



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

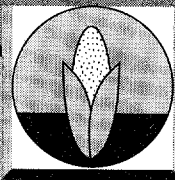
AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*



# *The Minnesota Rural* *Real Estate Market in* **1989**

*by Kumaresan Govindan and Philip M. Raup*

*University of Minnesota  
St. Paul, Minnesota 55108  
Economic Report ER90-5  
July, 1990*

## **INCLUDING SPECIAL STUDIES OF:**

*Economic Development Regions  
Southwestern, Metro, and Red River Valley Area  
A Comparison of Average Size of Tract Purchased  
and Average Size of Farm  
A Comparison of Land Value Data from the U.S. Census  
of Agriculture and the Minnesota Survey  
Land Market Effects of the Conservation Reserve Program  
Deflated Estimated Values and Sales Prices*

**The authors would like to acknowledge the valuable help of  
Steven Taff, Andrew Schwab, Susan McKenzie and Linda Schwartz  
in the conduct of the study and preparation of this report.**

**Cover photography by Dave Hansen  
Graphics by University Media Resources-Art & Instructional Materials**

## Table of Contents

	Page Number
<b>Summary</b>	2
<b>Introduction</b>	4
<b>Part I. The Minnesota Rural Real Estate Market in 1989</b>	7
<b>A. Land Market Trends</b>	7
Reporters' Estimates	7
Reported Sales	7
Adjusted Sales Prices	9
<b>B. Activity in the Rural Real Estate Market</b>	13
Reported Sales: An Analysis Over a Decade (1980-1989)	14
<b>C. Analysis of Reported Sales</b>	17
Reasons for Sale	17
Method of Finance	21
Type of Buyer	27
Distance of Buyer's Residence from Tract Purchased	29
Quality of Land and Buildings	34
Improved Versus Unimproved Land	39
<b>D. Trends in Sales Prices by Economic Development Regions</b>	43
<b>Part II. The Effect of Location, Climate, and Soil Quality on the Rural Real Estate Market</b>	49
Southwestern Minnesota	49
The Greater Twin Cities Metropolitan Area	52
The Red River Valley Area	59
<b>Part III. A Comparison of Average Size of Tract Purchased and Average Size of Farm</b>	67
<b>Part IV. A Comparison of Land Value Data from the U.S. Census of Agriculture and The Minnesota Survey</b>	70
<b>Part V. Land Market Effects of the Conservation Reserve Program (CRP)</b>	78
<b>Part VI. Deflated Estimated Values and Reported Sales Prices</b>	86
<b>Statistical Appendix</b>	90

## Summary

The estimated state-wide average value per acre of Minnesota farm land as of July 1989 was \$581, an increase of 11 percent from July 1988. This continues the increasing trend in the value of farm land first noted in 1988, after the sharp declines observed between 1981 and 1987. Except for the Northeast, the remaining five districts all showed an increase in value, with the greater increases in the southern and western districts.

In contrast to the 11 percent increase in estimated values, the survey of actual farm land sales in 1989 resulted in an average reported sales price per acre of \$815 for the state as a whole. This was 18 percent higher than the figure of \$691, reported for 1988. In general, there was an increase in sales prices in all districts, but the increase was greatest in the Southeast and the Southwest districts.

An adjusted sales price per acre of farm land was calculated to remove the effect of a higher proportion of sales of good quality lands in 1989 than in 1988. This adjustment reduced the increase in the 1989 state average sales price to 15 percent over 1988, instead of 18 percent, when unadjusted.

When deflated with the consumer price index (1967-100), the average estimated value was \$161 per acre in 1989, slightly lower than the deflated 1957 value of \$164 per acre. The deflated average sales price per acre was \$226, approximately equal to the sales price per acre in the period 1965-69.

Retirement has reemerged after 1985 as the primary reason for farmland sales, accounting for 29 percent of the total sales in 1989. Financial difficulties were cited as the second most important reason for

sales of farm lands in 1989, contributing 20 percent of total sales. 'Leaving farming' (5 percent) and 'reduce size of farming' (11 percent) were additional reasons for sale, totaling 36 percent of sales that might have been influenced by financial difficulties.

The methods of financing sales in the Minnesota rural real estate market in 1989 showed a slight reversal of trends that had prevailed since land prices began to fall after 1981. Most significantly, 1989 was the first year in which financing by contract for deed had increased since 1981. Cash sales and contracts for deed each accounted for 40 percent of total sales, and mortgages 20 percent.

Expansion buyers continued to dominate the rural real estate market in 1989, purchasing 73 percent of total tracts sold. Investors and sole-tract operators accounted for 14 and 13 percent, respectively.

Unimproved land (land without buildings), as a percentage of all sales, declined to 58 percent, 3 points less than 1988. The Northwest district has the highest percentage of sales of unimproved land (84 percent), consistent with the fact that expansion buyers contributed 91 percent of total sales in that district.

## Introduction

The University of Minnesota has collected and analyzed information on rural farm land markets in the state for 79 years. The data for this report were collected from individuals familiar with the rural real estate market in Minnesota, including brokers, appraisers, farm managers, insurance agents, bank officers, county officials and others familiar with their respective areas. About 1000 questionnaires were mailed in July 1989, and the rate of response was just under 40 percent. Respondents provided information about estimates of land value and actual sales prices. In addition, they answered questions concerning the quality of land and buildings, method of finance, reasons for sale, etc.

In analyzing the data, duplicate reports of sales were eliminated, data for Hennepin and Ramsey counties (Minneapolis and St. Paul) were omitted, and respondents were asked not to report sales between close relatives.

Data on both estimated values and sales prices are compiled and analyzed regionally, and for the state as a unit. Estimated values are supplied by respondents and refer to farms with land and buildings of average size and value in their communities, as of July-August in each survey year. District and state estimated values are derived by weighting the estimated values for each county by the acres of land in farms in that county as reported in the 1987 U.S. Census of Agriculture. This yields an estimate of value that can be used to derive the total value of farmland in the county, district or state.

In contrast, data on reported sales prices refer to actual sales of farmland occurring between January 1 and July 1 in the survey year, as

reported by respondents. Average sales prices for districts, Economic Development Regions, and the state are calculated by multiplying acres sold by price per acre, adding the results, and dividing by the total acres sold in the respective areas.

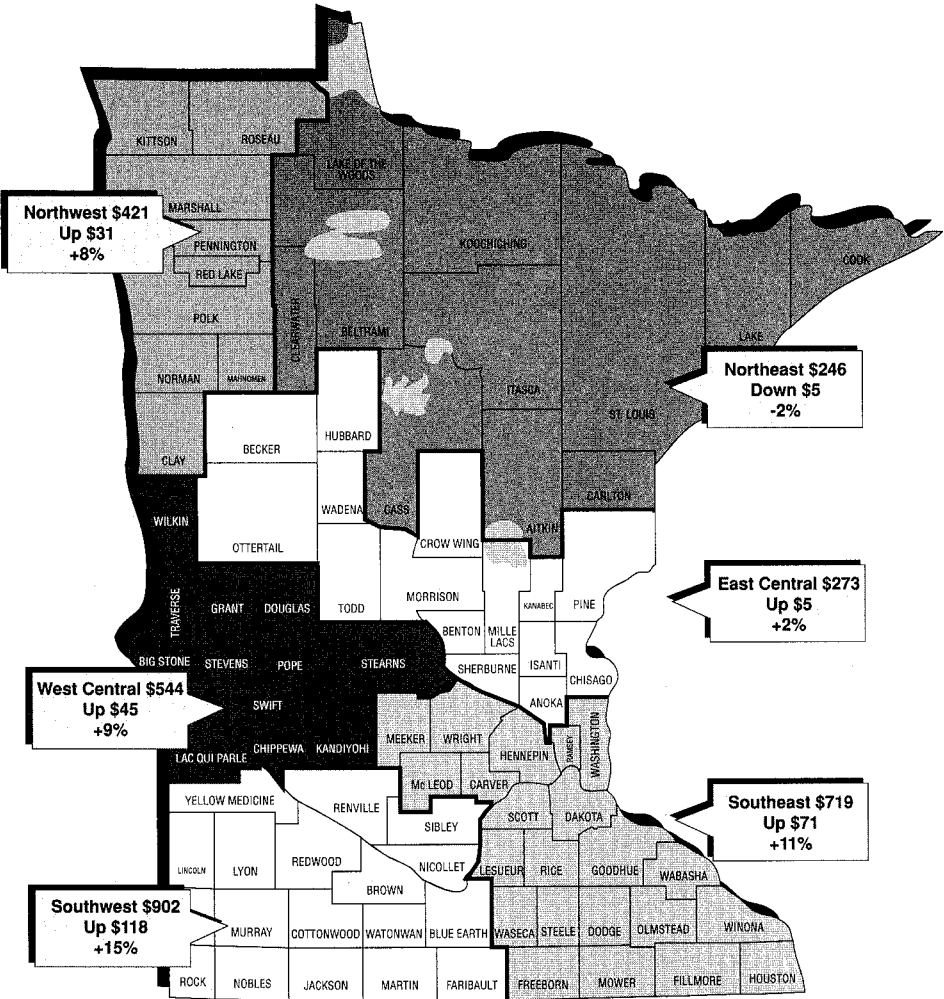
It is important to note that in any given area or year the land that sells is not necessarily representative of all land in that area. In most areas and years, prices per acre received in actual sales are above the estimated values per acre for the respective counties, districts, or for the state as a whole. This difference has been especially wide in recent years.

One reason is that land market activity has been greater in counties and districts containing the state's higher priced lands. These sales enter with a heavy weight in calculating average sales prices. Since 1986/87 an additional reason for the differences between estimated values and sales prices has been due to the relatively heavy enrollment of lower-priced lands in the Conservation Reserve Program. These lands have value, are included in the area of land in farms in the respective counties, and are reflected in the estimated values per acre. They can be sold, even though enrolled in the Conservation Reserve, but sales in recent years have been infrequent.

As a result, the effect of the Conservation Reserve Program has been to reduce the frequency of sales of lower-priced lands. This tends to raise the average price per acre of lands that are sold, when compared to county, district or statewide average estimated values. This effect is discussed in more detail in Part V.



**Figure 1: Estimated Land Values per Acre In 1989 (Excluding Hennepin and Ramsey Counties)**



## **Part I**

### **The Minnesota Rural Real Estate Market in 1989**

#### **A. Land Market Trends**

##### **Reporters' Estimates**

The 1989 statewide average estimated value per acre continued the increase first noted in 1988, after continuous decline from 1981 to 1987. It reached an estimated \$581 in 1989, an increase of 11 percent from \$523 in 1988 (Table 1 and Figure 1).

District-wide analysis of estimated average values per acre indicates a similar trend as for 1988, with five of the six districts showing increases in the value of land. The Northeast district alone reported a continuing decline of 2 percent from the estimated value of 1988. The greatest increase of 15 percent was observed in the Southwest district, followed by increases of 11 percent in the Southeast district, 9 percent in the West Central, 8 percent in the Northwest, and 2 percent in the East Central. The estimated average values from the beginning of the land boom in 1972 through 1989 are shown in Table 1.

##### **Reported Sales**

Information was gathered on 1198 reported sales that took place between January 1 and July 1, 1989. The data are summarized in Table 2. Based on these reports, the unadjusted average sales price per acre of Minnesota farm land in 1989 was \$815, an increase of 18 percent from the average sales price of \$691 per acre reported for the first six months of 1988. The increase in sales prices parallels the results derived from reporter's appraisals of the increase in the estimated average value per acre of farm land.

**Table 1: Estimated Average Value Per Acre of Minnesota Farmland, by District, 1972-1989**

Year	South-east	South-west	West Central	East Central	North-west	North-east	State Average
1972	370	379	208	163	117	76	248
1973	433	459	247	194	146	115	298
1974	576	675	378	279	199	144	423
1975	674	844	503	296	295	163	525
1976	856	1106	624	349	378	210	667
1977	1027	1316	730	415	427	279	794
1978	1191	1421	803	498	483	304	889
1979	1453	1620	883	573	599	368	1040
1980	1526	1750	962	596	683	390	1120
1981	1709	2083	1135	679	813	460	1310
1982	1504	1875	1044	584	748	483	1179
1983	1354	1669	981	561	658	411	1065
1984	1164	1401	873	505	586	436	927
1985	861	967	690	374	510	362	686
1986	603	696	511	296	418	308	515
1987	558	671	472	259	375	293	480
1988	648	784	499	268	390	251	523
1989	719	902	544	273	421	246	581
<b>Percent Change</b>							
1988-1989	11	15	9	2	8	- 2	11

Regionally, all the districts showed increases in sales prices in 1989. The largest increases of 18 percent were in the Southeast and Southwest districts, and the smallest increases of 3 percent were in the East Central and Northeast districts. Increases in the Northwest and West Central districts were 12 percent and 9 percent respectively. One reason for this variation in the increase of prices may be attributed to the 1988 drought, which was especially severe in the West Central and East Central districts.

Table 2 indicates that the average sales price was highest in the Southwest district, at \$1074 per acre. This district has consistently reported the highest sales price since 1974, with the single exception of 1978. The sales prices in other districts show the same rank order as in 1988: Southeast, \$938; West Central, \$620; Northwest, \$461; East Central, \$407; and, Northeast, \$189.

