8-1996

South Dakota Agricultural Land Market Trends: 1991-1996

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South Dakota
Agricultural Land Market Trends
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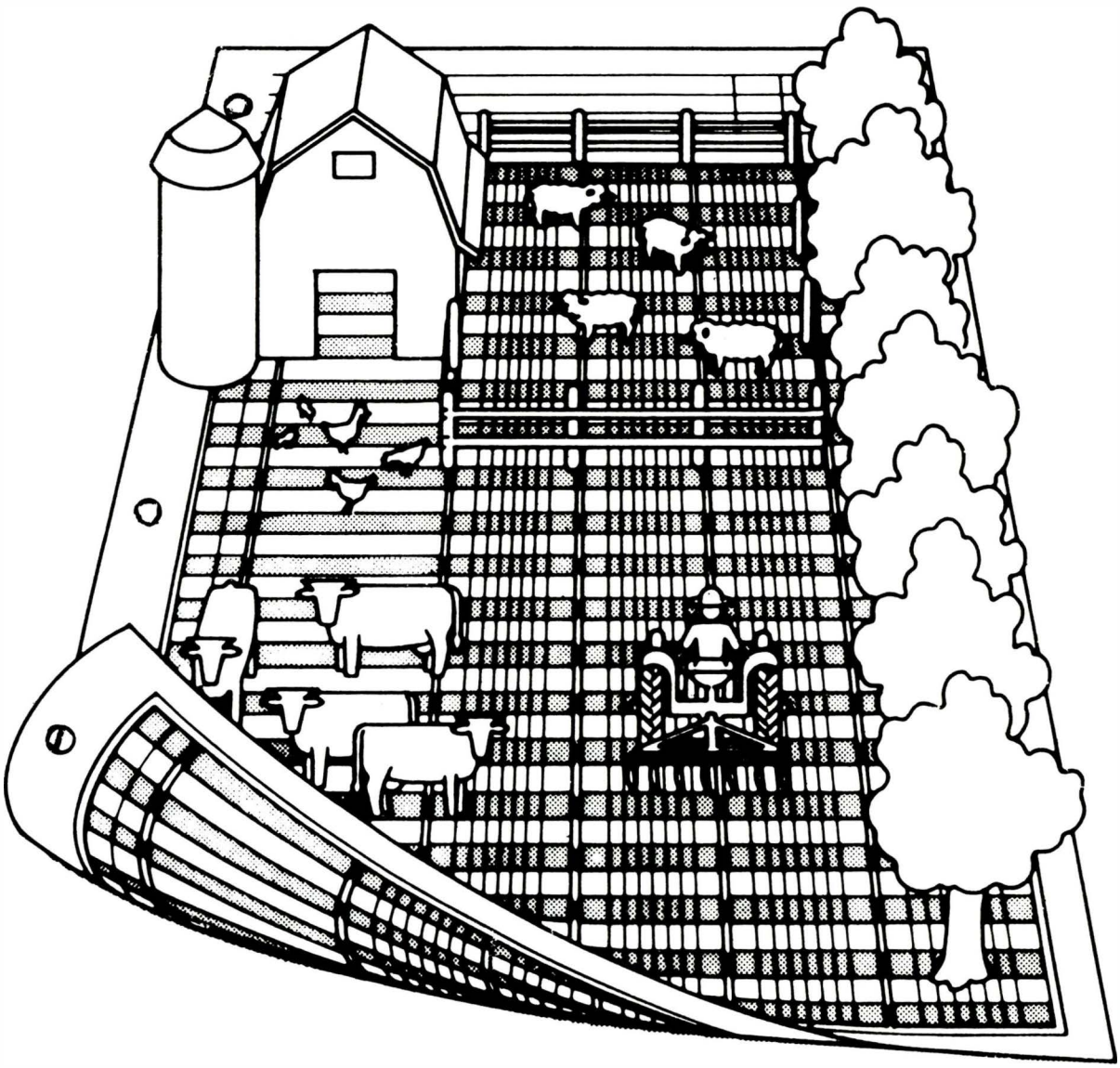
Results from the 1996 SDSU South Dakota Farm Real Estate Survey



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South Dakota Agricultural Land Market Trends 1991–1996
Results from the 1996 SDSU South Dakota Farm Real Estate Survey

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Results from the 1996 SDSU South Dakota Farm Real Estate Survey

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Foreword

Agricultural land values and cash rental rates in South Dakota, regional and statewide, 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 policymakers interested in agricultural land market trends. The report contains the results of the 1996 SDSU South Dakota Farm Real Estate Survey, the sixth 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 and Dr. Don Taylor of the SDSU Economics Department, and Mary Brashier, Ag Communications Department, SDSU.

Rebecca Woodland, graduate assistant and co-author of this report, conducted the many tasks associated with survey development, data collection, editing, and data entry. We wish to thank Economics secretarial staff for developing and maintaining mailing lists and for developing most of the figures and charts included in this report.

General funding for this project is from the SDSU Agricultural Experiment Station project H-134.

Finally, we wish to thank all of the 218 respondents (lenders, appraisers, and Extension agents) who participated in the 1996 South Dakota Farm Real Estate Survey. Most of these people have participated in one or more past annual land market surveys. Without their responses, this report would not be possible.

South Dakota

Agricultural Land Market Trends

1991—1996

Summary

The 1996 SDSU Farm Real Estate Market Survey reports current agricultural land values and cash rental rates by land use in different regions of South Dakota and compares them with values from earlier years. Key findings are highlighted below.

South Dakota agricultural land values generally increased more than the rate of general price inflation from 1991 to 1996. During the past 5 years, agricultural land value increases have been close to the inflation rate (+13.5% over the period) in east-central and northeast regions and above the inflation rate in all other regions. Rangeland values increased at a greater rate than cropland values during most of this period.

From 1995 to 1996, South Dakota farmland values increased 4.2%, paced by strong increases of 12% in the northwest and central regions. Slight declines in agricultural land values occurred in the northeast, south-central, and southwest regions.

South Dakota's agricultural land values vary systematically 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 generally highest in the southeast and lowest in the west.

Average value of nonirrigated agricultural land (as of February 1, 1996) in South Dakota is $273 per acre, varying from $636 per acre in the southeast to $112 per acre in the northwest.

Average nonirrigated cropland values vary from $751 per acre in the southeast region to $332 per acre in the central region and $191 per acre in the northwest. Average cropland values exceed $950 per acre in a few counties of eastern South Dakota.

Average rangeland values vary from $336 per acre in the southeast to $97 per acre in the northwest.

Within each region, there are substantial differences in per-acre value by land productivity and land use.

Average cash rental rates per acre also vary systematically 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 1996 for nonirrigated cropland are between $70 and $85 per acre in a few counties of eastern South Dakota and $16 to $17 per acre in western South Dakota. Average range-

land rents vary from $21.20-$22.10 per acre in the southeast and east-central regions to $5.60-$6.10 per acre in western South Dakota.

Cash rental rates have held steady or increased during the past several years. From 1991 to 1996, average cash rental rates per acre for hayland, pasture, and rangeland increased in all regions of South Dakota. Average cropland rental rates increased in all except the south-central region. In all regions, hayland and cropland cash rental rates increased at a slower rate than cropland or hayland values.

From 1995 to 1996, average cash rental rates for cropland increased $2-$3 per acre in the east-central and southeast regions and were steady to $1.20 higher in most other regions. Strong increases in hayland cash rental rates were reported in the east-central and central regions and were steady to slightly higher in most other regions.

Rangeland rates per AUM (Animal Unit Month) declined or held steady during this past year and vary from an average $14.70 in the north-central region to $17.50 in the southeast. From 1991 to 1996, AUM rental rates held steady in the northeast and increased elsewhere.

Rates of return to agricultural land have held steady or declined over the past several years. Gross rent-to-value ratios (gross cash rent as a percent of reported land value) are a measure of **gross** rate of return to land before deduction of property taxes and other landlord expenses. In 1996, gross rent-to-value ratios average 7.1% for all ag land, 7.9% for nonirrigated cropland, and 6.4% for rangeland.

Respondents were asked to estimate **net** rates of return to agricultural land ownership in their locality, given current land values. Statewide, the estimated net rate of return to agricultural land declined from 5.8% in 1992 to 5.1% in 1996.

Farm expansion is the major reason for purchasing and farm retirement or estate settlement are the major reasons for selling farmland. These have been major reasons for selling and buying farmland since the 1950s. Financial position and pressure are important motivations for many buyers and sellers and contribute to market weakness in some localities.

Respondents expressed cautious optimism for 1996 farmland values with increases projected by most respondents in eastern and central South Dakota and modest declines projected by respondents in western South Dakota. Continued low cattle prices and major policy changes recently enacted in the 1996 farm bill could have considerable impacts on agricultural land markets in the next few years. ❑

South Dakota
Agricultural Land Market Trends
1991-1996

The 1996 SDSU Farm Real Estate Market Survey is the sixth annual survey of agricultural land values and cash rental rates by land use (cropland, rangeland, tame pastureland, hayland, and irrigated land) in different regions of South Dakota. Publication of survey findings is a response to numerous requests by farmland owners, renters, appraisers, lenders, and others for more detailed information on farmland markets in South Dakota.

