-Central	39	18.1%	Farm Service Agency	43	20.0%
Northeast	27	12.6%	Assessor	20	9.3%
North-Central	35	16.3%	Appraiser/realtor	24	11.2%
Central	23	10.7%	Extension agents	24	11.2%
South-Central	15	7.0%		215	100.0%
Southwest	14	6.5%			
Northwest	21	9.8%			
	215	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	204	94.9%	Nonirrigated cropland	201	93.5%
Irrigated cropland	82	38.1%	Irrigated cropland	75	34.9%
Hayland	172	80.0%	Hayland	171	79.5%
Rangeland (native)	187	87.0%	Rangeland (acre)	182	84.7%
Pastureland (tame)	161	74.9%	Rangeland (AUM)	55	25.6%

Source: 2001 South Dakota farm real estate market survey