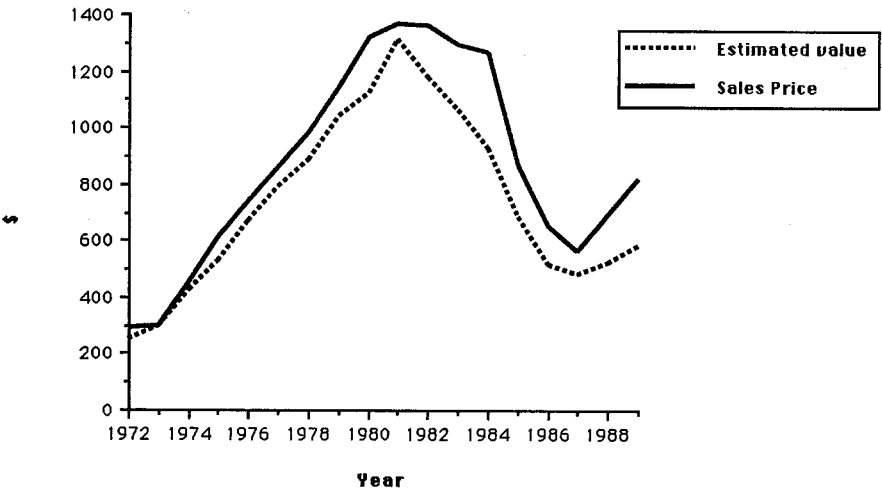
### **Adjusted Sales Prices**

The change in average sales price of farm land from 1988 to 1989 may be due to geographical shifts in the location of real estate market activity, in addition to the change in price. For instance, if a larger proportion of sales were reported from the higher priced area in 1989 than in 1988, the overall sales price would appear higher than if the geographical distribution of sales were the same as in 1988. To test for this, an adjusted average sales price was calculated by district, and the results are presented in Table 3. The computation of adjusted average sales price attempts to answer the following question: What would have been the district average sales price per acre in 1989 if each county's

**Table 2: Average Reported Sales Price per Acre of Farmland by District, Minnesota, 1972-1989 (Unadjusted)**

<u>Year</u>	<u>South- east</u>	<u>South- west</u>	<u>West Central</u>	<u>East Central</u>	<u>North- west</u>	<u>North- east</u>	<u>State Average</u>
1972	389	366	222	145	107	76	293
1973	444	410	223	178	120	122	298
1974	598	630	340	243	204	144	450
1975	792	844	493	299	353	159	607
1976	937	1116	644	321	377	210	735
1977	1216	1340	709	446	432	198	859
1978	1352	1321	908	554	504	256	980
1979	1675	1680	949	618	612	411	1140
1980	1837	1868	1095	603	759	394	1318
1981	1965	2005	1171	680	919	483	1367
1982	1749	2022	1168	746	887	406	1360
1983	1470	1872	1068	679	711	328	1291
1984	1386	1665	1062	644	700	223	1263
1985	1013	1181	872	510	575	222	864
1986	673	830	602	556	411	220	650
1987	621	755	493	429	337	168	559
1988	797	911	571	395	411	184	691
1989	938	1074	620	407	461	189	815
Percent Change 1988-1989	18	18	9	3	12	3	18

**Figure 2: Average Estimated Values and Average Sales Prices Per Acre for Minnesota, 1972-1989**



**Table 3: Adjusted Sales Prices per Acre for 1989, by District, Minnesota**

District	Unadjusted Price		1989 Adjusted Price	Percent Change <u>1988 to 1989</u>	
	1988	1989		Unadjusted	Adjusted
Southeast	797	938	938	18	18
Southwest	911	1074	1099	18	21
West Central	571	620	620	9	9
East Central	395	407	462	3	17
Northwest	411	461	442	12	8
Northeast	184	189	177	3	- 4
Minnesota	691	815	793	18	15

proportion of acres sold had remained unchanged from 1988? This reduces the effect of the shift in quality difference by removing the shift in the geographic distribution of sales activity among counties and districts.

The adjusted sales prices were computed by multiplying the average sales price per acre for 1989, county by county, with the number of acres sold in 1988. These values were then added for the counties within a district, and the product was divided by the total acres sold in the districts in 1988. This removes the effect of any shift in the volume of sales among counties from 1988 to 1989.

When adjusted in this way, the reported average sales price per acre for the state as a whole in 1989 showed an increase of 15 percent compared to 18 percent when unadjusted. Analysis by districts indicates that the adjusted sales prices were 3 percentage points higher than the unadjusted prices in the Southwest district, and 14 percentage points higher in the East Central district. The Northeast showed a decline of 4 percent in the adjusted sales prices against an increase of 3 percent in the case of unadjusted sales prices, and an unadjusted increase of 12 percent was reduced to 8 percent in the Northwest district.

#### **B. Activity in the Rural Real Estate Market**

The respondents to the survey were asked to estimate the percentage change in the number of farm land sales in their area, comparing the first six months of 1988 and 1989. The majority of the respondents reported no change in the number of sales. Of the remaining respondents, about two-thirds reported an increase in the number of sales, and about one-third reported a decrease in the number of sales. The Southeast and Southwest



districts were the most active areas in the rural real estate market activity in 1989 (Table 4).

The total number of sales reported through the survey provides another measure of market activity. The number of sales increased to 1198 in 1989, from 1077 in 1988. The greatest increase was noticed in the Southeast and Southwest districts, confirming them as the most active areas. The West Central and Northwest districts showed a decline in the number of reported sales, while the East Central and Northeast districts showed a marginal increase (Table 5).

#### **Reported Sales: An Analysis Over a Decade (1980-1989)**

The ten-year (1980-1989) annual average number of reported sales in the Minnesota Rural Real Estate Market for the state as a whole is 1111 (Table 5). Over the decade, the Southwest district led in the percentage of reported sales with 33 percent, followed by the Southeast district with 28 percent (Table 6). The lowest percentage of sales is reported in the Northeast district (2 percent). The Southwest district accounted for the highest percentage of reported sales in each year during 1980-1989, except for the years 1980 and 1985. Throughout this period, the Northeast district reported the lowest percentage of sales.

A review of the total acres sold as reported in this survey during 1980-1989 provides additional information. By districts, the Southwest led in total acres sold (28 percent), followed by the Southeast (25 percent), the West Central (19 percent), the Northwest (14 percent), the East Central (10 percent), and the Northeast (3 percent). The total acres

**Table 4: Percent of Respondents Indicating Direction of Change In Number of Farms Sold by District from 1988 to 1989**

Region	% Estimating increase in sales	% Estimating decrease in sales	% Estimating no change in sales
Southeast	29	17	54
Southwest	23	22	55
West Central	23	10	68
East Central	13	7	80
Northwest	16	11	73
Northeast	13	20	67
Minnesota	25	13	62

**Table 5: Number of Reported Sales by District, Minnesota, January 1-July 1, 1980-1989\***

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
1980	333	300	165	176	116	37	1127
1981	336	337	232	207	131	35	1278
1982	275	287	165	111	92	39	969
1983	336	395	187	158	105	23	1204
1984	365	468	208	112	69	8	1230
1985	237	221	142	86	91	18	795
1986	322	312	152	91	81	22	980
1987	324	469	194	110	137	20	1254
1988	270	371	236	85	95	20	1077
1989	314	476	208	98	79	23	1198
Average	311	364	189	123	100	25	1111

**Table 6: Percentage of Reported Sales by District, Minnesota, January 1-July 1, 1980-1989**

Year	South-east	South-west	West Central	East Central	North-west	North-east
1980	29	27	15	16	10	3
1981	26	26	18	16	10	3
1982	28	30	17	11	9	4
1983	28	33	16	13	9	2
1984	30	38	17	9	6	7
1985	30	28	18	11	11	2
1986	32	32	16	9	8	2
1987	26	37	15	9	11	2
1988	25	34	22	8	9	2
1989	26	40	17	8	7	2
Average	28	33	17	11	9	2

\*These sales should not be interpreted as a record of total farm land transactions for the years indicated. The majority of farm land sales are completed in the first half of the calendar year, which explains the choice of the January 1-July 1 reporting period. Some sales do occur in the latter half of the year, but they are not included in the data reported.

reported sold annually in Minnesota over 1980-89 were relatively stable, except for significantly fewer acres sold in 1982, 1985, and 1986 (Table 7).

### **C. Analysis of Reported Sales**

#### **Reasons for Sale**

Throughout the 1970's, death and retirement were the primary reasons for sales of farm land, with retirement alone accounting for an average of over 40 percent of all sales (Table 8). This changed dramatically during the fall in land values after 1981, with death and retirement accounting for only one-fourth of all sales at the low point in 1987. In that year, two-thirds of all sales were triggered by financial difficulties or by decisions to reduce the size of farming operations. This reversed in 1988, when sales due to death or retirement were 37 percent of all sales. The reversal continued in 1989 with death and retirement accounting for 44 percent of total sales. The primary reason for sale from 1986 through 1988 had been given as "financial difficulties". While financial difficulties were given as the reason for 60 percent of the sales in 1987 and 42 percent in 1988, this dropped to 20 percent of total sales in 1989 (Table 9). If one assumes that the reasons "left farming" (5 percent) and "reduce size of farming" (11 percent) might have been the result of financial difficulty, then a total of 36 percent of total sales in 1989 could have reflected financial difficulties, down from 71 percent in 1987 and 56 percent in 1988. In 1989, retirement was given as the reason for 29 percent of total sales, death for 15 percent, and sales by farmers who moved but remained in farming, 2 percent. The remaining 18 percent of sales were attributed to "other reasons" (Table 10 and Figure 3).

**Table 7: Acreage of Land Sold, Average Acres Per Sale and Percentage of Total Acres Sold, by District, Minnesota, January 1-July 1, 1980-1989**

Acres Sold							
Year	South-east	South-west	West Central	East Central	North west	North east	Minnesota
1980	46894	43867	29783	27089	31929	4908	184476
1981	47236	44975	45439	27463	36679	12456	214247
1982	34978	36283	25718	19662	21527	10994	149162
1983	40878	50127	31190	20421	24211	3007	169834
1984	45520	52855	34771	15599	15023	1346	165114
1985	29601	27336	22377	10475	16652	7243	113714
1986	49133	39281	28912	12175	17996	3109	150696
1987	49109	63130	33577	17148	41669	4280	208913
1988	44632	52335	41297	12069	20878	3663	174874
1989	41286	62643	37229	14865	16291	3688	176002
Average	42927	47283	33029	17697	24286	5472	170703

Acres/Sale							
1980	141	146	181	154	275	133	164
1981	141	133	196	133	280	356	168
1982	127	126	156	177	234	282	154
1983	122	127	167	129	231	131	141
1984	125	113	167	139	218	168	134
1985	125	124	158	122	183	404	143
1986	153	126	190	134	222	145	154
1987	152	134	173	156	304	214	166
1988	165	141	175	142	220	183	162
1989	131	132	179	152	206	160	147
Average	138	130	174	144	237	218	153

Percentage of Total Acres Sold in State							
1980	25	24	16	15	17	3	100
1981	22	21	21	13	17	6	100
1982	23	24	17	13	14	7	100
1983	24	30	18	12	14	2	100
1984	28	32	21	9	9	1	100
1985	26	24	20	9	15	6	100
1986	33	26	19	8	12	2	100
1987	24	30	16	8	20	2	100
1988	26	30	23	7	12	2	100
1989	23	36	22	8	9	2	100
Average	25	28	19	10	14	3	100

**Table 8: Percentage of Sales by Reason for Selling Land, Minnesota, 1972-1989**

Year	Reason for Sale							
	Death	Retire- ment	Left Farming	Moved, Still Farming	<sup>a</sup> Divorce	Reduce Size	Financial <sup>b</sup> Difficulty	Other
1972	20	39	20	8				14
1973	15	42	18	6				20
1974	15	46	12	10				18
1975	17	40	15	7				21
1976	16	41	14	9				19
1977	15	38	15	9				23
1978	14	39	16	10				21
1979	18	41	15	10				17
1980	16	39	12	10				23
1981	17	36	16	9				22
1982	17	32	11	3	2	23		11
1983	14	29	12	2	1	23		20
1984	16	22	13	2	2	25		20
1985	17	25	12	2	1	18		25
1986	12	18	11	1	1	17		40
1987	12	14	5	0		6	60	3
1988	14	23	6	0		8	42	7
1989	15	29	5	2		11	20	18

<sup>a</sup>These reasons were added to the survey in 1982.

<sup>b</sup>This was added to the survey in 1987.

**Table 9: Percentage of Sales by Reason for Selling Land, Minnesota, 1985-89**

Reason for Sale	1985	1986	1987	1988	1989
Financial Difficulty	16	35	60	42	20
Reduce Size	18	17	6	8	11
Left Farming	<u>12</u>	<u>11</u>	<u>5</u>	<u>6</u>	<u>5</u>
Sub Total	46	63	71	56	36
Death	17	12	12	14	15
Retirement	25	18	14	23	29
Moved, Still Farming	2	1	0	0	2
Other	10	6	3	7	18

Regionally, retirement was the primary reason for sale in all districts, except the East Central and Northwest. In these two districts, the highest percentage of the sales were due to financial difficulty (Table 10).

### **Method of Finance**

The methods of financing used in the Minnesota rural real estate market in 1989 showed a slight reversal of trends that had prevailed since land prices began to fall after 1981 (Table 11). Cash sales and contracts for deed each accounted for 40 percent of total sales in 1989. This represented a small decline from the 41 percent reported for cash financing in 1988, and an increase from the 34 percent of sales financed by contracts for deed in 1988. This was the first year that use of contracts for deed had increased since 1981 (Table 11).

By districts, the Northwest district led in cash sales (51 percent) and also reported the smallest share of sales financed by mortgages (13 percent). The most frequent use of mortgages was in the Southeast and East Central districts (30 and 28 percent, respectively).

Cash sales dominated the rural real estate market in all districts in 1988 and 1989 with the exception of the West Central and East Central districts in 1988 and the Southeast, East Central and Northeast districts in 1989. Contract for deed was the most frequent method of finance used in the East Central district in both years (Table 13).