The 1996 estimates are based on reports from 218 respondents to the SDSU 1996 South Dakota Farm Real Estate Market Survey. Respondents are agricultural lenders, rural appraisers, realtors, professional farm managers, or Extension agricultural agents. All are familiar with farmland market trends in their localities.

Copies of the survey were mailed in February and March 1996 requesting information on cash rental rates and agricultural land values as of February 1, 1996. Most of the survey reports were returned before the 1996 farm bill was passed. Response rates, respondent characteristics, and estimation procedures are discussed in Appendix I.

Results are presented in a format similar to that of previous years' surveys (see Janssen *et al*, 1995, 1994, 1993, 1992, 1991). Regional level information on land values and cash rents by land use are emphasized in these SDSU reports. Current-year findings are also compared to those of earlier years.

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.

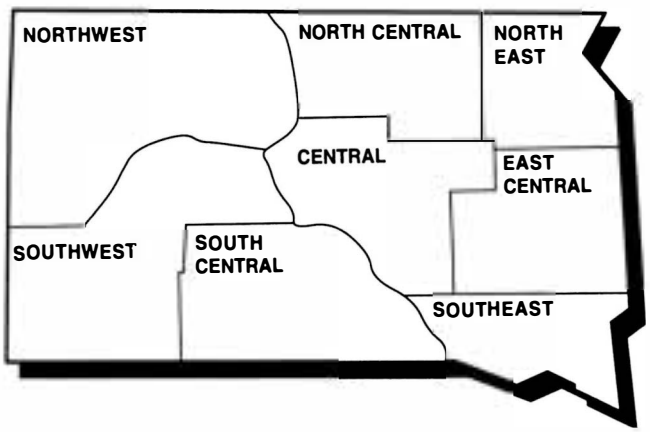
County data on whole farm, cropland, and pastureland rents and values are provided by the South Dakota Agricultural Statistics Service (SDASS) in their report: *South Dakota 1996 County Level Land Rents and Values.*[2] The SDASS report is based on a telephone survey of South Dakota farm/ranch producers and is the third annual survey of county level land rents and values.

1996
South Dakota Agricultural Land Values and Value Changes

Respondents to the 1996 South Dakota Farm Real Estate Market Survey estimated the per-acre value of nonirrigated cropland, hayland, rangeland, tame pastureland, and irrigated land in their county and the percent change in value from one year earlier. Responses for nonirrigated land uses are grouped into eight agricultural regions (Fig 1). The six regions in eastern and central South Dakota correspond with USDA Crop Reporting Districts. In 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 irrigat-

[2] The SDASS report on county level land rents and values can be obtained by calling (605) 330-4235 or writing South Dakota Agricultural Statistics Service / P.O. Box 5068 / Sioux Falls, SD 57117-5068.

Fig 1. Agricultural regions of South Dakota.



ed land values and rental rates are regrouped into six 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 value estimates are weighted averages based on the relative amount and value of each nonirrigated agricultural land use in each region (Appendix I).

The all-land values shown for 1991-1995 are revised from last year's (1995) report because (1) irrigated land is now excluded in calculating all-land values, and (2) more recent (1992 South Dakota Census of Agriculture) land use information shows a higher proportion of rangeland. The net impact is to slightly reduce reported all-land values.

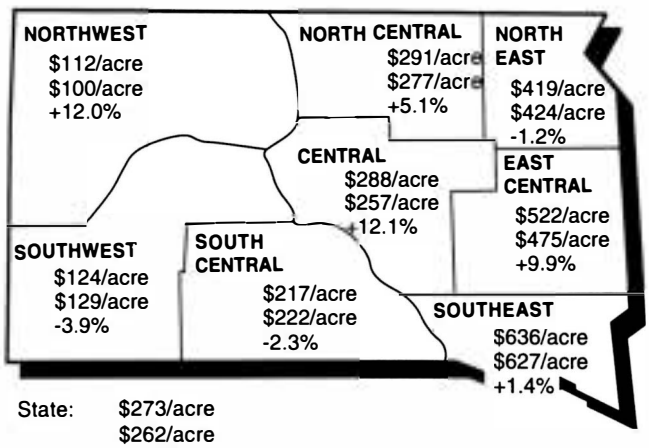
From 1991 to 1996, South Dakota agricultural land values increased more than the rate of price inflation (+13.5%) in most regions. As of February 1996, the South Dakota all-land average value was $273 per acre, an estimated 4.2% increase in value from one year earlier and 22.4% above February 1991 estimates (Fig 2; Table 1).

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.[3]

The all-land average values are highest in eastern South Dakota, with per-acre values ranging from $636 in the southeast to $522 in the east-central and $419 in the northeast regions. These three eastern regions contain the most productive land in South Dakota.

[3] Based on 1992 land use data, the estimated proportions of privately owned farmland in South Dakota by land use are rangeland, 48%; tame pastureland, 7%; nonirrigated cropland, 35%; hayland, 9%; and irrigated land, 1%. Most agricultural land in each region (78-92% of acres) is native rangeland or nonirrigated cropland, but the proportion in each use varies greatly by region. For example, native rangeland is the dominant land use in western South Dakota, while most agricultural land in eastern South Dakota is nonirrigated cropland. Most of the remaining agricultural land (8-22%) in each region is tame (improved) pasture or hay (alfalfa hay, other tame hay, or native hay). Irrigated land is primarily used to produce corn or alfalfa hay and is concentrated in the southeast region, near the Black Hills, and along the Missouri River.

Fig 2. Average value of South Dakota agricultural land, February 1, 1996 and 1995, and percent change from one year ago.[a]



State: $273/acre
$262/acre
+4.2%

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, 1996
Middle: Average per-acre value—February 1, 1995
Bottom: Annual percent change in per-acre land value

[a] The 1995 all-land values are revised slightly from last year's report. See text (page 6) for details.

Source: 1996 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, 1991-1996.

Type of Land	*South-east*	*East-Central*	*North-east*	*North-Central*	*Central*	*South-Central*	*South-west*	*North-west*	*STATE*
All Agricultural Land (nonirrigated)									
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
5-year % change 96/91	20.9	12	15.7	28.2	28.0	22.6	27.8	33.3	22.4
Annual % change 96/95	1.4	9.9	-1.2	5.1	12.1	-2.3	-3.9	12	4.2
Annual % change 95/94	10.6	-4.4	7.9	-5.5	0.8	16.2	15.2	6.4	4.8
Annual % change 94/93	3.5	-0.2	-1.5	15.4	9.4	-4.0	0.9	4.4	3.7
Annual % change 93/92	5.6	5.1	8.4	-1.9	4.5	7.0	6.7	1.1	4.3
Annual % change 92/91	-1.3	1.7	1.7	14.1	-0.9	5.1	7.2	6.0	3.6
Nonirrigated Cropland									
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
5-year % change 96/91	20.5	10.6	14.2	26.5	19.4	16.5	15.6	24.8	18.8
Annual % change 96/95	2.6	10.5	-1.5	5.4	11.7	-2.8	-9.7	3.2	3.9
Annual % change 95/94	10.7	-5.9	7	-7.6	0.3	12.8	8.7	9.5	2.3
Annual % change 94/93	0.9	-0.8	-1.8	17.2	8.5	-4.3	10.7	3.7	3.4
Annual % change 93/92	6.3	3.7	8.0	-4.7	1.7	5.2	0.5	-2.4	3.2
Annual % change 92/91	-1.1	3.6	2.2	16.3	0.0	5.5	5.9	9.2	4.1

Source: 1996 and earlier South Dakota Farm Real Estate Market Surveys

Cropland and hayland, 70%-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. Average value per acre ranges from $217 in the south-central region to $288 and $291, respectively, in the central and north-central regions. Cropland and hayland are a majority of farmland acres in the central and north-central regions; rangeland and pasture are 69% of agricultural land acres in the south-central region. Lowest average land values are in the northwest ($112 per acre) and southwest regions ($124 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 1995 to early 1996) were related to changing economic conditions

Table 1 (continued)

Type of Land	*South-east*	*East-Central*	*North-east*	*North-Central*	*Central*	*South-Central*	*South-west*	*North-west*	*STATE*
Rangeland (native)									
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
5-year % change 96/91	25.4	14.8	22.0	32.0	31.3	29.2	35.1	40.6	31.2
Annual % change 96/95	-5.1	2.6	1.2	5.4	8.6	-1.7	-1.0	16.9	5.1
Annual % change 95/94	11.0	7.1	8.3	0.0	3.7	20.8	18.8	3.8	8.8
Annual % change 94/93	12.7	2.5	-1.7	8.9	8.6	-5.1	-4.5	5.3	2.5
Annual % change 93/92	4.4	3.4	11.0	3.7	10.1	8.3	11.3	2.7	7.0
Annual % change 92/91	1.1	-1.5	2.0	10.9	-2.5	5.8	8.1	7.2	4.6
Pasture (tame, improved)									
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
5-year % change 96/91	20.3	10.2	10.7	35.9	29.6	15.3	38.0	22.3	24.3
Annual % change 96/95	-1.6	3.5	6.5	6.0	20.6	-12.1	8.5	12.7	8.0
Annual % change 95/94	3.8	3.3	4.4	9.0	-4.5	10.3	7.3	9.7	4.4
Annual % change 94/93	13.8	0.6	0.8	3.1	15.5	0.5	4.8	-5.1	5.1
Annual % change 93/92	-0.6	8.8	-3.1	0.0	2.1	9.7	4.0	11.4	2.9
Annual % change 92/91	4.1	-5.8	2.0	14.1	-4.5	8.0	8.7	6.4	1.9
Hayland									
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
5-year % change 96/91	23.2	26.0	24.6	29.6	43.7	17.8	23.8	19.7	26.5
Annual % change 96/95	1.1	23.6	-6.5	2.8	19.2	0.9	-4.9	0.7	5.1
Annual % change 95/94	14.9	-10.8	20.4	-9.4	-3.4	12.7	19.7	16.9	5.8
Annual % change 94/93	12.4	2.8	1.5	25.0	15.6	0.0	-2.1	2.5	7.6
Annual % change 93/92	4.6	18.5	16.0	5.0	4.1	5.7	3.7	1.7	7.7
Annual % change 92/91	-9.8	-6.1	-6.0	5.9	3.7	-2.0	7.1	-2.5	-1.9

in the crop and cow-calf sectors and the impact of 2-3 years of wet weather conditions in some localities. According to survey reports, agricultural land values decreased slightly in the northeast, south-central, and southwest regions of South Dakota. Modest declines in cropland and rangeland value were reported in the south-central and southwest regions, while cropland and hayland values declined slightly in the waterlogged northeast region. Land value increases of 12% were reported in the central and northwest region with strong increases in values reported for all land uses. Excellent crop and range conditions were frequently reported in these regions.

Five-year (1991-1996) trends in agricultural land values show increases of 12% and 15.7%, respectively, in the east-central and northeast regions, close to the 5-year inflation rate of 13.5%. Increases of 27.8% to 33.3% in land values in the southwest, central, north-central, and northwest regions in the same period have been well above the inflation rate.

Rangeland values have increased at a greater rate than cropland values in all regions over the 1991-1996 period. Statewide, from 1991-1996, rangeland values increased 31.2% and cropland values increased 18.1%. Hayland and tame pastureland values increased about 25% during this same period (Table 1).

Forage land value increases have lagged behind and are closely related to strong cattle prices and cow-calf profits from 1991 to early 1995. Since early 1995, economic losses have occurred in the cow-calf industry and further losses are expected into 1997. This could lead to declines or minimal changes in forage land values during the next 2-3 years.

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, while the lowest average land values are found in the northwest and southwest regions (Figs 3, 4; 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

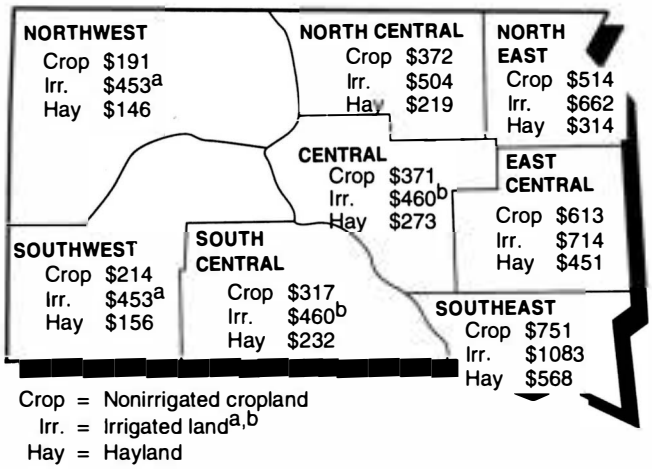
The weighted average value of South Dakota's nonirrigated cropland (as of February 1996) is $456, a 3.9% increase from 1995.

There is considerable regional variation in value changes. For example, substantial increases of 10-12% in cropland values are reported for 1996 in the east-central and central regions, while declines are reported in the northeast, south-central, and southwest regions. From 1991 to 1996, South Dakota cropland values increased in all regions with a statewide increase of 18.1%.

The southeast region has the highest average cropland values ($751 per acre), followed by cropland in the east-central and northeast regions (Fig 3; Table 1). These three eastern regions contain nearly 45% of South Dakota's cropland, and the major crops are corn, soybeans, wheat, and other small grains.

Wheat and other small grains are the predominant cropland uses in the central regions of South Dakota. Average cropland values in the north-central and central region are higher ($371-372 per acre) than in the south-central region ($317 per acre). The lowest average cropland values ($191 to $214 per acre) are found in the northwest and southwest regions. 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 one fourth of those in the southeast (Table 1).

Fig 3. Average value of South Dakota cropland, irrigated land, and hayland, by region, February 1996, dollars per acre.



Crop = Nonirrigated cropland
Irr. = Irrigated land[a,b]
Hay = Hayland

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

Source: 1996 South Dakota Farm Real Estate Market Survey, SDSU.

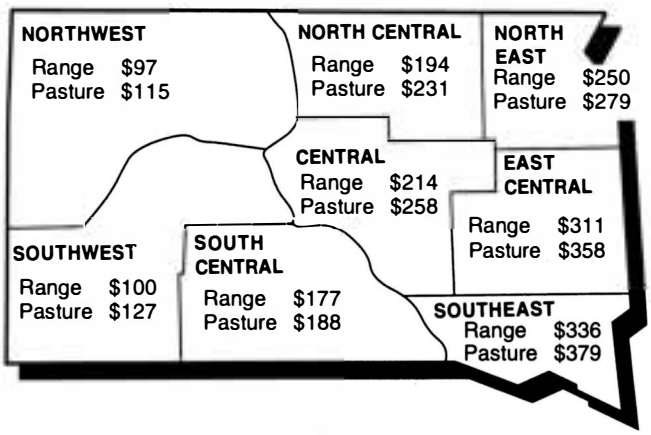
Hayland Values

South Dakota hayland values averaged $267 per acre as of February 1996, a 5.1% increase from one year earlier and a 26.5% increase from 1991. Strong annual increases in hayland values are reported in the east-central and central, while slight declines were reported in the northeast and southwest regions.

From 1991-1996, the strongest increases in hayland values (+43.7%) were reported in the central region while increases of less than 20% were reported in the south-central and northwest regions.

Per-acre hayland values follow the same regional patterns as cropland values, highest in the southeast ($568 per acre) and lowest in the northwest ($146 per acre). Alfalfa hay and other tame hay are the most common hays harvested in eastern South Dakota, while native hay is more common in central and western South Dakota. Respondents from the southeast and east-central regions primarily reported alfalfa hayland values, while those in all other regions primarily reported all-hayland values.

Fig 4. Average value of South Dakota rangeland and tame pasture, by region, February 1996, dollars per acre.



Source: 1996 South Dakota Farm Real Estate Market Survey, SDSU.

Pasture and Rangeland Values

In February 1996, the weighted average value of South Dakota native rangeland was $143 per acre, while the average value of tame pasture was $256 per acre (Table 1; Fig 4). Native rangeland is much more concentrated in the western and central regions of South Dakota, while tame pasture is concentrated in the eastern regions.

The statewide average change in value from February 1995 to February 1996 was +5.1% for rangeland and +8.0% for tame pastureland. Slight declines in rangeland values were reported across southern South Dakota (southeast, south-central, and southwest regions), while strong increases were reported in the northwest region. Reported values of pasture increased in all areas except the south-central and southeast regions.

From 1991 to 1996, rangeland values increased 31.2% statewide, with percentage

increases above 29% in all western and central regions and considerably lower increases (14.8% to 25.4%) in eastern regions. During the same period, reported values of tame pastureland increased 24.3%, with greatest percentage increases in the southwest and north-central regions and the smallest (about 10%) increases in the east-central and northeast.

Rangeland average values are highest in the southeast and east-central regions ($336 and $311 per acre, respectively) and lowest in the northwest and southwest regions ($97 and $100 per acre, respectively). In the central regions of South Dakota, average rangeland values are clustered from $177 to $214 per acre, compared to $250 per acre in the northeast (Table 1; Fig 4). Average rangeland values are typically 80% to 90% of the average value of tame pastureland.

In most regions, the average per-acre value of nonirrigated cropland is 1.7-2.2 times the average value of native rangeland. In all regions, per-acre average hayland and tame pasture values are considerably lower than nonirrigated cropland values and somewhat higher than native rangeland values.

Irrigated Land Values

The irrigated land value reports are regrouped into six regions (Table 1A; Fig 3). 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 regions are combined into a western region because almost all irrigated land reports are for gravity-irrigated cropland in counties adjacent to the Black Hills. In all other regions, the value of irrigated land was reported for center pivot irrigation systems, excluding the value of the center pivot.

Table 1A. Average reported value and annual percentage change in value of South Dakota irrigated land by region, 1991-1996.