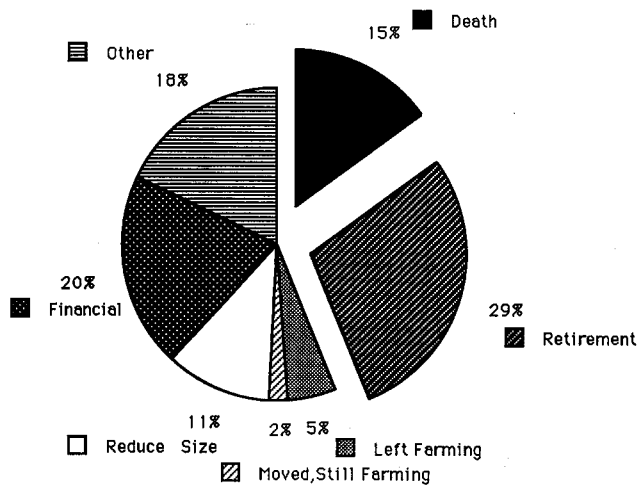
The buyers using mortgages paid the highest statewide average sales price of \$898 per acre in 1989. Those who used cash financing and contract for deed paid statewide average sales prices of \$784 per acre and \$773 per acre, respectively (Table 12). The variation in rank order of



**Table 10: Percentage of Sales by Reason for Selling Land, Minnesota, by Districts, 1989**

Reason for Sale	South- east	South- west	West Central	East Central	North- west	North- east	Minnesota
PERCENT							
Financial Difficulty	17	24	19	25	27	9	20
Reduce Size	7	6	9	9	13	22	11
Left Farming	4	3	6	8	7	0	5
Subtotal	28	33	34	42	47	31	36
Death	15	20	16	11	16	13	15
Retirement	42	24	30	24	26	26	29
Moved, Still Farming	3	2	0	3	4	0	2
Other	12	20	20	19	7	30	18

**Figure 3: Reason for Sale, Minnesota, 1989**



**Table 11: Proportion of Farm Sales by Method of Financing, by District, Minnesota,  
1965, 1970, 1975, 1981-1989**

Method of Financing	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
-----percent-----							
<u>Cash</u>							
1965	17	15	22	21	29	29	19
1970	15	13	14	19	20	31	16
1975	12	16	13	15	18	30	15
1981	17	20	17	9	16	10	16
1982	20	24	20	15	28	9	21
1983	25	27	22	10	25	22	23
1984	23	31	23	19	25	13	26
1985	26	41	20	26	42	17	32
1986	32	56	36	24	49	19	41
1987	35	43	43	24	52	22	40
1988	41	48	34	16	46	45	41
1989	34	47	39	27	51	39	40
<u>Mortgage</u>							
1965	33	39	41	30	27	3	35
1970	19	23	28	28	40	26	25
1975	28	27	24	36	30	25	28
1981	20	22	19	28	27	32	23
1982	17	22	17	13	22	23	19
1983	25	26	25	19	38	17	26
1984	19	25	28	22	39	13	24
1985	24	21	18	21	33	6	22
1986	17	19	19	18	19	24	19
1987	26	21	16	16	28	45	22
1988	28	25	25	26	16	22	25
1989	30	21	21	28	13	9	20
<u>Contract for Deed</u>							
1965	50	45	37	49	44	68	46
1970	66	64	58	53	40	43	59
1975	60	58	63	49	52	45	57
1981	63	58	63	63	57	58	61
1982	63	54	62	72	50	69	60
1983	50	47	53	71	37	61	51
1984	59	43	49	59	36	75	50
1985	51	38	53	52	26	78	46
1986	51	25	44	58	32	57	40
1987	39	36	41	60	20	33	38
1988	31	27	41	58	38	33	34
1989	36	33	33	46	36	52	40

Table 12: Average Sales Price Per Acre of Farmland by Method of Financing by District, Minnesota, 1981-1989

Method of Financing	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
-----Dollars per Acre-----							
<u>Cash</u>							
1981	2091	2058	1251	758	1084	397	1613
1982	1490	1992	1014	792	772	407	1326
1983	1367	1723	1058	476	825	328	1315
1984	1314	1520	1047	700	686	100	1254
1985	986	1063	733	454	539	237	820
1986	637	785	566	341	491	199	646
1987	614	766	450	424	447	199	585
1988	775	927	545	359	494	217	741
1989	938	1025	646	339	404	138	784
<u>Mortgage</u>							
1981	1900	2021	1115	494	1039	514	1295
1982	1553	1909	1119	772	1240	379	1416
1983	1464	1932	1108	650	808	205	1332
1984	1375	1629	1041	761	797	185	1268
1985	969	1113	835	435	646	890	866
1986	664	895	666	736	338	212	674
1987	627	725	465	414	290	156	484
1988	785	917	579	461	388	162	728
1989	958	1102	587	502	685	168	898
<u>Contract for Deed</u>							
1981	1947	1910	1174	843	851	478	1318
1982	1879	2008	1223	790	834	413	1358
1983	1536	1907	1077	724	632	400	1263
1984	1417	1747	1119	605	648	229	1268
1985	1069	1194	946	552	552	179	856
1986	680	853	592	556	384	227	635
1987	624	750	541	428	246	198	578
1988	857	883	595	382	368	164	634
1989	920	1101	627	409	427	222	773

**Table 13: Proportion of Farm Land Sales by Method of Financing, by Districts,  
Minnesota, 1988-1989**

Districts	Cash		Mortgage		Contract for Deed	
	1988	1989	1988	1989	1988	1989
	.....PERCENT.....					
Southeast	41	34	28	30	31	36
Southwest	48	47	25	21	27	33
West Central	34	39	25	21	41	33
East Central	16	27	26	28	58	46
Northwest	46	51	16	13	38	36
Northeast	45	39	22	9	33	52
Minnesota	41	40	25	20	34	40

the average sales prices per acre by method of financing in the years 1981-1989 indicate that it is difficult to conclude that the method of financing has any systematic effect on the sales prices.

### **Type of Buyer**

The buyers of Minnesota farm land are classified into three categories for the present study: "Sole-tract" buyers are operating farmers who are planning to manage the farms they buy and are not using the purchases to expand existing land holdings. "Expansion buyers" are adding the land purchased to existing holdings. "Investor buyers" are those who do not plan to operate the land themselves, but presumably expect to rent it out, or have it operated by a manager.

For the state as a whole, expansion buyers in 1989 accounted for 73 percent of all farm land sales, compared to 75 percent in 1988. Sole-tract operators contributed 13 percent of total sales in 1989, one percentage point more than in 1988. Participation by investor buyers also increased by one percentage point to 14 percent in 1989 (Table 14).

District wide analysis indicates that 91 percent of the purchasers of farm lands in the Northwest district were expansion buyers. This district has consistently had the highest proportion of expansion buyers since 1985. In general, expansion buyers dominated the market for rural real estate in 1989 in all districts. Only in the East Central and Northeast districts did sole-tract operators constitute 20 percent or more of the market in 1989.

The dominant role played by expansion buyers in the Minnesota rural real estate market in 1989 has continued to make the market highly local in nature. Expansion buyers have been the dominant purchasers since 1965,

**Table 14: Proportion of Farm Land Sales and Average Sales Price per Acre by Type of Buyer, by District and Minnesota, 1988-1989**

<u>District</u>	<u>Sole-Tract Operator Buyer</u>			
	1988 % of sales	1988 \$ per acre	1989 % of sales	1989 \$ per acre
Southeast	16	715	17	992
Southwest	7	719	6	902
West Central	8	699	11	688
East Central	30	394	20	436
Northwest	14	267	4	511
Northeast	11	273	22	231
Minnesota	12	598	13	627
	<u>Expansion Buyer</u>			
	1988 %	1988 \$	1989 %	1989 \$
Southeast	66	804	69	910
Southwest	80	939	88	1104
West Central	83	562	79	633
East Central	46	328	63	447
Northwest	85	406	91	467
Northeast	56	167	48	163
Minnesota	75	695	73	621
	<u>Investor Buyer</u>			
	1988 %	1988 \$	1989 %	1989 \$
Southeast	18	887	14	1035
Southwest	13	884	6	1129
West Central	9	554	9	502
East Central	25	504	17	297
Northwest	9	405	5	307
Northeast	33	196	30	191
Minnesota	13	772	14	577

accounting for half or more of the sales (Table 15 and Figure 4). This has offset the loss of share of sole-tract buyers who had been the predominant buyers before 1963. The contribution of investor buyers remained relatively constant.

#### **Distance of Buyer's Residence from Tract Purchased**

The median distance of 4 miles, from buyer's residence to tract purchased, indicates that the Minnesota rural real estate market has remained a local market (Table 16). This means that one-half of the buyers purchased tracts 4 miles or less from their residence. This is consistent with the fact that 73 percent of the tracts sold were purchased by expansion buyers who could be expected to purchase land near their existing holdings.

By district, the Southwest and Northwest had the most local market, with a median distance of 3 miles. The Southeast and West Central districts maintained the 1988 median distance of 4 miles and 5 miles, respectively in 1989. The East Central and Northeast districts showed a marginal increase in the median distance from 1988 to 1989.

Apart from median distance, the distribution of sales in various intervals of distance of buyer from tract purchased confirmed the localization of rural real estate market activity. Statewide, 53 percent of farm land sales were to buyers living within 5 miles, 76 percent within 10 miles and 93 percent within 50 miles of the tracts purchased (Table 16).

Percentage of acres sold instead of number of sales, by distance of buyer's residence from tract purchased, provides almost the same picture. In the Southwest and Northwest districts, 83 percent of acres sold were



Figure 4: Percentage of Farm Sales by Type of Buyer, Minnesota, 1954-1989

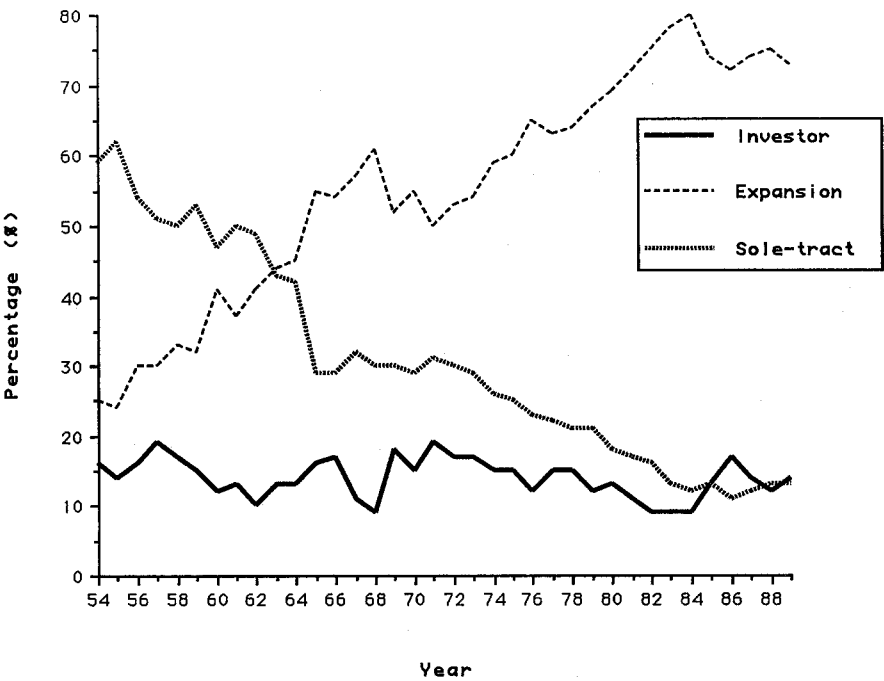


Table 15: Percent of Sales of Farm Land Made to Three Types of Buyers, Minnesota, 1954-1989

Year	Investor Buyer	Expansion Buyer	Sole-Tract Buyer
		Percent	
1954	16	25	59
1955	14	24	62
56	16	30	54
57	19	30	51
58	17	33	50
59	15	32	53
1960	12	41	47
61	13	37	50
62	10	41	49
63	13	44	43
64	13	45	42
1965	16	55	29
66	17	54	29
67	11	57	32
68	9	61	30
69	18	52	30
1970	15	55	29
71	19	50	31
72	17	53	30
73	17	54	29
74	15	59	26
1975	15	60	25
76	12	65	23
77	15	63	22
78	15	64	21
79	12	67	21
1980	13	69	18
81	11	72	17
82	9	75	16
83	9	78	13
84	9	80	12
1985	13	74	13
86	17	72	11
87	14	74	12
88	12	75	13
89	14	73	13

**Table 16: Percentage of Farm Land Sales by Distance of Buyer's Residence from Tract, by District, Minnesota, 1981-1989**

Distance of Buyer's Residence from Tract Purchased	South- east	South- west	West Central	East Central	North- west	North- east	MN
	-----percent-----						
<u>Less than 2 miles</u>							
1981	24	27	17	13	15	13	21
1982	23	17	25	17	24	14	21
1983	22	17	18	28	15	29	20
1984	20	18	21	23	24	13	20
1985	25	25	21	29	19	19	24
1986	21	18	12	16	14	20	17
1987	23	29	15	21	26	28	23
1988	22	26	23	23	18	30	24
1989	20	22	26	22	17	14	22
<u>2-4 Miles</u>							
1981	31	37	29	18	27	13	30
1982	40	42	36	11	41	6	35
1983	34	44	30	14	46	19	35
1984	39	46	40	21	32	0	40
1985	34	41	35	33	43	25	37
1986	31	38	41	24	43	15	36
1987	30	37	42	13	33	0	33
1988	30	34	25	23	40	21	31
1989	34	37	21	13	49	9	31
<u>5-9 Miles</u>							
1981	20	18	24	8	26	10	19
1982	16	27	19	17	13	3	19
1983	23	23	27	16	14	5	22
1984	19	22	20	18	32	25	21
1985	21	21	21	12	22	6	20
1986	21	24	24	15	29	15	22
1987	20	20	22	15	24	24	20
1988	11	23	30	18	18	14	19
1989	22	24	25	20	17	41	23
<u>10-49 Miles</u>							
1981	18	12	16	25	17	10	17
1982	15	9	13	25	13	19	14
1983	16	13	19	28	15	19	17
1984	18	11	15	23	8	50	15
1985	16	10	21	14	8	6	14
1986	17	10	16	31	9	15	7
1987	20	10	15	37	15	18	16
1988	21	9	15	18	20	0	15
1989	18	14	17	29	13	18	17

**Table 16: Percentage of Farm Land Sales by Distance of Buyer's Residence from Tract, (cont'd) by District, Minnesota, 1981-1989**

Distance of Buyer's Residence from Tract Purchased	South- east	South- west	West Central	East Central	North- west	North- east	MN
	-----percent-----						
<u>50-299 Miles</u>							
1981	6	4	14	26	8	32	10
1982	5	5	6	21	5	33	8
1983	3	2	6	12	5	19	5
1984	4	3	3	12	5	13	4
1985	1	2	1	10	3	0	3
1986	8	7	7	11	1	15	7
1987	6	2	4	13	0	24	4
1988	14	8	4	16	2	14	9
1989	5	3	8	10	3	14	5
<u>300 Miles and Over</u>							
1981	1	3	1	9	8	23	4
1982	1	0	1	8	6	25	3
1983	0	1	0	2	3	10	1
1984	1	0	1	2	0	0	1
1985	1	1	0	1	5	44	2
1986	2	3	1	4	4	15	2
1987	1	2	2	1	2	6	2
1988	2	0	3	2	2	21	2
1989	2	2	3	4	3	5	2
<u>Median distance in Miles</u>							
1981	4	3	5	15	5	55	4
1982	3	4	4	10	3	70	4
1983	4	3	5	6	3	5	4
1984	3	3	3	5	4	11	3
1985	3	3	3	3	3	27	3
1986	4	4	4	5	4	8.5	4
1987	4	3	4	10	3	8	4
1988	4	3	5	5	4	4	4
1989	4	3	5	6	3	6	4

purchased by buyers whose residences were less than 10 miles from the tracts purchased (Table 17). In descending order, the percentage of acres sold to buyers living less than 10 miles away, for the remaining districts, was Southeast, 76 percent; West Central, 72 percent; Northeast, 64 percent; and, East Central, 55 percent.

The distribution in distance intervals can also be seen by regrouping the counties into Economic Development Regions. When using the thirteen regions instead of six districts, a slight variation in the median distance was observed among the regions (Table 18). Based on median distances, the market was most local in regions 1, 6W, 6E, 8, 9, and 10. It was least local in regions 5, 7W, 7E and 11.

The percentage of acres sold in various intervals of distance revealed again that the markets in regions 1, 3, 6W, 6E, 8, 9, and 10 were most local, with 75-87 percent of total acres sold accounted for by tracts situated less than 10 miles from the buyers' residences (Table 18). The market in region 7E was least local, with only 14 percent of the acres purchased by buyers living less than 10 miles away.

### **Quality of Land and Buildings**

Throughout the 1980's there has been a remarkable stability in the relative proportions of land sales when classified by land quality. Sales of "good" land varied between 37 and 45 percent of all sales, "average" land fluctuated between 44 and 50 percent, and "poor" land varied from 11 to 15 percent. For the decade as a whole, land classified as good accounted for 41.2 percent of all sales, average land for 46.2 percent, and poor land for 12.6 percent (Table 19).

**Table 17: Percentage of Acres Sold by Distance of Buyer's Residence from Tract Purchased, Minnesota, 1989**

Distance of Buyer's Residence from Tract Purchased	South- east	South- west	West Central	East Central	North- west	North- east	MN
	-----PERCENT-----						
Less than 2 miles	20	22	26	22	17	14	22
2-4 miles	34	37	21	13	49	9	31
5-9 miles	<u>22</u>	<u>24</u>	<u>25</u>	<u>20</u>	<u>17</u>	<u>41</u>	<u>23</u>
Under 10 miles	76	83	72	55	83	64	76
10-49 miles	18	14	17	29	13	18	17
50-299 miles	5	3	8	10	3	14	5
300 miles and over	2	2	3	4	3	5	2

**Table 18: Percentage of Acres Sold by Distance of Buyer's Residence from Tract,  
by Economic Development Regions, Minnesota, 1989**

Economic Development Regions	Distance in Miles							Median Distance In Miles
	<2	2-4	5-9	<10	10-49	50-299	300+	
-----PERCENT OF ACRES SOLD-----								
1	11	55	17	83	11	2	4	3
2	32	11	16	59	26	11	5	6
3	0	0	83	83	0	17	0	5
4	18	22	23	73	14	9	4	5
5	21	21	16	58	16	21	5	7
6W	31	36	20	87	3	5	5	3
6E	21	33	25	79	18	3	0	4
7W	23	11	14	48	46	5	0	10
7E	7	0	7	14	47	33	7	15
8	21	40	23	84	11	2	2	3
9	25	36	22	83	14	2	1	3
10	20	31	24	75	17	5	3	4
11	24	14	14	52	38	10	0	8
Minnesota	22	31	23	76	17	5	2	4

There was a decrease of 2 percentage points from the 1988 level in the sales of land classified by respondents as 'good' in 1989, accounting for 43 percent of total sales. This was offset by an increase of 1 percentage point each in the proportions of sales of average quality and poor quality land. It is important to note that estimates of land quality are made by respondents with reference to the average quality of farmland in their respective parts of Minnesota. This means that land of 'good' quality in one area may be regarded as 'average' or 'poor' in another area, or by individual respondents. These differences should be kept in mind when interpreting the validity of highly aggregated statistics.

There is a correlation between the type of buyer and the quality of land purchased. Expansion buyers have consistently concentrated their purchases in land of good or average quality, with a share of 45 percent and 44 percent, respectively, in 1989. Sole-tract buyers have also consistently purchased a higher proportion of land of good or average quality. In 1989, land of average quality comprised 50 percent of their purchases, as compared to 36 percent of good quality land. Investor buyers have consistently purchased a higher proportion of poor quality land than has been true of sole-tract or expansion buyers. In 1989, 26 percent of the purchases by investor buyers were of poor quality land, compared to 14 percent by sole-tract buyers and 11 percent by expansion buyers. Investor buyers have apparently placed greater emphasis on price than on land quality.

In 1989 the sales prices of good quality and average quality land increased for the state as a whole, compared to 1988. There was a marginal decline in the sales prices of poor quality land (Table 20).



**Table 19: Percent of Sales by Type of Buyer for Land of Varying Quality, Minnesota, 1980-1989**

Year	Sole-tract	Expansion	Investor	All Sales
GOOD QUALITY				
----- percent of sales -----				
1980	34	41	20	37
1981	36	43	27	40
1982	33	46	31	42
1983	39	42	22	40
1984	32	43	40	42
1985	34	42	38	41
1986	29	44	34	41
1987	35	44	30	41
1988	30	49	34	45
1989	36	45	27	43
AVERAGE QUALITY				
----- percent of sales -----				
1980	56	47	57	50
1981	53	45	53	47
1982	56	43	49	45
1983	47	47	47	47
1984	53	47	35	47
1985	47	47	40	46
1986	61	44	51	47
1987	47	43	48	44
1988	55	43	44	44
1989	50	44	47	45
POOR QUALITY				
----- percent of sales -----				
1980	11	12	23	13
1981	11	12	20	13
1982	10	12	20	12
1983	14	11	31	13
1984	15	9	25	11
1985	20	11	22	14
1986	10	12	15	12
1987	18	13	22	15
1988	15	8	22	11
1989	14	11	26	12

Good quality land sold for \$969 per acre, an increase of 14 percent over 1988. The sales price of average quality land increased 25 percent to \$762 per acre from \$611 per acre in 1988. The sales price of poor quality land decreased 2 percent from \$427 in 1988 to \$416 in 1989. It should be noted that in 1988 the biggest percentage increase in sales prices was observed in poor quality land.

In noting the relationship between building quality and type of buyer, it is not surprising to observe that sole-tract buyers purchased land with either good or average quality buildings (Table 21). In total, 66 percent of their purchases involved land with either good or average buildings, an increase of 11 percentage points from 1988. The presence of buildings can be assumed to be especially important to sole-tract buyers who may plan to live on the land purchased. In contrast, expansion buyers prefer to purchase land without buildings, accounting for 67 percent of their total purchases in 1989. Investor buyers have also been primarily interested in land without buildings, accounting for 54 percent of their total purchases in 1989.

#### **Improved Versus Unimproved Land**

The average sales price per acre of improved land increased to \$897 in 1989 for the state as a whole, an increase of 26 percent over 1988, while the increase was only 10 percent for unimproved land from \$674 per acre in 1988 to \$742 per acre in 1989 (Table 22). Regionally, the Northwest district showed the greatest differential between years, with unimproved land selling in 1989 at 107 percent of the price of improved land, down from 152 percent in 1988.

**Table 20: Price Paid per Acre by Type of Buyer for Land of Varying Quality, Minnesota, 1980-1989**

Year	Sole-tract	Expansion	Investor	All Sales
GOOD QUALITY				
----- sales price per acre -----				
1980	1,229	1,847	1,291	1,658
1981	1,446	1,789	1,727	1,716
1982	1,414	1,740	1,323	1,656
1983	1,111	1,573	1,540	1,517
1984	1,281	1,512	1,357	1,478
1985	939	1,092	1,019	1,061
1986	826	760	765	765
1987	641	753	700	732
1988	834	826	1,001	849
1989	831	990	948	969
AVERAGE QUALITY				
----- sales price per acre -----				
1980	811	1,365	1,086	1,173
1981	956	1,390	1,143	1,261
1982	916	1,359	1,049	1,224
1983	996	1,258	1,142	1,213
1984	978	1,239	1,129	1,197
1985	688	852	725	808
1986	628	619	647	625
1987	594	533	475	530
1988	544	599	731	611
1989	724	755	860	762
POOR QUALITY				
----- sales price per acre -----				
1980	707	895	865	858
1981	987	874	620	849
1982	769	1,094	654	976
1983	810	888	667	829
1984	739	774	570	723
1985	481	525	317	445
1986	612	361	446	396
1987	363	296	386	322
1988	346	434	462	427
1989	516	433	331	416

**Table 21: Percent of Sales by Quality of Building and by Type of Buyer, Minnesota, 1980-1989**

Year	Sole-tract	Expansion	Investor	Total Sales
GOOD QUALITY				
----- percent of sales -----				
1980	26	11	8	14
1981	39	10	10	15
1982	34	8	15	13
1983	30	8	9	11
1984	34	5	15	10
1985	30	7	9	11
1986	28	9	20	13
1987	28	6	9	9
1988	26	6	9	10
1989	29	5	14	9
AVERAGE QUALITY				
----- percent of sales -----				
1980	41	20	19	24
1981	32	15	22	19
1982	34	13	16	16
1983	37	13	19	17
1984	36	12	10	14
1985	34	14	16	17
1986	33	12	20	16
1987	38	12	14	16
1988	29	12	12	15
1989	37	13	14	16
POOR QUALITY				
----- percent of sales -----				
1980	21	17	25	18
1981	16	17	26	17
1982	14	16	21	16
1983	16	18	24	18
1984	13	12	26	13
1985	21	12	18	14
1986	18	14	8	13
1987	11	12	15	13
1988	17	13	16	14
1989	13	14	18	14

Table 21: Percent of Sales by Quality of Building and by Type of Buyer, Minnesota, (cont'd) 1980-1989

Year	Sole-tract	Expansion	Investor	Total Sales
NO BUILDINGS				
----- percent of sales -----				
1980	11	53	47	44
1981	12	58	42	48
1982	18	63	47	54
1983	16	61	47	54
1984	17	71	49	63
1985	15	67	57	58
1986	21	65	52	58
1987	23	68	62	62
1988	28	69	63	63
1989	21	67	54	61

The fact that 58 percent of all sales in 1989 involved unimproved land is associated with the predominant participation of expansion buyers, who are typically interested in purchasing land but not buildings. This is especially clear in the Northwest district, where 84 percent of all sales were of unimproved land, and 91 percent of the sales were to expansions buyers. It is also interesting to note that the ratio of prices of improved to unimproved land was 83 percent in 1989, almost the same as the ratio in 1971, just before the beginning of the land boom (Table 23).

#### **D. Trends in Sales Prices by Economic Development Regions**

A detailed analysis of sales price by economic development regions provides many interesting results. As shown in Table 24, the highest sales price per acre for farm land in 1989 was observed in the Twin Cities Metropolitan Region 11 (\$1215), followed by Region 9 in the Southwest (\$1143). The sales price per acre of farm land was the lowest in Region 2 (\$188).

In percentage terms, Region 8 reported the greatest increase of 30 percent from 1988 to 1989. The largest decline in sales price in 1989 occurred in Economic Development Region 7E (-39%). A contiguous area comprising Regions 2, 5, 7W and 7E all reported reductions in sales price from 1988 to 1989, when the prices are unadjusted, while the remaining nine regions showed increase in prices.

These results show some significant changes when the 1988 unadjusted prices are compared with 1989 adjusted prices, to remove the effects of county level changes in volume of sales in 1989 (Table 24). Comparison of 1988 unadjusted prices with 1989 unadjusted prices indicate that region 8

**Table 22: Proportion of Sales and Average Sales Price per Acre of Improved and Unimproved Farmland, by District, Minnesota, 1988 and 1989**

District	Improved				Unimproved				Price of Unimproved Land as a Percent of Price of Improved	
	1988		1989		1988		1989		1988	1989
	%	\$	%	\$	%	\$	%	\$	%	%
Southeast	45	877	50	992	55	711	50	860	81	87
Southwest	37	880	39	1113	63	937	61	1038	107	93
W. Central	31	610	39	685	69	551	61	572	90	84
E. Central	68	391	60	455	32	409	40	353	104	78
Northwest	20	303	16	436	80	460	84	465	152	107
Northeast	50	240	43	242	50	148	57	153	62	63
Minnesota	39	713	42	897	61	674	58	742	94	83

**Table 23: Proportion of Sales and Ratio of Prices of Improved and Unimproved Land,  
Minnesota, 1970-1989**

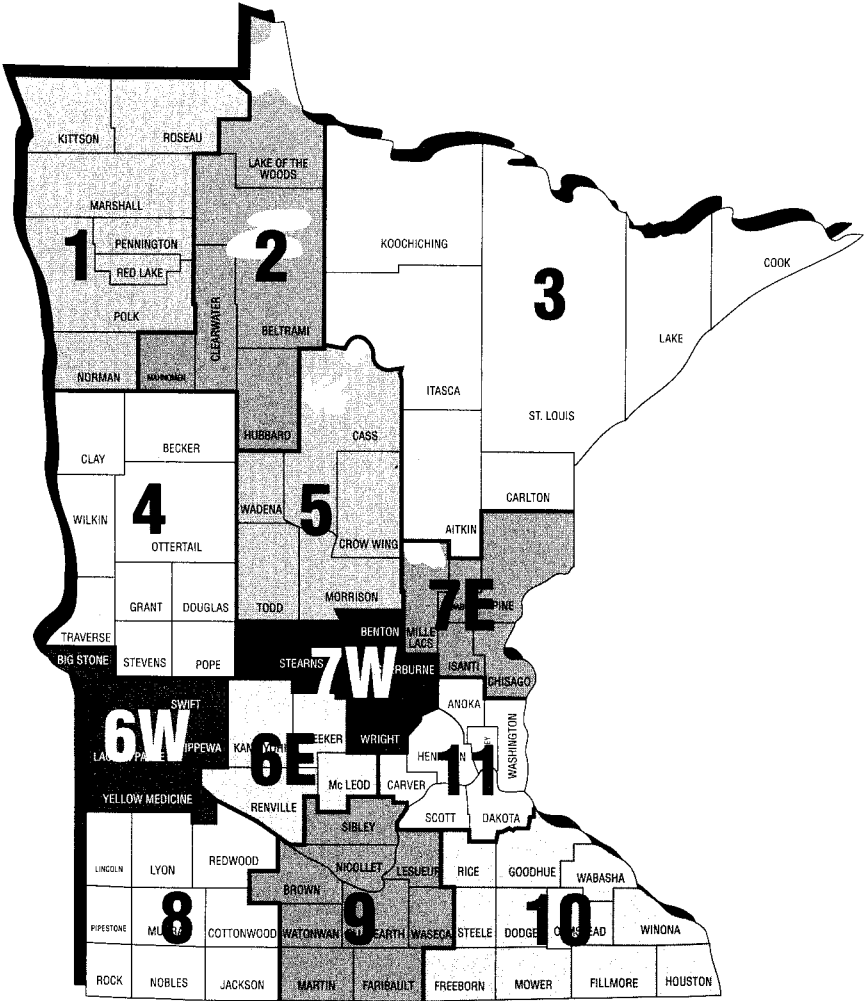
	Price Per Acre	
	Percent of Sales	Unimproved/Improved
	Improved	Unimproved Percent
1970	77	23 79
1971	77	23 82
1972	73	27 78
1973	73	27 74
1974	69	31 96
1975	66	34 101
1976	65	35 103
1977	60	40 87
1978	61	39 87
1979	59	41 93
1980	56	44 98
1981	53	47 106
1982	48	52 109
1983	48	52 99
1984	37	63 109
1985	43	57 95
1986	44	56 98
1987	41	59 105
1988	39	61 94
1989	42	58 83