Type of Land	*South-east*	*East-Central*	*North-east*	*North-Central*	*Central/ S-Central*	*Western*	*STATE*
				dollars per acre			
Irrigated Land							
Average value, 1996	1083	714	662	504	460	453	642
High-Productivity	1294	821	719	603	534	639	—
Low-Productivity	853	571	478	410	393	326	—
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
5 year % change 96/91	15.0	7.4	17.6	16.4	0.0	8.1	10.7
Annual % change 96/95	-5.3	-3.5	-16.5	-5.8	-3.2	10.2	-3.4
Annual % change 95/94	9.7	-6.3	16.1	-5.6	-7.6	-5.3	1.4
Annual % change 94/93	6.5	3.3	17.2	3.8	2.8	-11.8	2.3
Annual % change 93/92	-0.6	-9.4	-9.0	21.6	7.6	8.9	2.9
Annual % change 92/91	4.6	24.4	13.9	3.9	7.2	7.6	7.2

Source: South Dakota Farm Real Estate Market Surveys 1996 and earlier reports.

We continue to caution readers that irrigated land value data are less reliable than data shown for other agricultural land uses. Irrigated land is not common (less than 1% of total acres) in most regions, and there are few sales of irrigated land tracts. Consequently, only 29% of all respondents were able to provide information on irrigated land values.

Based on 63 responses, irrigated land value declines were reported in all regions except western South Dakota. Statewide average irrigated land values are $642 per acre, a 3.4% decrease from a year earlier and 10.7% above 1991 reported values. Average irrigated land values are above the statewide average in the southeast ($1083 per acre), east-central ($714 per acre), and northeast ($662 per acre) regions. In central and western regions of South Dakota, irrigated land values average $453 to $504 per acre (Table 1A; Fig 3).

Variation in Land Values By Land Productivity And County Cluster

Within each region and for each agricultural land use, there is considerable variation in land values. In this section, we report February 1996 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 land 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. At present, 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 land productivity for each land use in each region. For example, 1996 cropland values in the southeast region range from an average of $545 per acre for low-productivity cropland to $975 per acre for high-productivity cropland. In the northwest region, at the other extreme, the average value of low (high) cropland values is $146 ($223) per acre. In most regions, average value of high-productivity cropland is 50% to 80% higher than average value of low-productivity cropland (Table 2).

Rangeland values in the southeast region vary from $259 per acre for lower-productivity rangeland to $395 per acre for higher-productivity rangeland. In the northwest region, at the other extreme, the average value of low- (high-) productivity rangeland is $69 ($117) per acre. Average value of high-productivity rangeland is 38% to 52% above average value of low-productivity rangeland in all regions east of the Missouri River and 64% to 81% above the value of low-productivity rangeland in regions west of the Missouri River (Table 2). Most of the differences in rangeland values reflect differences in livestock carrying capacity.

The greatest variation in land values is in the east-central and southeast regions.

For example, the per-acre value of average quality nonirrigated cropland is (1) $999 to $968 per acre, respectively, in the Minnehaha-Moody and Clay-Lincoln-Turner-Union county clusters, (2) $583 to $655 per acre in the Brookings-Lake-McCook and Bon Homme-Hutchinson-Yankton county clusters, and (3) only $435 to $448 per acre in the western county clusters (Sanborn-Davison-Hanson-Kingsbury-Miner and Charles Mix-Douglas) of these two regions (Table 2). Similar patterns of per-acre values occur for other land uses in these three pairs of county clusters.

Compared to 1995, land values increased considerably in the county clusters with the highest land values (Minnehaha-Moody and Clay-Lincoln-Turner-Union counties) and held steady or declined in the other county clusters of these two eastern regions.

In the northeast region, land value changes by land use from 1995 to 1996 were mixed in each county cluster. Average cropland values are highest in the Grant-Roberts county cluster, while hayland values are highest in the Codington-Deuel-Hamlin county cluster. Average values of pastureland and rangeland are similar in both county clusters. Considerably lower average land values are found for each land use in the Clark-Marshall-Day county cluster.

In the north-central region, average land values reported in Brown and Spink counties are much higher than average land values in the other counties. Most land in Brown and Spink counties is located in the James River valley and is more productive than most other land in the north-central region. Compared to 1995, cropland values increased considerably in the Brown-Spink county cluster and held steady or declined in the other two county clusters. Rangeland and pasture values increased throughout this region.

Strong increases in land values were reported for each nonirrigated land use in the central region. The per-acre values of rangeland and pasture are highest in the Aurora-Beadle-Jerauld county cluster. Cropland and hayland values are highest in the Hughes-Sully county cluster.

In each of these five regions of eastern and central South Dakota, cropland values increased the most in the county clusters with the **highest** cropland values. In these same regions, cropland values held steady or declined slightly in the county clusters with the **lowest** average crop-

Table 2. Average reported value per acre of agricultural land by South Dakota region, county clusters, type of land, and land productivity, February 1, 1996.

Agricultural Land Type and Productivity	*All*	*Southeast*			*All*	*East-Central*		
		Clay Lincoln Turner Union	*Bon Homme Hutchinson Yankton*	*Charles Mix Douglas*		*Minnehaha Moody*	*Brookings Lake McCook*	*Sanborn Davison Hanson Kingsbury Miner*
	dollars per acre							
Nonirrigated Cropland								
Average	751	999	655	448	613	966	583	435
High-Productivity	975	1350	860	573	759	1227	734	509
Low-Productivity	545	722	458	333	477	698	442	375
Rangeland (native)								
Average	336	407	317	279	311	395	282	291
High-Productivity	395	478	380	323	361	500	320	328
Low-Productivity	259	327	233	224	261	316	239	248
Pastureland (tame, improved)								
Average	379	476	363	296	358	485	330	329
High-Productivity	436	562	435	329	422	610	394	367
Low-Productivity	308	406	305	234	304	400	279	280
Hayland								
Average	568	856	430	317	451	782	397	327
High-Productivity	712	967	627	368	518	930	455	362
Low-Productivity	416	587	360	225	349	558	307	273

Source: 1996 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.

land values. These findings are consistent with a transition toward a more market-oriented farm policy.

Land values in the most cropland-intensive and productive areas will be expected to increase faster (or decline more slowly) than cropland in more marginal areas.

For the regions west of the Missouri River, average land values for each land use are highest in the south-central region and are lowest in the northwest region. From 1995 to 1996, strong increases in rangeland and pastureland values were reported in the northwest region, and steady to declining values were reported in the south-central and southwest regions. Cropland values increased 3.2% in the northwest region and declined modestly in the southwest and south-central regions.

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 localities. During the 6 years the SDSU Farm Real Estate Market Survey has been conducted, the most commonly cited reasons for purchase and sale have not changed.

Farm expansion was the most popular reason (46.7% of responses to this question) for purchasing farmland. Investment potential of farmland, location of the land tract, and favorable prices were the next three most common reasons (Fig 5). Some additional reasons for purchasing farmland include buying land for use as a hunting or wildlife area, moving

Table 2 (continued)

		Northeast				North Central		
Agricultural Land Type and Productivity	*All*	*Codington Deuel Hamlin*	*Grant Roberts*	*Clark Day Marshall*	*All*	*Brown Spink*	*Edmunds Faulk McPherson*	*Campbell Potter Walworth*
	dollars per acre							
Nonirrigated Cropland								
Average	514	547	632	392	372	496	284	317
High-Productivity	695	667	906	521	459	650	334	387
Low-Productivity	364	398	424	281	298	385	231	264
Rangeland (native)								
Average	250	267	254	215	194	258	190	149
High-Productivity	286	300	295	249	230	290	220	182
Low-Productivity	203	221	212	172	151	196	150	122
Pastureland (tame, improved)								
Average	279	295	292	245	231	294	213	214
High-Productivity	319	327	347	279	265	318	230	267
Low-Productivity	221	240	218	198	186	215	174	203
Hayland								
Average	314	382	320	235	219	284	193	200
High-Productivity	387	449	433	287	259	330	227	240
Low-Productivity	244	277	285	174	167	204	148	167

into an area for the country lifestyle, purchasing land from the landlord, and entry into farming. Purchasing farmland for hunting, recreation, or country lifestyle reasons are important factors in some localities, especially close to the Black Hills, near the Missouri River, and within commuting distance of Sioux Falls.

Retirement from farming was the most common reason (40.5% of responses to this question) given for selling farmland (Fig 6). Financial reasons and settling estates were the second and third most popular reasons. Additional reasons for selling farmland include favorable market conditions for selling, cash flow pressure, and low profitability. Compared to past surveys, there appears to be more financial pressure for selling farmland.

Positive and Negative Factors Affecting 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 amount of farmland for sale, how much is sold, and sale prices.