**Table 24: Average Reported Sales Price per Acre of Farmland by Economic Development Regions, Minnesota, 1974-1989 (Unadjusted) and 1989 Adjusted Sales Price Data**

Year	1	2	3	4	5	6W	6E	7W	7E	8	9	10	11	State
Unadjusted														
1974	199	141	148	317	197	341	569	430	254	534	829	565	882	450
1975	344	206	157	446	259	537	691	472	316	710	1115	753	1035	607
1976	300	250	162	542	235	696	923	596	455	906	1464	915	1150	735
1977	367	277	179	558	297	746	1027	778	473	1058	1835	1197	1437	859
1978	433	321	280	853	478	906	1171	927	575	1199	1682	1373	1396	980
1979	560	520	310	828	483	960	1528	1112	768	1574	2111	1645	1799	1140
1980	132	452	271	868	506	1051	1735	1056	741	1674	2320	1864	1778	1318
1981	888	645	386	973	695	1303	1949	1300	790	1646	2865	1941	1830	1367
1982	806	459	325	987	556	1259	1876	1240	873	1701	2484	1713	1711	1360
1983	671	515	141	874	605	1090	1569	1187	780	1743	2139	1395	1878	1291
1984	636	460	256	955	502	1098	1391	1123	828	1405	1964	1337	1642	1263
1985	533	390	192	691	467	872	1163	869	604	986	1392	929	1423	864
1986	342	231	268	622	499	552	746	738	889	701	953	629	1127	650
1987	325	198	---	458	360	506	635	592	687	703	878	577	827	559
1988	375	269	191	504	381	582	831	804	670	795	1061	749	1070	691
1989	404	188	204	553	270	618	880	770	406	1034	1143	951	1215	815
*Change of Unadjusted Prices 1988-1989														
	8	-30	7	10	-29	6	6	-4	-39	30	8	27	14	18
Adjusted 1989 Prices														
	289	291	112	561	294	628	930	824	430	1045	1173	935	1336	794
Percentage Change from 1988 Unadjusted to Adjusted 1989 Prices														
	-23	8	-41	11	-23	8	12	2	-36	31	11	25	25	15

Figure 5: Minnesota Economic Development Regions



still led the state, with a 31 percent increase in sales prices from 1988 to 1989. Regions 1, 3, 5 and 7E showed a decline in adjusted sales prices from 1988 to 1989. In contrast, regions 2, 4, 6W, 6E, 7W, 8, 9, 10, and 11 all showed an increase in adjusted sales prices from 1988 to 1989.

## **Part II**

### **The Effect of Location, Climate, and Soil Quality on the Rural Real Estate Market**

#### **The Rural Real Estate Market in Southwestern Minnesota**

Southwestern Minnesota offers an opportunity to compare land market trends in areas characterized by a general absence of urban influences and similar land use patterns, but with different exposure to climatic risk. Three clusters of counties are formed for this study: a 'lower-risk area' of nine south-central counties with high crop yields and relatively stable weather patterns; a 'higher-risk area' of nine west-central counties with a history of greater variability in crop yields and extremes in climate; and a 'transitional area' of nine counties lying in between, as shown in Figure 6.

The average sales price per acre in transitional and lower risk areas increased from 1988 to 1989, with a 31 percent increase in the transitional area and a 19 percent increase in the lower risk area. The sales prices per acre in the higher risk area remained stable (Table 25). At the peak of the land price boom in 1981, the average sales price per acre in the higher risk area was only 42 percent of the average price in the lower risk area. During the period of land price declines from 1981 to 1987, the gap narrowed. By 1986, relative prices in the higher risk area had risen to 61 percent of those in the lower risk area. With the increase in land prices in 1988 and 1989, the spread increased again, dropping the relative price of the higher-risk group to that of the lower-risk group from 56 percent in 1987 to 54 percent in 1988 and again to 45 percent in 1989, almost back to the relative relationship that prevailed at the peak of the boom.

**Table 25: Farmland Sales by Risk Category in Southwestern Minnesota, 1981-1989**

item		1981	1982	1983	1984	1985	1986	1987	1988	1989
DOLLARS										
average	hi	1159	1140	1016	1001	783	561	479	545	542
sale price	tr	1680	1698	1590	1356	1011	680	651	776	1023
per acre (\$)	lo	2760	2529	2145	1954	1354	919	853	1011	1206
PERCENT										
change in	hi	22	- 2	-11	- 1	-22	-28	-15	14	nil
sale price	tr	8	1	- 6	-15	-25	-33	- 4	19	31
from previous	lo	19	- 8	-15	- 9	-31	-32	- 7	18	19
year (%)										
average sale	hi	42	45	47	51	58	61	56	54	45
price as % of	tr	61	67	74	69	75	74	76	77	85
average price										
in low risk area										
ACRES										
average #	hi	191	158	162	167	151	206	169	176	173
acres per	tr	156	136	150	127	140	148	144	146	137
sale	lo	111	110	110	101	115	117	125	139	128

NOTE: "hi," "tr", and "lo" refer (respectively) to higher-risk area, transitional area, and lower-risk area.



The variation in the total transaction amounts among various risk categories shows that the total value of reported sales in the higher risk area fell relative to the lower risk area (Table 26). This is a result of a greater increase in average sales price per acre in the lower risk region and a relatively lower frequency of sales in the higher risk counties (Table 25).

Expansion buyers dominated the rural real estate market in southwestern Minnesota in all the categories, accounting for 79 percent of total sales in the higher risk area, 84 percent in the transitional area and 86 percent in the lower risk area (Table 27). There was an increase in the frequency of sales to expansion buyers in the lower risk and transitional areas in 1989 compared to 1988, and a marginal decrease in the proportion of sales to expansion buyers in higher risk areas.

Cash sales predominated in the higher risk and transitional areas, accounting for 40 percent and 46 percent, respectively, while the lower risk area reported a surprising increase in use of contracts for deed, to 44 percent (Table 28). Compared to 1988, in the higher risk area, there was a decline in the use of contracts for deed, and an offsetting increase in mortgage financing. In contrast, mortgage financing remained at a low level in the lower risk area, accompanied by an increase of 16 percentage points in sales by contract for deed, and a decline of 8 percentage points in cash financing (Table 28).

### **The Greater Twin Cities Metropolitan Area**

The 14 counties surrounding the Twin Cities counties (Hennepin and Ramsey) are defined, for this study, as the Greater Twin Cities

**Table 26: Variation In Average Transaction Amounts, by Risk Category in Southwestern Minnesota, 1981-1989<sup>a</sup>**

Risk Area	1981	1982	1983	1984	1985	1986	1987	1988	1989
DOLLARS									
Hi	221,369	180,120	164,592	167,167	118,233	115,566	80,957	95,938	93,766
Trans.	262,080	230,928	238,500	172,212	141,540	100,640	93,744	113,311	40,151
Low	306,360	278,190	235,950	197,354	155,710	107,523	106,625	140,501	54,368
PERCENT									
Hi/Lo	67.8	64.7	69.8	84.7	75.9	107.5	75.9	68.3	60.7

<sup>a</sup>Transaction Amount is price per acre times acres per sale.



**Table 27: Proportion of Sales by Type of Buyer (top number) and Average Price per Acre (bottom number) by Risk Areas, Southwestern Minnesota, 1981-1989**

		1981	1982	1983	1984	1985	1986	1987	1988	1989
HIGHER-RISK AREA										
sole-tract buyer	%	5	6	7	6	8	5	8	5	4
	\$	1165	1264	994	1207	499	479	410	513	450
expansion buyer	%	88	83	85	83	83	80	81	81	79
	\$	1171	1135	1026	996	836	564	482	549	544
investor buyer	%	6	11	7	11	8	14	11	14	17
	\$	1172	1127	1052	895	748	594	519	536	472
TRANSITIONAL AREA										
sole-tract buyer	%	13	11	14	10	14	10	10	13	8
	\$	1557	1733	1249	1190	900	624	631	689	1085
expansion buyer	%	76	81	79	85	72	76	77	77	84
	\$	1752	1742	1678	1373	1061	688	689	794	1028
investor buyer	%	10	8	8	5	14	14	13	9	8
	\$	1405	1302	1368	1330	900	677	487	854	958
LOWER-RISK AREA										
sole-tract buyer	%	3	2	4	2	4	4	5	5	4
	\$	2763	2447	1875	1699	1338	931	762	746	1091
expansion buyer	%	93	94	92	95	83	81	89	80	86
	\$	2790	2569	2183	1979	1331	905	859	1056	1261
investor buyer	%	4	4	4	3	13	15	6	14	10
	\$	2765	1617	2368	2098	1142	968	846	938	1252

**Table 28: Percentage of Sales by Method of Finance (top number) and Average Sale Price per Acre (bottom number) by Risk Areas, Southwestern Minnesota, 1981-1989**

		1981	1982	1983	1984	1985	1986	1987	1988	1989
<b>HIGHER-RISK AREA</b>										
cash	%	14	23	30	30	33	39	45	40	40
	\$	1335	1085	984	1002	730	506	473	551	533
mortgage	%	24	16	24	26	15	15	19	28	39
	\$	1042	1160	1106	1010	840	607	611	554	567
contract for deed	%	62	61	46	44	52	46	36	32	21
	\$	1165	1149	1002	1051	769	555	505	539	516
<b>TRANSITIONAL AREA</b>										
cash	%	19	25	23	24	34	50	41	44	46
	\$	1646	1675	1497	1985	855	676	636	775	969
mortgage	%	19	21	19	25	19	20	19	31	27
	\$	1842	1576	1604	1286	1031	722	611	793	1055
contract for deed	%	63	54	58	51	48	31	40	25	27
	\$	1626	1758	1598	1476	1075	649	666	760	1064
<b>LOWER-RISK AREA</b>										
cash	%	28	19	26	35	38	52	45	48	36
	\$	2893	2502	2078	1901	1272	885	862	1030	1193
mortgage	%	24	26	34	25	20	22	21	24	21
	\$	2583	2546	2226	1941	1202	956	864	980	1288
contract for deed	%	47	55	40	40	42	27	34	28	44
	\$	2680	2495	2175	2029	1333	920	819	1021	1179

Metropolitan Area. To facilitate a more detailed study, the area was divided into three sub-areas, based on population levels, productivity of the land, and historical trends in land values (Figure 7).

The Twin Cities Metro Area consists, for this study, of Anoka, Carver, Dakota, Scott and Washington (excluding Hennepin and Ramsey counties of Economic Development Region 11).

The South Metro Fringe consists of five counties: Goodhue, McLeod, LeSueur, Rice and Sibley.

The North Metro Fringe includes four counties: Chisago, Isanti, Sherburne and Wright.

The average sales price per acre in the Twin Cities Metro and South Metro Fringe areas increased in 1989, while sales prices in the North Metro Fringe declined, compared to 1988 (Table 29). It should be noted that the North Metro Fringe includes counties in which dairying is prominent, and which suffered severely in the drought of 1988. With limited areas in cash grains, they did not participate as fully in disaster relief and income maintenance programs in 1988-89 as did more southern counties.

The average sales price for the Greater Twin Cities Metro Area as a whole increased in 1989, but only by 3 percent. In contrast, the South Metro Fringe showed an increase of 17 percent, the largest increase among the three metropolitan sub-areas.

In spite of this strong recovery in 1989, the South Metro Fringe has not regained the relative position it achieved at the peak of the boom. Its average price in 1989 was only 47 percent of its peak price in 1980, while the average price in the core "seven" county area had recovered to

**Table 29: Average Reported Sales Price per Acre, Greater Twin Cities Metropolitan Area and Sub-Areas, 1973-1989**

Year	"Seven" County Metro <sup>1</sup>	South Metro Fringe <sup>2</sup>	North Metro Fringe <sup>3</sup>	Greater T.C. Metro (14 counties) <sup>4</sup>	Minnesota
1973	698	475	353	516	298
1974	882	647	556	689	450
1975	1035	808	599	839	607
1976	1150	1086	718	1045	735
1977	1437	1285	752	1198	859
1978	1396	1313	892	1185	980
1979	1799	1799	1309	1694	1140
1980	1778	2097	1170	1781	1318
1981	1830	1955	1334	1791	1367
1982	1711	1867	1446	1759	1360
1983	1878	1614	1325	1581	1291
1984	1642	1464	1280	1458	1263
1985	1423	1069	1051	1152	864
1986	1127	846	721	855	650
1987	827	752	764	772	559
1988	1070	848	1159	928	691
1989	1215	991	864	958	815

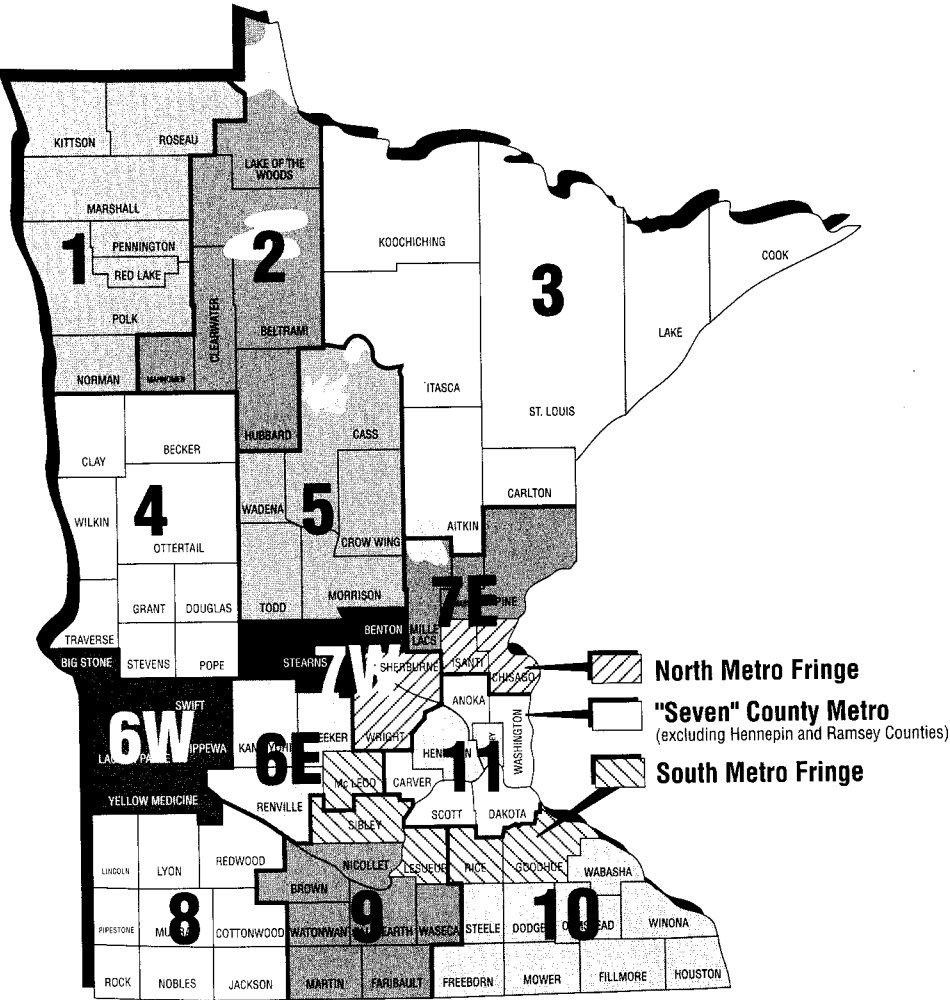
<sup>1</sup>Anoka, Carver, Dakota, Scott, Washington Counties (Hennepin and Ramsey are excluded for reporting purposes.)