High income from favorable crop prices was listed more often than any other positive factor (42.7% of responses) affecting farmland markets. This response was considerably higher than a year ago. There was also an increase in the response of low interest rates as a positive factor, moving it to the second most common reason. Lower interest rates were fol-

Table 2 (continued)

Agricultural Land Type and Productivity	*All*	*Aurora Beadle Jerauld*	*Central Buffalo Brule Hand Hyde*	*Hughes Sully*	*South-Central All*	*South-west All*	*North-west All*
				dollars per acre			
Nonirrigated Cropland							
Average	371	341	339	432	317	214	191
High-Productivity	429	414	403	487	421	251	223
Low-Productivity	288	298	263	310	253	148	146
Rangeland (native)							
Average	214	265	229	162	177	100	97
High-Productivity	256	304	279	196	220	132	117
Low-Productivity	176	217	194	126	134	73	69
Pastureland (tame, improved)							
Average	258	278	275	243	188	127	115
High-Productivity	292	304	312	292	247	152	132
Low-Productivity	218	226	230	212	152	99	89
Hayland							
Average	273	281	259	288	232	156	146
High-Productivity	299	319	283	317	271	188	166
Low-Productivity	214	233	198	218	177	107	107

lowed by investment potential as most common positive factors affecting South Dakota farmland markets.

Responses varied greatly by location. Additional major positive factors include farm expansion, demand for farmland, government programs, demand for hunting and/or recreation on rural lands, good crop yields, and the desire for a rural lifestyle (Fig 7).

Low cattle prices was the major negative factor (41.9% of responses to this question) affecting farmland markets. Again, factors varied greatly by respondent location. Weather, in particular excess rainfall, tripled from last year's response to become the second most common negative factor (9.9% of responses). Close behind were market uncertainty (8.7% of responses) and government program uncertainty (8.4% of responses). Additional negative factors include high property taxes, low profits from farmland ownership, high and rising input costs, and lack of available land (Fig 8).

Generally, good crop prices are the major positive factor, and low cattle prices are major negative factor affecting farmland markets.

The growing demand for alternative uses of farmland, such as hunting, recreation, and rural lifestyle, is becoming an important positive factor in the farmland market in many localities. Negative factors are usually financially based, with market uncertainty, high input costs, property taxes, interest rates, and low profits dominating. The key positive and negative factors vary greatly by location.

Fig 5. Reasons for buying farmland

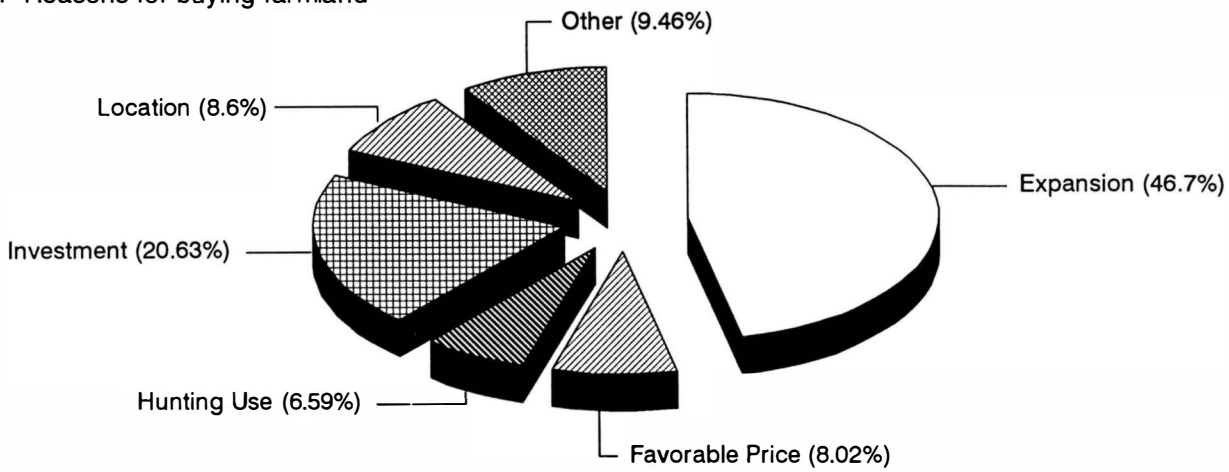
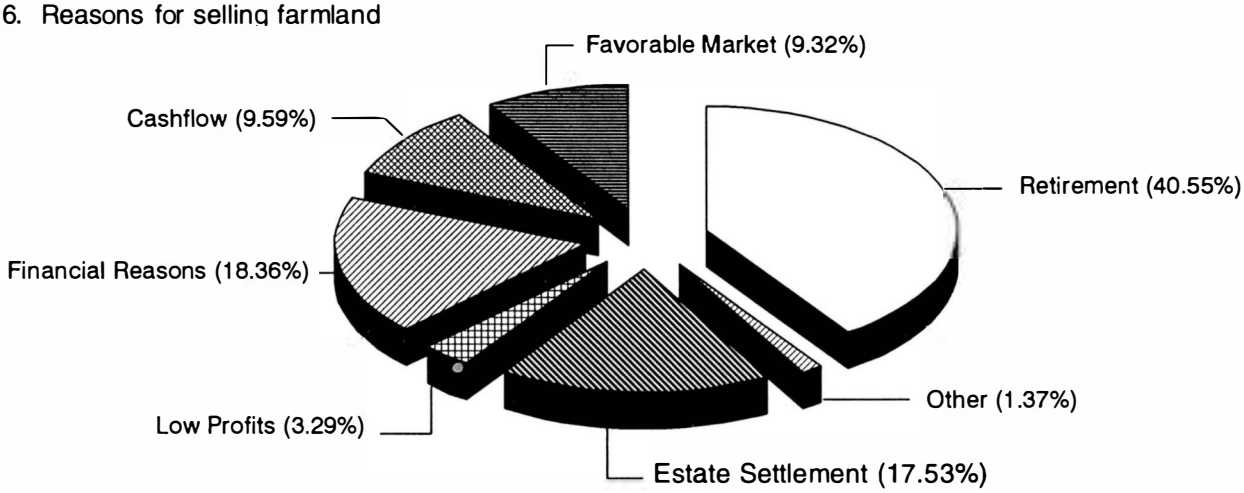


Fig 6. Reasons for selling farmland



1996 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's farmland renters and three fifths of agricultural landlords are involved in one or more cash leases for ag 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. This addition makes cash rental data and land value data collection comparable. Cash rental rates by land use by region are summarized in Tables 3 and 3A and Figures 9 and 10. The same information is summarized by region and county cluster in Table 4.

Cash rental rates differ greatly by region and land use. For each nonirrigated land use, cash rental rates per acre are highest in the southeast and east-central regions and lowest in northwest and southwest South Dakota. In each region, cash rental rates are highest for cropland and lowest for rangeland and pasture (Table 3; Figs 9, 10).

Fig 7. Positive factors in the land market.

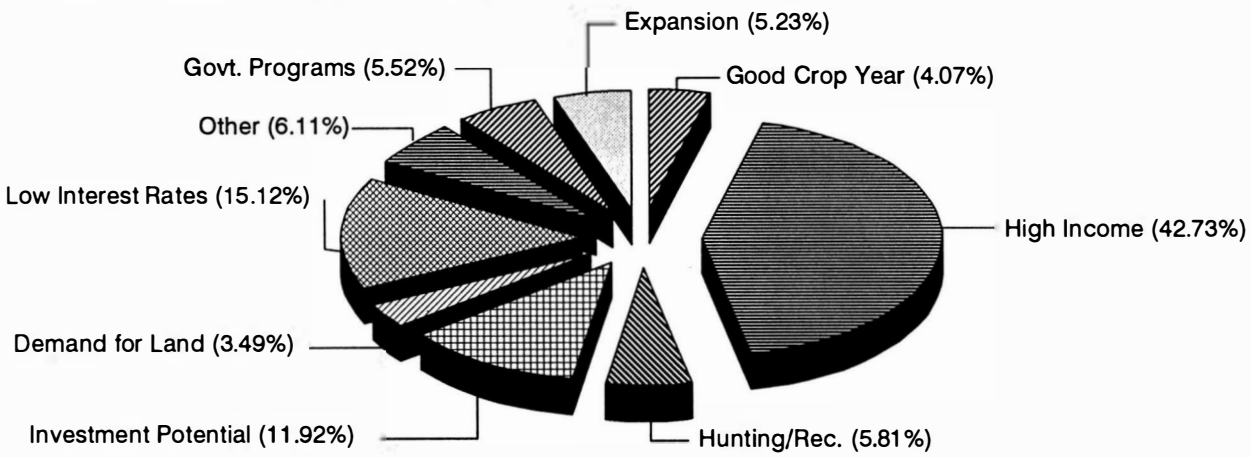


Fig 8. Negative factors in the land market.

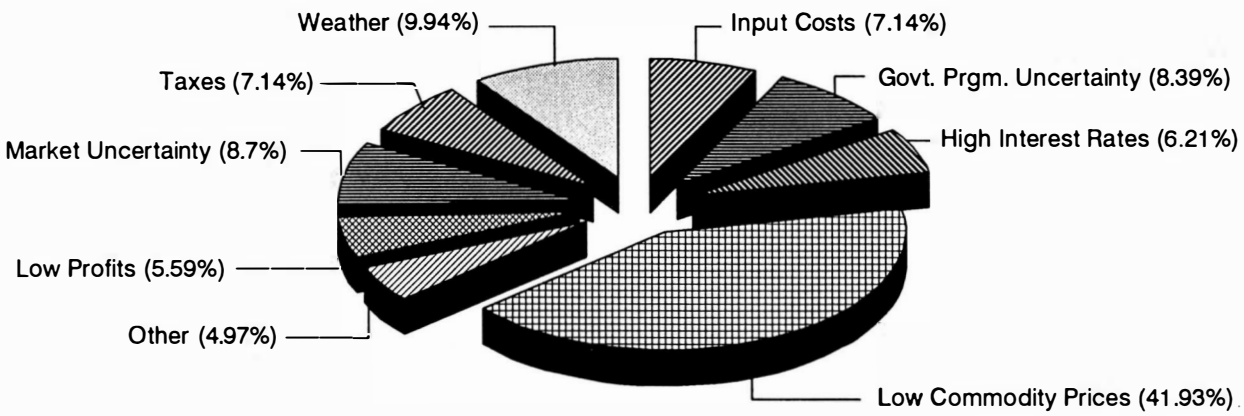
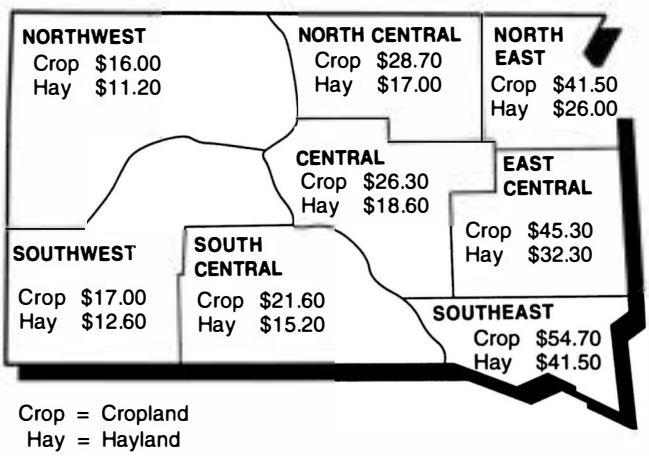


Table 3. Reported cash rental rates of South Dakota agricultural land by type of land by region, 1991-1996.

Type of Land	South-east	East-Central	North-east	North-Central	Central	South-Central	South-west	North-west
	dollars per acre							
Nonirrigated Cropland								
Average 1996 rate	54.70	45.30	41.50	28.70	26.30	21.60	17.00	16.00
High-Productivity	69.50	58.50	57.60	37.50	34.20	27.30	21.70	20.20
Low-Productivity	41.40	33.50	29.90	21.40	19.40	16.40	12.60	12.00
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 1996 rate	41.50	32.30	26.00	17.00	18.60	15.20	12.60	11.20
High-Productivity	52.60	41.00	34.00	21.30	23.10	18.80	16.80	14.60
Low-Productivity	31.90	22.90	18.70	12.30	13.80	11.50	8.60	8.70
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								
Average 1996 rate	21.20	22.10	18.80	14.70	16.30	12.00	5.60	6.10
High-Productivity	26.80	27.50	24.60	18.30	21.10	14.90	7.60	8.70
Low-Productivity	15.70	16.80	13.20	9.80	12.20	8.70	4.10	4.10
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
	dollars per Animal Unit Month							
Average 1996 rate	17.50	16.70	15.60	14.70	16.30	16.60	16.40	16.20
High-Productivity	20.10	19.30	18.20	19.70	20.20	17.70	19.30	19.80
Low-Productivity	14.60	14.00	13.00	11.20	12.50	12.40	11.70	12.50
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, 1996 and earlier year reports.

Fig 9. Average cash rental rate of South Dakota nonirrigated cropland and hayland, by region, 1996, dollars per acre.



Source: 1996 South Dakota Farm Real Estate Market Survey, SDSU.

Cash Rental Rates: Cropland and Hayland

Average cash rental rates in 1996 for nonirrigated cropland range from $16 to $17 per acre in western South Dakota to $45.30 per acre in the east-central region and $54.70 per acre in southeastern South Dakota (Fig 9; Table 3). Average cash rental rates are highest ($76.10 per acre) in the Clay-Lincoln-Turner-Union (CLTU) county cluster and next highest ($69.50 per acre) in the Minnehaha-Moody county cluster. Typical cash rental rates for high-productivity cropland exceed $95 per acre in the CLTU cluster and equal $88 per acre in the Minnehaha-Moody cluster (Table 4).

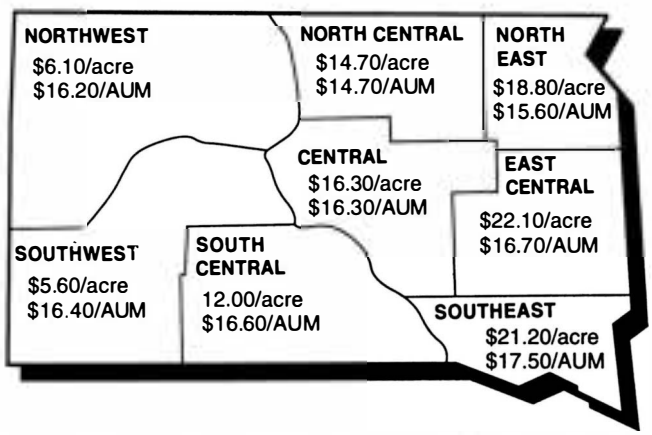
Within each region and county cluster, cash rental rate averages for low-productivity cropland are considerably lower than typical cash rental rates for high-productivity cropland. For example, reported average cash rent for nonirrigated cropland in the southeast region is $41.40 per acre for lower-productivity cropland and $69.50 per acre for higher-productivity cropland. In the northwest region, lower-productivity cropland rents for $12 per acre and higher-productivity cropland rents are an average of $20.20 per acre (Table 4).

Hayland cash rental rates in 1996 vary from an average of $11.20 per acre in the northwest region to an average of $41.50 in the southeast region. Average cash rental rates for alfalfa hayland is $69.20 per acre in the Clay-Lincoln-Turner-Union county cluster and $53.70 per acre in the Minnehaha-Moody cluster. Some hayland cash leases exceed $80 per acre in several of these eastern counties where a commercial alfalfa hay market has developed.

As with cropland, there are considerable differences in average cash rental rates of low- and high-productivity hayland. In most regions (except the southeast and east-central regions) the lower cash rental rates for hayland are based on reports for native hayland and less productive tame hayland, while the higher rates are often quoted for good quality alfalfa hayland.

From 1995 to 1996, average cash rental rates for cropland increased $2-$3 per acre in the southeast and east-central regions and decreased slightly ($0.60) in the southwest region. Cropland cash rental rates were steady to $1.20 higher in all other regions. Average cash rental rates for hayland increased in all regions, except in the southeast. Fairly strong increases in hayland cash rental rates of $4.10 ($2.50) per acre were reported in the east-central (central) region (Table 3), where the greatest increases in hayland values were also reported.

Fig 10. Average cash rental rate of South Dakota rangeland and pastureland by region, 1996, dollars per acre and dollars per AUM.



Source: 1996 South Dakota Farm Real Estate Market Survey, SDSU.

From 1991 to 1996, average reported cash rental rates for cropland increased in all regions except for cropland in the south-central region. During this period, average cash rental rates for cropland increased from 11-18% in the northwest, southeast, north-central, and central regions and from 5-8% in the east-central, northeast, and southwest regions.

Similar trends occurred for hayland cash rental rates. From 1991 to 1996, average cash rental rates for hayland increased in all regions from a low of +$0.40 (+$0.50) per acre in the south central (southwest) region to a high of +$3.70 per acre in the northeast.

From 1991 to 1996, reported cash rental rates for cropland and hayland increased at a slower rate than reported cropland or hayland values in all regions. This confirms our findings that gross rates of return to cropland and hayland have generally been declining during this period.

Cash Rental Rates: Irrigated Land

Cash rental rates for center pivot irrigated land in the central and eastern regions of South Dakota vary from an average of $43.90 per acre in the central and south-central regions to $85.40 per acre in the southeast region (Table 3A; Fig 9). Average cash rental rates for gravity-irrigated land in western South Dakota is $33.80 per acre. From 1992 to 1996, irrigated cash rental rates in each region have either declined or held steady. Many reporters indicated few irrigated tracts in their locality were leased.

Cash Rental Rates: Rangeland and Pastureland

More than three eighths of South Dakota's 26.6 million acres of rangeland and pastureland 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 1996 cash rental rates per acre and per AUM on privately owned rangeland and pastureland in their localities.

Table 3A. Reported cash rental rates of South Dakota irrigated land by region, 1991-1996.

Type of Land	*South-east*	*East-Central*	*North-east*	*North-Central*	*Central/ S-Central*	*Western*
	dollars per acre					
Irrigated Land						
Average 1996 rate	85.40	61.90	68.70	46.40	43.90	33.80
High-Productivity	103.30	75.00	86.00	58.40	53.40	49.00
Low-Productivity	70.20	50.00	51.00	36.60	35.40	23.80
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	85.20	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 Survey, 1996 and earlier reports.