<sup>2</sup>Goodhue, McLeod, Le Sueur, Rice and Sibley Counties

<sup>3</sup>Chisago, Isanti, Sherburne, Wright Counties

<sup>4</sup>All fourteen counties named above

Figure 7: Minnesota Economic Development Regions and the Greater Twin Cities Metropolitan Area



65 percent of its former peak in 1983 (Table 30). The Greater Twin Cities Metro area, as a whole, has lagged behind the state in recovering from the price declines of the 1980's.

In the early 1970's, the annual average per acre sale price in the Greater Twin Cities Metro Area ranged from 40 to 73 percent above the statewide average. This differential narrowed in the 1980's, and in 1989 was only 17.6 percent. Relative to the state as a whole, the price-enhancing effect on agricultural land of location within the greater Twin Cities metro area appears to be declining.

### **The Red River Valley Area**

The Red River Valley for this study is defined as the former glacial lake plain. It is highly productive, while the areas surrounding this plain are generally less productive. Analyses that include both Valley and non-Valley land in the Northwest district or in Economic Development Regions 1 and 4 are often distorted. In order to reduce the effect of these sharp changes in land quality, two sub-areas are studied: the Red River Valley, and a Comparison Area consisting of non-Valley townships and counties, lying within the Northwest district, but outside of the Valley. The two areas are shown in Figure 8.

In 1989, the spread between prices in the two areas narrowed with an increase in average sales price per acre over 1988 of 5 percent in both the Valley and Comparison Area (Table 31). For the Red River Valley, the average sales price per acre increased to \$644 from \$612 in 1988 and in the Comparison Area, the average sales price increased to \$294 from \$281 in 1988.

Table 30: Average Reported Sales Price Per Acre in 1989 as a Percent of Peak Price  
Greater Twin Cities Metro Area

	"Seven" County Metro	South Metro Fringe	North Metro Fringe	Greater T.C. Metro	Minnesota
	-----Dollars Per Acre-----				
Peak Price	1878 <sup>a/</sup>	2097 <sup>b/</sup>	1446 <sup>c/</sup>	1791 <sup>d/</sup>	1367 <sup>d/</sup>
Price in 1989	1215	991	864	958	815
	PERCENT				
1989 as Percent of Peak	64.7	47.3	59.8	53.5	59.6

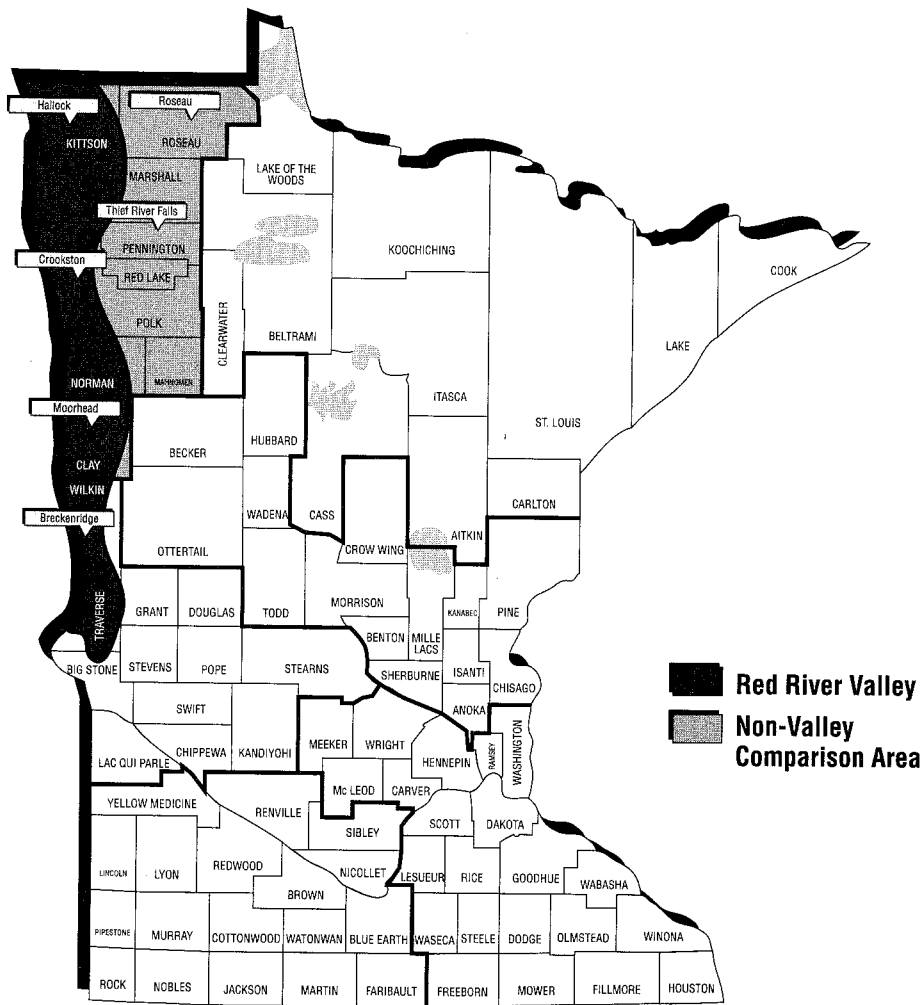
<sup>a/</sup> 1983

<sup>b/</sup> 1980

<sup>c/</sup> 1982

<sup>d/</sup> 1981

Figure 8: The Red River Valley and Comparison Area





**Table 31: Farm Land Sales Prices and Average Tract Size, Red River Valley and Comparison Area, 1972-1989**

Year	Price Per Acre (\$)		Percent Change From Previous Year (%)		Average Size of Tracts Sold (acre)	
	Comparison		Comparison		Comparison	
	Valley	Area	Valley	Area	Valley	Area
1972	151	78	-9	18	316	260
1973	201	90	33	15	252	358
1974	359	152	79	69	231	337
1975	535	227	49	49	219	270
1976	733	279	37	23	216	325
1977	780	306	6	10	284	287
1978	849	385	9	26	270	290
1979	993	461	17	20	257	321
1980	1112	638	12	38	204	317
1981	1195	788	7	24	281	284
1982	1239	629	4	-20	164	287
1983	998	561	-19	-11	190	249
1984	939	524	-6	-7	186	248
1985	755	387	-20	-26	180	203
1986	625	266	-17	-31	187	265
1987	493	244	-21	-8	232	369
1988	612	281	23	16	186	256
1989	644	294	5	5	193	220

Expansion buyers dominated the rural real estate market in both the Red River Valley and Comparison Area in 1989, accounting for 96 percent and 88 percent of the sales, respectively (Table 32). Throughout the period of land price declines, there has been a virtual absence of investor buyers in the Red River Valley, and there were none in 1989. Nine percent of the tracts were purchased by investor buyers in the Comparison Area in 1989.

It is interesting to note that in the Red River Valley, the sales of unimproved land as a proportion of all sales decreased to 86 percent while increasing to 84 percent in the Comparison Area (Table 33). A distinctive feature of both areas in recent years has been the higher prices paid for land without buildings (unimproved), reflecting the predominance of expansion buyers. In this market, the absence of buildings can generally be considered a price-enhancing factor.

In contrast to the predominant method of financing by contract for deed in 1988 in both areas, cash sales were predominant in both the Red River Valley and the Comparison Area in 1989. An all time low of 5 percent of the sales were financed by mortgages in the Comparison Area (Table 34). The strong resurgence in the use of contracts for deed in the Red River Valley was especially marked, reaching 55 percent of all sales in 1989 from a low of 11 percent as recently as 1985.

**Table 32: Proportion of Sales by Type of Buyer (top number) and Average Price per Acre (bottom number), 1981-1989**

Type of Buyer	1983	1984	1985	1986	1987	1988	1989
RED RIVER VALLEY							
Sole-Tract Buyer	% 2 \$ 1150	2 1250	0 --	2 513	0 --	4 389	4 681
Expansion Buyer	% 98 \$ 995	98 1005	92 740	96 626	100 506	94 605	96 644
Investor Buyer	% 0 \$ --	0 --	8 857	2 897	0 --	2 502	0 --
COMPARISON AREA							
Sole-Tract Buyer	% 11 \$ 646	17 445	9 578	6 356	13 387	19 243	3 292
Expansion Buyer	% 81 \$ 561	80 544	68 402	88 258	77 232	81 290	88 291
Investor Buyer	% 8 \$ 399	3 350	23 289	6 393	10 184	0 --	9 307

**Table 33: Proportion of Sales and Average Sales Price per Acre of Improved and Unimproved Land, Red River Valley and Comparison Area, 1981-1989**

Area and Year	Percentage of Sales		Price Per Acre		Price of
	Improved	Unimproved	Improved	Unimproved	Unimproved
	%	%	\$	\$	Land as a % of Price of Improved Land
<b>Red River Valley</b>					
1981	25	75	1,083	1,293	119
1982	29	71	1,358	1,187	87
1983	25	75	959	1,027	107
1984	15	85	1,051	918	87
1985	8	92	755	755	106
1986	30	70	581	648	112
1987	20	80	423	527	125
1988	6	94	610	612	100
1989	14	86	548	660	120
<b>Non-Valley Area</b>					
1981	39	61	886	677	76
1982	42	57	663	596	90
1983	28	72	618	523	85
1984	40	60	485	561	116
1985	28	72	387	388	100
1986	24	76	238	276	116
1987	41	59	237	254	107
1988	31	69	274	287	105
1989	16	84	348	283	81

**Table 34: Proportion of Sales (Top Figures) and Price Paid per Acre (Bottom Figures)  
by Method of Finance, Red River Valley and Comparison Area, 1983-1989**

Method of Finance		1983	1984	1985	1986	1987	1988	1989
RED RIVER VALLEY								
Cash	%	33	27	52	49	60	39	52
	\$	1021	911	675	715	592	651	577
Mortgage	%	40	38	37	13	21	15	22
	\$	1019	1008	834	601	429	558	792
Contract for Deed	%	27	35	11	38	19	45	55
	\$	965	1037	801	598	447	616	590
COMPARISON AREA								
Cash	%	17	21	23	45	39	35	55
	\$	533	550	235	279	291	262	288
Mortgage	%	38	38	31	32	36	17	5
	\$	627	551	439	303	245	295	192
Contract for Deed	%	45	41	46	23	25	48	40
	\$	537	485	463	202	175	283	315

**Part III**  
**A Comparison of Average Size of Tracts Sold and**  
**Average Size of Farms in Minnesota**  
**1965-1989**

Data from this annual survey permit a comparison between the average size of land parcels changing hands in reported sales and the average size of farm operating units for the twenty-five years from 1965 through 1989 (Table 35 and Figure 9).

When averaged over five-year intervals, there was a remarkable stability in the average size of tracts sold from 1965 through 1979. This average dropped after 1979 and has remained appreciably lower throughout the 1980's, with an average size in the 1980's that was 15 percent below the average size of sales tracts in the 1970's.

Over the same 25 years, the average size of farm operating units as estimated by the Minnesota Agricultural Statistical Service increased almost without interruption, from 228 acres in 1965 to 333 acres in 1989, an increase of 46 percent.

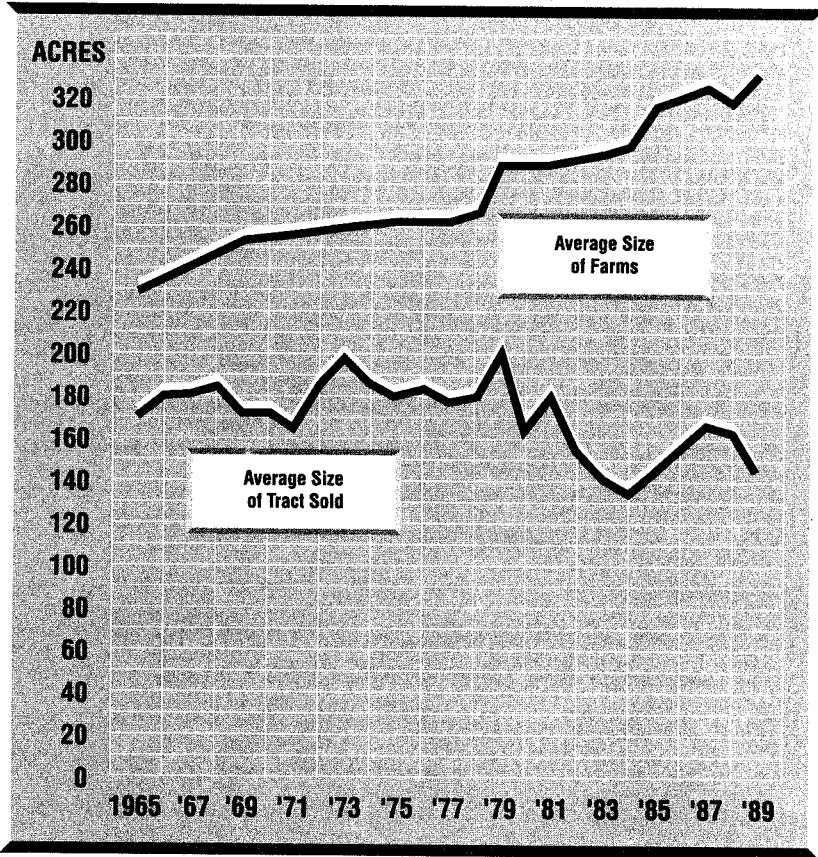
These contrasting trends are consistent with the data in Table 15, showing the increasing role played in the farm land market by farm expansion buyers. Intact farm operating units seldom change ownership in arms-length sales. The tracts that sell are typically parts of former farms. The divergent trends suggest strongly that ownership units are declining in size while operating units are increasing. The contemporary Minnesota farm involves more ownership (and taxing) units than was the case twenty-five years ago.

**Table 35: Average Size of Tracts Sold and Average Size of Farms, Minnesota, 1965-1989**

Year	Average Size of Tract Sold	Average Size of of Farm*
	Acres/Sale	Acres/Farm
1965	171	228
1966	181	234
1967	181	240
1968	185	246
1969	172	253
<b>Average</b>	<b>178</b>	<b>240</b>
1970	173	255
1971	167	256
1972	184	259
1973	196	262
1974	186	262
<b>Average</b>	<b>181</b>	<b>259</b>
1975	179	262
1976	183	262
1977	178	264
1978	179	268
1979	188	291
<b>Average</b>	<b>181</b>	<b>269</b>
1980	164	291
1981	168	292
1982	154	295
1983	141	298
1984	134	301
<b>Average</b>	<b>152</b>	<b>295</b>
1985	143	317
1986	154	323
1987	167	326
1988	162	319
1989	147	333
<b>Average</b>	<b>155</b>	<b>325</b>

\*Source: Minnesota Agricultural Statistics, 1978, p.3 and 1989, p.6,  
Minnesota Agricultural Statistics Service, Minnesota Department  
of Agriculture.

**Figure 9: Trends in Average Size of Tracts Sold and Average Size of Farms, Minnesota, 1965-1989**





## **Part IV Comparison of Land Value Data from the U.S. Census of Agriculture and the Minnesota Survey**

The U.S. Census of Agriculture periodically reports county and statewide estimated values of farmland, with the most recent data covering the early months of 1988. These permit comparison with the county and statewide estimated values and actual reported sales prices of Minnesota farmland reported by the annual Minnesota Rural Real Estate Market Survey. The comparison between the information provided by these two sources can be done only in general magnitudes because of different methods used in the collection of the data.

The U.S. Census of Agriculture uses a sample of approximately twenty percent of self-reporting farmers to collect the information on county and statewide farmland values. The Minnesota survey obtains the estimated values and sales prices of farmland from a variety of different sources, including brokers, bankers, farm managers, rural appraisers, credit officers, and county officials. Data are not collected from actual landowners.

A comparison of county data from three sources (census values plus estimated values and actual sales prices from the Minnesota survey) can be helpful in bringing out any systematic discrepancies and their possible causes. With this in mind, the county data from the U.S. Census of Agriculture, 1987, are compared with the estimated values and sales prices of farmland in 1988, obtained through the Minnesota Survey for 1988 (Table 36).

Since the U.S. Census of Agriculture mailed the questionnaires in January 1988, asking for estimated values of farmland, it is appropriate to compare these values with the estimated values and sales prices from

Minnesota Survey for 1988, which reflected the sales that took place between January and June, 1988.

The data are presented pictorially in Figure 10, showing the counties in which the U.S. Census of Agriculture estimated land value figures were higher or lower than those reported by the Minnesota survey for the census years 1969, 1974, 1978, 1982, and 1987. The summary of these data, presented in Table 37, shows a change in 1987 compared to the pattern that prevailed over the past census years from 1969 through 1982.

Using data from the 1987 census, the number of counties in which census data were above the Minnesota survey's estimated values or actual sales prices was greater than the number of counties in which census data were below the Minnesota survey values. This is contrary to the trend that prevailed in the census years from 1969 to 1982, in which the number of counties with census values below the Minnesota survey values and sales prices predominated. In the 1987 census, the self-reporters of census data in only 18 counties "undervalued" their land while self-reporters in 45 counties had "undervalued" their land in 1982. The numbers reversed in the 1987 census, with self-reporters in 45 counties "overvaluing" their land, when compared to the data on estimated values and sales prices reported in the Minnesota survey.

Some of the reasons for these discrepancies in land value data between the U.S. Census of Agriculture and the Minnesota survey can be attributed to the self-reporting of census data, in contrast to the secondary data obtained in the Minnesota survey. The census data are based on a 100% sample from large sized farms and a much smaller sample

from small sized farms. However, it remains unclear why self-reporters became more optimistic regarding the value of their farmland in 1987-88.

Statewide, farm land values from the U.S. Census of Agriculture and reported sales in the Minnesota survey are similar (Table 36), even though there are some large discrepancies among countywide data.

**Table 36: Comparison of Dollar Value Per Acre According to Three Different Sources, by Counties, Minnesota, 1987**

County	Reporters Estimates 1988	U.S. Census of Agriculture 1987*	Reported Sales 1988
	-----DOLLARS PER ACRE -----		
Aitkin	---	550	211
Anoka	---	1564	---
Becker	400	521	502
Beltrami	212	404	---
Benton	---	702	545
Big Stone	488	497	583
Blue Earth	1120	948	962
Brown	950	953	936
Carlton	---	434	---
Carver	1130	1216	1085
Cass	250	360	371
Chippewa	735	649	802
Chisago	---	962	825
Clay	563	629	608
Clearwater	250	407	159
Cook	300	765	---
Cottonwood	943	822	824
Crow Wing	---	455	419
Dakota	838	1219	600
Dodge	867	801	1092
Douglas	450	581	385
Fairbault	1135	949	928
Fillmore	645	630	403
Freeborn	767	861	702
Goodhue	839	897	733
Grant	575	556	525
Hennepin	---	2339	---
Houston	367	648	262
Hubbard	313	456	---
Isanti	550	812	---
Itasca	200	428	181
Jackson	1070	921	992
Kanabec	350	536	---
Kandiyohi	665	762	623
Kittson	500	486	337
Koochiching	---	366	145
Lac qui Parle	589	557	561
Lake	---	682	---

**(Table cont.)**

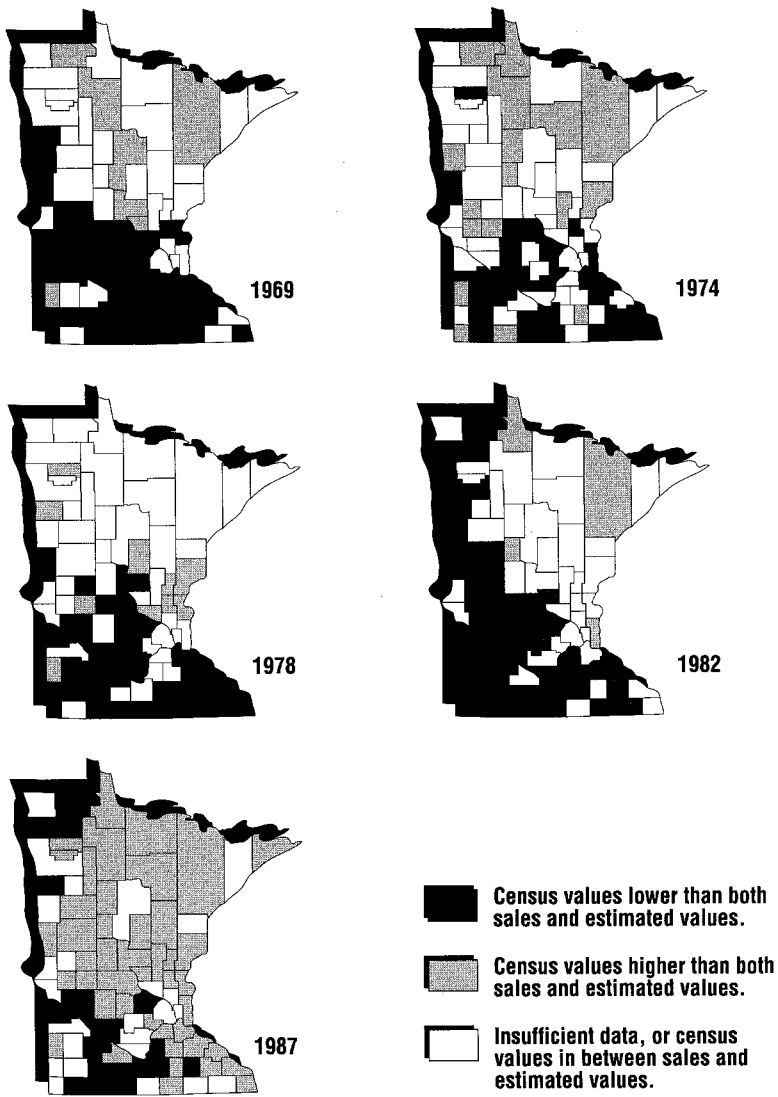
County	Reporters Estimates 1988	U.S. Census of Agriculture 1987	Reported Sales 1988
	DOLLARS PER ACRE		
Lake of the Woods	167	361	156
Le Sueur	950	904	926
Lincoln	440	509	429
Lyon	775	695	688
McLeod	808	826	875
Mahnomen	400	463	363
Marshall	505	466	544
Martin	1256	1038	1282
Meeker	633	740	659
Mille Lacs	433	592	200
Morrison	375	628	496
Mower	800	793	785
Murray	750	643	577
Nicollet	751	948	1026
Nobles	885	769	838
Norman	588	588	592
Olmsted	670	878	698
Otter Tail	421	557	320
Pennington	250	362	219
Pine	---	551	254
Pipestone	600	539	455
Polk	615	654	738
Pope	450	535	468
Ramsey	---	5767	---
Red Lake	231	378	260
Redwood	953	837	1029
Renville	950	860	1019
Rice	800	957	826
Rock	802	795	776
Roseau	283	349	256
St. Louis	150	523	200
Scott	650	1346	1117
Sherburne	700	1016	1250
Sibley	1000	900	922
Stearns	569	696	640
Steele	808	830	730
Stevens	535	605	525
Swift	594	529	535
Todd	400	535	335
Traverse	350	543	592

(Table cont.)

County	Reporters Estimates 1988	U.S. Census of Agriculture 1987	Reported Sales 1988
		DOLLARS PER ACRE	
Wabasha	550	644	548
Wadena	225	426	---
Waseca	1113	889	1137
Washington	2000	2025	---
Watsonwan	1050	976	1334
Wilken	500	669	591
Winona	---	750	689
Wright	788	1110	1275
Yellow Medicine	700	660	637
State Total	523	700	691

\*Source: U.S. Census of Agriculture, 1987.

**Figure 10: Alternate Measures of Land Value: The U.S. Census of Agriculture and the survey.**



**Table 37: Comparison of Number of Counties In the Minnesota Survey with Estimated Value and Sales Prices Above or Below the U.S. Agricultural Census Values, 1969, 1974, 1978, 1982, and 1987**

	Number of Counties				
	Year				
	1969	1974	1978	1982	1987
Census data <u>below</u> both Minnesota Survey Estimated Values or Actual Sales Prices	45	27	36	45	18
Census data <u>above</u> both Minnesota Survey Estimated Values or Actual Sales Prices	7	17	10	4	45



## **Part V**

### **Land Market Effects of the Conservation Reserve Program (CRP)**

The Conservation Reserve Program (CRP), authorized by the 1985 Food Security Act (the "Farm Bill") has introduced a potentially distorting element into the analysis of rural land market trends. From the first round of bids in March 1986 through the 9th round in October 1989 a total of 1,830,217 acres have been entered under the CRP program in Minnesota (Table 38). This is 6.9 percent of the area of land in farms as reported in the 1987 U.S. Census of Agriculture. For the state as a whole, approximately one out of every 15 acres of farmland is now removed from crop use by the CRP.

Entries under the CRP program are highly concentrated in a few counties and regions (Figure 11). The fourteen of the state's eighty-seven counties in which CRP entries total over ten percent of the land in farms account for 51 percent of total CRP entries, by acres. The concentration is especially marked in the Northwest district as defined in this report.

The nine counties in that district, for example, have 18 percent of the total land in farms in the state, but 38.7 percent of total CRP entries. For the district as a whole, CRP entries cover 14.8 percent of all land in farms or almost one of every seven acres, twice the statewide frequency (Table 39).

Within the Northwest district, CRP entries are concentrated in the portions of the counties lying outside the lake plain of the Red River Valley, in areas that include some of the lowest-priced farmland in the state.

In contrast, the eighteen counties of the Southwest district, containing the state's highest priced farmland, include 24.9 per cent of the state's total area of land in farms, but account for only 13.2 percent of the acres entered under the CRP. Within the Southwest district, the concentration is marked, with 49 percent of all CRP entries in the district located in three counties, Lincoln, Lyon, and Yellow Medicine. These three counties contain much of the lowest priced farmland in the Southwest district.

Other areas of concentration of CRP entries include a band of counties running south from Becker through Otter Tail, Grant, Douglas, Stevens, Pope, and Kandiyohi. In the Southeast district, there is a notable concentration in Le Sueur and Rice and a less marked concentration in Olmstead and Fillmore counties.

With the exception of the southeastern counties, CRP entries tend to be concentrated in counties or parts of counties with sales prices well below the statewide average. This is not surprising, given the environmental hazards that must be present to qualify land for entry under the CRP. It does have the effect of removing lower-priced lands from the frequency base of lands that are sold. Although lands entered in the CRP can be sold, sales of these lands have been infrequent.

The result has been to reduce the probability that lower-priced lands will be represented in the listing of lands sold in 1987, 1988, and 1989 with the same frequency that prevailed before the CRP. In areas where CRP entries are concentrated there is thus an upward drift in reported sales prices over the last three years.

By districts, this can affect the relative significance of district-wide average sales prices. State-wide, it shifts the frequency of reported sales toward the higher-priced segments of the market.

In the absence of detailed data on the quality of land actually sold, it is impossible to quantify the effect of this reduction in the frequency of sales of lower-priced land. Since CRP contracts are for ten years, it is probable that this "CRP effect" will distort the interpretation of average sales prices until at least the mid-1990s. One effect is to widen the difference between the estimated value of farmland and prices received in actual sales. In the sales prices, the lower end of the land quality scale is currently underrepresented.