Average cash rental rates per acre reflect regional differences in productivity and carrying capacity of pastures and rangeland. Average cash rental rates vary from $5.60 to $6.10 per acre in western South Dakota and $21.20 to $22.10 in southeast and east-central South Dakota. The ranges of typical cash rental rates for low- and high-productivity rangeland vary from $4.10 to $8.70 per acre in the northwest region and from $16.80 to $27.50 per acre in the southeast region (Fig 10; Table 3).

Rangeland rates per AUM in 1996 are fairly uniform across South Dakota, averaging $14.70 per AUM in the north-central region to $17.50 per AUM in the southeast region.[4]

From 1991 to 1996, average cash rental rates per acre of rangeland increased in all regions. Average cash rental rates per AUM held steady in the northeast and increased in all other regions. Average increases exceeding $2 per AUM occurred in the southeast, southwest and northwest regions.

From 1995 to 1996, cash rental rates per acre of rangeland held steady or declined in most regions but increased by $0.80 to $1.50 per acre in the south-central and central regions. Rental rates per AUM held steady or slightly declined in most regions.

[4] 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, or demand for leased rangeland.

Table 4. Reported cash rental rates of South Dakota agricultural land by region and county clusters, 1996 and 1995 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*
	dollars per acre							
Nonirrigated Cropland								
Average 1996 rate	54.70	76.10	46.70	32.60	45.30	69.50	42.50	33.10
High-Productivity	69.50	95.50	59.00	41.80	58.50	88.00	58.50	41.60
Low-Productivity	41.40	59.00	32.20	23.40	33.50	50.00	30.50	26.10
Average 1995 rate	52.50	70.20	44.90	32.30	42.10	66.70	43.70	32.20
Hayland								
Average 1996 rate	41.50	69.20	35.80	22.30	32.30	53.70	30.70	24.60
High-Productivity	52.60	85.00	45.00	29.20	41.00	67.50	40.50	29.70
Low-Productivity	31.90	53.30	27.30	16.10	22.90	37.50	21.60	18.20
Average 1995 rate	43.80	67.30	42.10	22.00	28.20	49.20	28.60	24.50
Pasture/Rangeland								
Average 1996 rate	21.20	24.80	21.60	18.20	22.10	28.60	21.00	20.00
High-Productivity	26.80	32.00	27.30	23.90	27.50	34.30	26.30	25.70
Low-Productivity	15.70	19.80	15.30	13.50	16.80	22.90	15.30	15.20
Average 1995 rate	21.90	23.70	21.90	18.10	21.60	24.60	21.10	21.10

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, 1995 and 1996.

Two important reasons that rangeland rental rates have held nearly steady are: (1) lack of cow herd liquidation (until recently) and (2) cattle producer response to sharply higher grain prices by increasing the amount of time calves and yearlings are grazed compared to feedlot finishing.

This is the first year that declines (albeit modest declines) in per-acre and per AUM rangeland rental rates have been reported in several regions.

Cow-calf enterprises were much more profitable from 1991-1994 than since. Relatively low calf prices are likely to persist into 1997. This reduction in price and profit potential is only beginning to be factored into cash rental rates for rangeland.

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 5.8% to 10.0% for

Table 4. (continued)

		Northeast				*North-Central*		
	All	*Codington Deuel Hamlin*	*Grant Roberts*	*Clark Day Marshall*	*All*	*Brown Spink*	*Edmunds Faulk McPherson*	*Campbell Potter Walworth*
	dollars per acre							
Nonirrigated Cropland								
Average 1996 rate	41.50	45.20	47.10	34.00	28.70	37.80	22.50	25.20
High-Productivity	57.60	60.40	69.10	45.20	37.40	49.80	31.80	32.20
Low-Productivity	30.00	31.90	35.50	24.60	21.40	26.20	17.90	20.20
Average 1995 rate	40.40	42.80	44.70	33.10	27.60	35.40	22.80	24.50
Hayland								
Average 1996 rate	26.00	31.40	25.20	20.65	17.00	20.10	13.90	17.00
High-Productivity	34.00	39.80	32.30	27.60	21.30	24.40	17.40	21.80
Low-Productivity	18.70	23.10	19.20	14.30	12.30	14.60	10.00	12.40
Average 1995 rate	25.30	27.90	27.80	21.80	16.70	19.50	15.50	14.40
Pasture/Rangeland								
Average 1996 rate	18.80	18.80	19.50	16.90	14.70	18.10	13.10	12.70
High-Productivity	24.60	23.80	25.30	22.20	18.30	21.90	16.08	15.90
Low-Productivity	13.20	13.90	13.10	12.60	9.80	12.40	9.60	8.00
Average 1995 rate	18.60	19.30	16.40	18.30	14.90	17.70	14.00	11.50

cropland, from 5.1% to 10.0% for hayland, and from 4.8% to 9.3% for rangeland.[5]

The statewide average gross rate of return (rent-to-value ratio) is 7.9% for nonirrigated cropland, 7.7% for hayland, and 6.4% for rangeland (Table 5). From 1991 to 1996, there were minimal changes in gross rent-to-value ratios for cropland and declines in rent-to-value ratios for forage land uses.

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

Average 1996 net rates of return were highest (6.4%) for nonirrigated cropland and lowest (4.2%) for rangeland. Most respondents reported net rates of return ranging from 4% to 10% for cropland, 4% to 9% for hayland, and 1% to 7% for rangeland.

The statewide average estimated net rate of return on all-agricultural land declined from 6.6% in 1991 to 5.5% in 1993 and 1994 and to 5.1% in 1996. From 1991 to 1993, net rates of return to agricultural land declined in all regions of the state and for all land uses. Net rates of return were relatively stable from 1993 to 1995, except for declines in rates of return to rangeland (Table 5; Fig 11).

During this same period, the difference between **gross** and **net** rates of return to agri-

[5] The range of reported net rates of return and calculated rent-to-value ratios is shown for the middle 90% of responses for each land use. This represents the practical range of reported net and gross rates of return.

Table 4 (continued)

		Central			South-Central	Southwest	Northwest
	All	Aurora Beadle Jerauld	Buffalo Brule Hand Hyde	Hughes Sully	All	All	All
	dollars per acre						
Nonirrigated Cropland							
Average 1996 rate	26.30	27.30	24.50	26.70	21.60	16.70	16.00
High-Productivity	34.20	36.10	32.10	34.10	27.30	21.70	20.20
Low-Productivity	19.40	22.30	18.30	19.10	16.40	12.60	12.00
Average 1995 rate	25.10	26.10	23.80	24.00	21.00	17.30	15.80
Hayland							
Average 1996 rate	18.60	21.50	18.20	16.50	15.20	12.60	11.20
High-Productivity	23.10	26.90	22.30	20.50	18.80	16.80	14.60
Low-Productivity	13.80	16.60	14.40	12.30	11.50	8.60	8.70
Average 1995 rate	16.10	19.30	14.90	11.70	14.90	11.10	11.10
Pasture/Rangeland							
Average 1996 rate	16.30	19.50	17.80	10.80	12.00	5.60	6.10
High-Productivity	21.10	24.70	23.00	14.10	14.90	7.60	8.70
Low-Productivity	12.20	15.10	13.60	8.10	8.70	4.10	4.10
Average 1995 rate	14.80	18.50	13.80	11.30	11.20	6.10	6.30

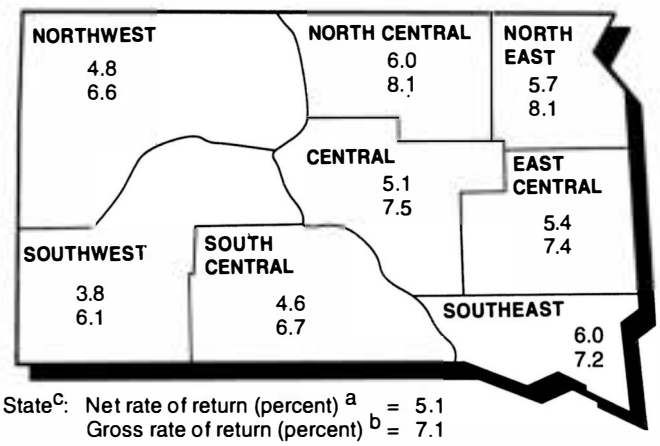
cultural land ownership in different regions has ranged between 1.2 and 2.4 points (Table 5). Most of the difference between gross and net returns is caused by property tax levies.

The current average net rate of return of 5.1% is much lower than farmland mortgage interest rates of 8.5% to 10%. This implies that relatively large downpayments are necessary before farmland purchases can be expected to cash flow from net returns. A cautious approach to debt financing will be needed to help farmland buyers avoid financial crisis.

Agricultural Land Market Expectations, Past and Prospective

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

Fig 11. Estimated rates of return to agricultural land, state and region, 1996.



State[c]: Net rate of return (percent) [a] = 5.1
Gross rate of return (percent) [b] = 7.1

[a] The net rate of return is the reporter's estimate of the percent rate of return to ownership (after payment of property taxes) given current land values. Appraisers often refer to it as the market capitalization rate.

[b] The gross rate of return is calculated by dividing reporter's average gross cash rental rate by his/her reported land values and converting it to a percentage measure.

[c] See Table 5 for further details on estimated rates of return by region and type of agricultural land.

Source: 1996 South Dakota Farm Real Estate Market Survey, SDSU.

During the past year, respondents' estimated percentage increases in land values were 4.2% for cropland, 3% for hayland, and 2% for pasture and native rangeland. Nearly 76% of respondents perceived increased cropland values during 1995 in their locality. However, only 56% (45%) of respondents reported percentage increases in hayland (rangeland) values. In general, respondents' perceptions of percentage changes in land values were less than the percent changes calculated from "actual" dollar values.

One half of respondents expect **no change** in land values during 1996, and 12% expect **declining** farmland values. This is the second consecutive year that more than 10% of respondents expect declining land values.

Thirty percent of all respondents expect agricultural land values to increase from 1% to 6%, while others (8% of respondents) expect greater increases in land values of +7.5% to +15%. The average expected change in farmland values is only 1.2%, with land value declines anticipated by western South Dakota respondents and modest increases expected elsewhere.

Many respondents commented that lower cattle prices and uncertainty about federal farm program provisions could lead to minimal changes or reductions in agricultural land values in forthcoming years. Since the survey was conducted, the 1996 farm bill has been enacted. Producers have been making, and will continue to make, changes in their operations to adjust to the new farm bill provisions. These changing conditions are likely to influence agricultural land markets in the next few years.

The 1996 farm bill (Federal Agricultural Improvement and Reform Act) includes major changes in farm commodity programs that are likely to impact farmland markets. Key changes in federal farm policy included in the 1996 farm bill are:

1. **A fixed declining schedule of production flexibility payments for 7 years replaces target prices and deficiency payments.** The

amount of production flexibility payments per farm is based on historical crop base acres and farm program yields. From 1973 to 1995, the principal federal farm income support was deficiency payments which automatically increased during low market-price periods and declined (or became zero) during high market-price periods. During the next 7 years, producers will know the amount of payments to be received each year. The 1996 farm bill breaks the link between farm program payment amounts and good/poor market prices.

2. **Producers will have almost complete flexibility in planting decisions and still be able to participate in the 7-year farm program.** Producers will be able to make planting decisions for the market place and be much less concerned about planting decisions restricted by government program administration.

Table 5. Estimated rates of return to South Dakota agricultural land by type of land and by region, 1991-1996.

Type of Land-Statewide[c]	*1996*	*1995*	*1994*	*1993*	*1992*	*1991*	*1996*	*1995*	*1994*	*1993*	*1992*	*1991*
	GROSS rate of return (%)[a]						*NET rate of return (%)*[b]					
All agricultural land	7.1	7.5	7.5	7.6	7.6	7.7	5.1	5.3	5.5	5.5	5.8	6.6
Nonirrigated cropland	7.9	7.8	8.0	8.1	8.1	8.2	6.4	5.8	5.8	5.9	6.3	6.8
Rangeland and pastureland	6.4	7.1	7.0	7.1	7.0	7.2	4.2	4.7	5.1	5.1	5.3	6.3
Hayland	7.7	7.6	8.0	7.9	8.4	8.6	5.2	5.4	5.5	5.4	5.8	6.8
Region[d]	*GROSS rate of return (%)*						*NET rate of return (%)*					
Southeast	7.2	7.3	7.5	7.7	7.7	7.9	6.0	5.6	5.8	5.7	6.2	6.9
East-Central	7.4	7.5	7.5	7.8	7.7	7.7	5.4	5.2	5.4	5.3	5.8	6.4
Northeast	8.1	8.1	8.0	7.9	8.7	8.4	5.7	5.9	5.9	5.9	6.8	7.1
North-Central	8.1	8.1	7.7	8.0	8.2	8.4	6.0	5.5	5.6	6.3	6.1	7.3
Central	7.5	7.5	8.2	8.1	7.8	8.1	5.1	5.3	5.0	5.5	5.3	6.4
South-Central	6.7	6.7	7.3	7.1	7.2	7.3	4.6	4.3	4.9	5.0	5.8	7.5
Southwest	6.1	6.5	6.8	7.0	7.2	7.6	3.8	4.8	4.9	5.0	4.8	5.2
Northwest	6.6	7.8	7.2	7.4	7.2	7.1	4.8	5.0	5.8	5.3	5.7	6.3

[a]GROSS rate of return (percent) is calculated by dividing the average gross cash rental rate by reported value of rental land.

[b]NET rate of 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.

[c]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.

[d]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's agricultural acres in each land use.

The 1996 regional and statewide GROSS and NET rates of return to all agricultural land are also reported in Figure 11.

Source: 1996 South Dakota Farm Real Estate Survey, SDSU

However, producers participating in the new farm program must continue to meet conservation compliance requirements.

3. **Several policy tools used in past and recent farm programs have been eliminated including annual set-aside (acreage reduction) programs and farmer-owned grain reserve programs. Several provisions of the new farm bill strongly discourage acquisition of federal grain reserve stocks.**

4. **The Conservation Reserve Program has been reauthorized to a maximum of current acreage levels (36.5 million acres), but funding levels are likely to be reduced from current levels.** New program rules have not been finalized but are expected to emphasize a broad spectrum of environmental quality benefits (water quality, wildlife, etc.) and have less emphasis on erosion control benefits. CRP administrators will have considerable flexibility in offering early-out programs for existing contract holders with less environmentally sensitive CRP lands and in offering new signups to existing and new contract holders.

At this point, we can only offer a few suggestions on potential impacts of the 1996 farm bill on agricultural land markets in South Dakota:

First, in the next 2-3 years, the combined forces of high crop prices and fixed production flexibility contract payments should boost cropland values considerably above the forecasts of respondents.

Second, producers are likely to encounter greater price swings for their crops and livestock. The amount of contract payments will also decline in the later years of the farm bill. Producers wanting to stay in business will need to plan on handling greater price volatility. Landlords and tenants need to prepare for greater swings in net returns to land and may need to renegotiate rental contract provisions.

Third, cropland values should increase by the greatest percentage in the more productive regions and the least in rangeland and marginal cropland areas. Over time some marginal cropland may shift to other uses such as grazing or hunting/recreation. Finally, the extent of CRP acreage and future contract payments combined with cattle herd liquidation or expansion decisions will impact forage land and rangeland values and rental rates. ❑

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APPENDIX I:
Survey Methods and Respondent Characteristics

The primary purpose of the 1996 South Dakota Farm Real Estate Market Survey was to obtain regional and statewide information on (1) 1996 per-acre agricultural land values by land use and land productivity, and (2) 1996 cash rental rates by agricultural land use and land productivity.

Copies of this survey were mailed to potential respondents about February 20 with a followup mailing on March 20. 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 (including members of professional rural appraisal and farm management societies). Some appraisers were primarily realtors, auctioneers, or professional farm managers.

The usable survey response rate was 36% of 600 persons contacted. The distribution of 218 respondents by location and reported occupation is shown in Appendix Table 1. Nearly 70% of Extension agents, 35% of agricultural lenders, and 29% of licensed appraisers contacted provided usable responses.

Fifty percent of the respondents were from the eastern regions of South Dakota, 32% were from the three regions of central South Dakota, and 18% 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 31% of respondents provided data on irrigated land values and 29% provided data on irrigated land cash rental rates.

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 exam-

Appendix Table 1. Selected characteristics of respondents, 1996

Number of respondents = 218

Respondents: Reporting location	*N*	*%*
Southeast	39	17.9
East-Central	39	17.9
Northeast	30	13.8
North-Central	30	13.8
Central	23	10.5
South-Central	17	7.8
Southwest	15	6.9
Northwest	25	11.4
	218	100.0

Primary Occupation	*N*	*%*
Banker/loan officer	104	47.7
Appraiser/realtor	68	31.2
Extension agents	46	21.1
	218	100.0

Response rates: Land values	*N*	*%*
Nonirrigated cropland	202	92.7
Irrigated land	68	31.2
Hayland	169	77.5
Rangeland (native)	183	83.9
Pasture (tame)	155	71.1

Cash Rental Rates	*N*	*%*
Nonirrigated cropland	209	95.9
Irrigated land	63	28.9
Hayland	174	79.8
Rangeland per acre	180	82.6
per AUM	66	30.3

Source: 1996 South Dakota Farm Real Estate Market Survey.

ple, the three eastern regions of South Dakota with the highest average land values have nearly 45% of the state's cropland acres, 26% of all-agricultural land acres, and only 9% of rangeland acres. Consequently, the relative importance of various regions on statewide agricultural land values varies greatly by land use.

We believe a weighted average approach to statewide land values is preferable to a simple average (mean) of all responses. 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.

In this 1996 report, the land use weighting factors were developed from county-level data in the 1992 South Dakota Census of Agriculture and other sources. These weighting factors were used to estimate statewide and regional all-land values for 1996 and to reestimate all-land values for 1991-1995 data shown in this report. The updated land use weighting factors increased the relative importance of rangeland in the estimates of all-land values. ❑