**Table 38: Total Acreage Under CRP Enrollment (1986-89) and Total Acreage Under Land In Farms (1987 census)**

<u>County</u>	<u>Total CRP Enrollment (Acres) 1986-89<sup>a/</sup></u>	<u>Total Land in Farms (Acres) (1987 Census)<sup>b/</sup></u>	<u>CRP Area as Percentage of Total Land in Farms</u>
Aitkin	4274.0	178100	2.4
Anoka	229.3	74443	0.3
Becker	36704.7	397385	9.2
Beltrami	10591.3	243679	4.3
Benton	2741.2	184412	1.5
Big Stone	20074.1	277071	7.2
Blue Earth	11792.6	401557	2.9
Brown	5209.7	335559	1.6
Carlton	332.8	132863	0.2
Carver	2259.6	167532	1.3
Cass	2701.4	195569	1.4
Chippewa	8613.2	327916	2.6
Chisago	2982.8	152717	2.0
Clay	44628.2	588808	7.6
Clearwater	7203.5	229537	3.1
Cook	0.0	1283	0.0
Cottonwood	17455.0	377506	4.6
Crow Wing	3996.1	132410	3.0
Dakota	15141.7	219920	6.9
Dodge	1616.2	239443	0.7
Douglas	34403.8	260294	13.2
Fairbault	3899.0	427986	0.9
Fillmore	48527.3	451054	10.8
Freeborn	25745.2	384001	6.7
Goodhue	17150.7	389539	4.4
Grant	25955.9	286857	9.0
Hennepin	722.9	91078	0.7
Houston	13594.5	285056	4.8
Hubbard	7331.0	123875	5.9
Isanti	3406.5	142998	2.4
Itasca	34.2	123555	0.02
Jackson	10960.7	394000	2.8
Kanabec	1961.7	164403	1.2
Kandiyohi	35903.3	377392	9.5
Kittson	80095.6	498253	16.1
Koochiching	3676.5	81284	4.5
Lac qui Parle	39211.0	411194	9.5
Lake	0.0	6404	0.0

**Table 38: Total Acreage Under CRP Enrollment (1986-89) and Total Acreage  
(cont'd) Under Land in Farms (1987 census)**

<u>County</u>	<u>Total CRP Enrollment (Acres) 1986-89</u>	<u>Total Land in Farms (Acres) (1987 Census)</u>	<u>CRP Area as Percentage of Total Land in Farms</u>
Lake of the Woods	5226.7	118959	4.4
La Sueur	31555.8	222523	14.2
Lincoln	60222.6	253044	23.8
Lyon	27553.4	368115	7.5
McLeod	5577.3	258172	2.2
Mahnomen	8957.8	197078	4.5
Marshall	158273.6	819664	19.3
Martin	3210.6	433285	0.7
Meeker	22303.0	298623	7.5
Mille Lacs	231.7	153315	0.2
Morrison	13871.2	430023	3.2
Mower	15614.1	385648	4.0
Murray	17844.3	372454	4.8
Nicollet	2077.6	250061	0.8
Nobles	5662.9	413816	1.4
Norman	60301.0	472449	12.8
Olmsted	33399.9	318748	10.5
Otter Tail	90778.6	876319	10.4
Pennington	77166.4	305784	25.2
Pine	336.2	258878	0.1
Pipestone	11171.2	246804	4.5
Polk	95357.5	1075711	8.9
Pope	39937.6	328165	12.2
Ramsey	0.0	2146	0.0
Red Lake	58196.6	210348	27.7
Redwood	19748.8	514462	3.8
Renville	6050.2	563931	1.1
Rice	30972.9	225762	13.7
Rock	1766.4	260092	0.7
Roseau	125333.9	613736	20.4
St. Louis	136.0	180030	0.1
Scott	2229.2	134420	1.7
Sherburne	808.4	124288	0.7
Sibley	2560.9	336712	0.8
Stearns	32674.9	671895	4.9
Steele	18406.1	234126	7.9
Stevens	26398.5	295499	8.9
Swift	23979.5	395484	6.0

**Table 38: Total Acreage Under CRP Enrollment (1986-89) and Total Acreage (cont'd) Under Land in Farms (1987 census)**

<u>County</u>	<u>Total CRP Enrollment (Acres) 1986-89</u>	<u>Total Land in Farms (Acres) (1987 Census)</u>	<u>CRP Area as Percentage of Total Land in Farms</u>
Todd	16838.5	418136	4.0
Traverse	11166.4	312130	3.6
Wabasha	15830.8	255550	6.2
Wadena	6170.1	178124	3.5
Waseca	10637.1	231788	4.6
Washington	1701.9	109442	1.6
Watsonwan	3750.9	252824	1.5
Wilken	24086.2	426995	5.6
Winona	9971.0	310325	3.2
Wright	7859.4	288429	2.7
Yellow Medicine	<u>29995.7</u>	<u>412568</u>	<u>7.3</u>
State Total	1830217.3	26573819	6.9

Source: a/ The conservation reserve program in Minnesota 1986-89 enrollment characteristics and program impacts, by Steven J. Taff, Minnesota Agricultural Experiment Station, 1989, plus CRP entries for the 9th Round, as of Feb. 26, 1990.  
b/ U.S. Census of Agriculture, 1987.

**Table 39: Relative Significance of CRP Entries in Northwest and Southwest Districts, Minnesota, 1989<sup>a</sup>**

	<u>Acres</u>	<u>Percent of State Total</u>
<u>NORTHWEST DISTRICT</u>		
Area of Land in Farms	4,781,831	18.0
Area of Land in CRP	708,312	38.7
<u>SOUTHWEST DISTRICT</u>		
Area of Land in Farms	6,614,776	24.9
Area of Land in CRP	240,934	13.2
<u>MINNESOTA</u>		
Area of Land in Farms	26,573,819	100.0
Area of Land in CRP	1,830,217	100.0

---

<sup>a</sup>CRP entries through 9th round, October 1989. Area of land in farms from U.S. Census of Agriculture, 1987.





## Part VI

### Deflated Estimated Values and Reported Sales Prices

Fluctuations in the estimated value and sales prices of farm land are heavily influenced by the rate of inflation in the general economy. One way to remove the effects of inflation is by deflating with the consumer price index (CPI). With 1967 prices used as a base of 100, the average CPI for the first six months of 1989 was 361.4. The effect of inflation on estimated values and sales prices of Minnesota farm land between 1967 and 1989 can be removed by dividing these figures by 3.614.

In 1989, the estimated value per acre of farm land was \$581 in nominal (current) dollars, an increase of 11 percent from the nominal value of \$523 per acre in 1988. When the figures are adjusted for inflation, the estimated real value in 1989 in 1967 dollars was \$161 per acre, an increase of only 8 percent over the deflated value of \$149 for 1988. The deflated 1989 average estimated value was in fact slightly lower than the deflated value of \$164 in 1957. When deflated by districts, the Northeast and East Central experienced a slight decrease in real values over recent years, while the other districts have shown modest increase in real estimated values (Table 40).

The nominal reported sales price per acre in 1989 was \$815. When deflated, this figure is reduced to \$226, reflecting a level of real value in 1986-89 that is approximately equal to that of the period 1965-69. When deflated by districts, all districts except the Northeast and East Central experienced an increase in real reported sales prices in 1989 (Table 41).

**Table 40: Average Estimated Value Per Acre, State and Districts, Deflated by the CPI, Minnesota, 1910-1989**

Year	South- east	South- west	West Central	East Central	North- west	North- east	Minnesota
	----- dollars per acre in 1967 dollars -----						
1910-11	207	193	139	86	86	39	146
1912-13	238	238	159	100	100	45	169
1914-15	272	279	186	113	106	47	193
1916-17	281	306	205	125	113	46	208
1918-19	259	262	173	111	89	40	182
1920-21	235	253	163	113	95	40	173
1922-23	227	237	163	112	88	46	169
1924-25	203	215	145	96	86	43	152
1926-27	200	206	136	92	68	42	143
1928-29	195	199	131	86	64	41	138
1930-31	176	176	102	72	44	36	120
1932-33	156	159	103	66	49	34	110
1934-35	130	145	95	65	55	37	100
1936-37	142	154	92	70	53	58	106
1938-39	142	161	88	66	52	59	107
1940-41	140	162	86	62	53	57	102
1942-43	133	156	82	59	49	51	98
1944-45	148	171	91	66	55	53	106
1946	150	178	96	67	56	55	111
1947	143	173	93	64	55	52	108
1948	144	179	96	65	57	53	110
1949	150	190	102	69	62	55	116
1950	151	196	105	69	64	55	118
1951	161	213	114	76	69	59	127
1952	165	220	121	82	86	53	135
1953	162	218	119	77	80	50	131
1954	173	232	123	82	89	50	140
1955	187	256	128	85	91	56	151
1956	192	263	131	86	93	52	155
1957	196	273	145	91	102	58	164
1958	207	279	142	97	104	75	170
1959	219	292	153	102	118	66	180

**Table 40: Average Estimated Value Per Acre, State and Districts, Deflated by  
(cont'd) the CPI, Minnesota, 1910-1989**

Year	South- east	South- west	West Central	East Central	North- west	North- east	Minnesota
	----- dollars per acre in 1967 dollars -----						
1960	212	280	150	106	112	72	175
1961	223	292	157	112	118	76	184
1962	212	276	152	109	115	76	175
1963	212	268	155	112	124	74	176
1964	222	271	156	119	124	64	179
1965	232	276	154	119	120	54	181
1966	249	285	157	126	115	60	188
1967	262	303	163	128	108	62	194
1968	275	320	174	129	117	55	203
1969	283	321	180	134	110	50	205
1970	273	299	171	139	103	53	196
1971	275	290	169	128	98	52	192
1972	296	303	166	130	94	61	198
1973	326	345	186	146	110	86	224
1974	392	459	257	190	135	98	288
1975	418	524	312	184	183	101	326
1976	502	649	366	205	222	123	391
1977	566	725	402	229	225	154	437
1978	610	727	411	255	247	156	455
1979	668	745	406	263	275	169	478
1980	618	709	390	241	277	158	454
1981	627	765	417	249	298	169	481
1982	520	649	361	202	259	167	408
1983	454	559	329	188	221	138	357
1984	374	450	281	162	188	140	298
1985	267	300	214	116	158	112	213
1986	185	213	156	91	128	94	158
1987	166	199	140	77	111	87	143
1988	185	224	143	77	111	72	149
1989	199	250	151	76	116	68	161

**Table 41: Average Price Per Acre of Reported Farm Sales, State and Districts,  
Deflated by the CPI, Minnesota, 1954-1989**

Year	South- east	South- west	West Central	East Central	North- west	North- east	Minnesota
	----- dollars per acre in 1967 dollars -----						
1954	182	231	131	71	79	48	153
1955	207	263	126	81	84	57	180
1956	197	254	123	70	95	50	171
1957	208	257	131	80	104	47	171
1958	194	270	133	89	91	60	179
1959	241	278	148	83	97	70	198
1960	213	271	154	78	114	56	181
1961	211	285	145	99	103	42	184
1962	216	252	155	84	82	33	178
1963	233	242	149	94	119	52	183
1964	230	252	162	93	112	56	192
1965	214	246	141	101	112	42	188
1966	261	268	169	116	106	31	209
1967	272	306	179	93	117	51	215
1968	303	316	179	100	86	45	223
1969	310	304	176	118	110	46	217
1970	298	292	177	121	97	39	209
1971	283	283	169	124	83	36	214
1972	311	292	177	116	86	61	234
1973	333	308	168	134	90	91	224
1974	405	427	230	164	138	98	305
1975	491	524	306	185	219	99	377
1976	550	654	389	188	221	123	431
1977	670	739	390	246	238	109	473
1978	692	676	464	284	258	131	501
1979	770	773	284	284	282	189	524
1980	744	757	444	244	307	160	534
1981	721	736	430	250	337	177	502
1982	605	700	404	258	307	140	470
1983	493	627	358	227	238	110	433
1984	446	533	341	207	225	72	406
1985	314	367	271	158	178	69	268
1986	205	253	183	169	125	67	198
1987	182	222	145	126	99	49	164
1988	228	260	163	113	117	53	198
1989	260	297	172	113	128	52	226

## Statistical Appendix

In general, while averages are used, the variation about the average is not apparent. This report has used several averages. A greater degree of variation reduces the reliability of the data and any reduction in variation increases the significance of the average.

Two measures of variability are the standard deviation and the coefficient of variation. The standard deviation reveals the dollar range from the average within which approximately two-thirds of the reported sales fall. For example, in 1989 the Southwest district had an average of \$1074 per acre, with a standard deviation of \$365. This means that approximately two-thirds of the sales in that district fall between \$709 and \$1439 per acre. The coefficient of variation is calculated by dividing the standard deviation over the average sales price, and multiplying by 100 to convert it to a percentage form.

**Table 42: Average Price Per Acre of Reported Farm Sales, Standard Deviation and Coefficient of Variation, Minnesota and districts, 1980-1989\***

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
<b>Average Price Per Acre (dollars)</b>							
1980	1837.1	1868.2	1095.3	603.0	758.8	394.5	1318.5
1981	1965.3	2004.6	1170.6	680.1	918.7	482.8	1367.1
1982	1748.5	2022.3	1167.9	745.7	886.8	405.7	1359.5
1983	1470.0	1872.0	1068.4	678.5	711.1	327.6	1291.0
1984	1386.1	1658.1	1062.2	644.4	700.0	223.2	1263.0
1985	1012.5	1181.0	872.3	509.6	575.0	222.0	862.4
1986	672.5	829.6	602.3	556.0	411.3	219.8	649.8
1987	620.8	754.6	493.4	428.7	337.4	168.0	558.7
1988	797.4	910.9	570.9	395.4	411.1	184.3	691.2
1989	938.3	1074.4	620.6	407.1	460.9	189.4	814.8

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
<b>Standard Deviation</b>							
1980	639.5	746.7	487.2	298.1	337.2	152.9	780.1
1981	675.8	891.3	426.9	624.5	332.2	157.0	826.6
1982	615.9	758.5	423.5	360.8	405.0	127.4	774.3
1983	501.2	593.0	355.4	369.9	293.1	160.5	665.7
1984	452.8	585.6	311.1	334.0	328.4	105.5	586.1
1985	383.8	450.9	350.8	298.6	294.9	122.8	464.9
1986	264.3	266.9	213.6	317.3	241.2	106.5	293.0
1987	251.6	268.6	171.8	248.0	208.4	65.3	287.2
1988	342.6	330.8	165.9	236.1	234.5	81.3	348.3
1989	371.3	365.0	181.6	286.3	263.0	128.5	412.0

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
<b>Coefficient of Variation (percent)</b>							
1980	34.8	40.0	44.5	49.4	44.4	38.8	59.2
1981	34.4	44.5	36.5	91.8	36.2	32.5	60.5
1982	35.2	37.5	36.3	48.4	45.7	31.4	57.0
1983	34.1	31.7	33.3	54.5	41.2	48.9	51.6
1984	32.6	35.3	29.3	51.8	46.9	47.3	46.4
1985	37.9	38.2	40.2	58.6	51.3	64.8	53.9
1986	39.3	32.2	35.5	57.1	58.6	48.5	45.1
1987	40.5	35.6	34.8	57.9	61.8	38.9	51.4
1988	43.0	36.3	29.1	59.7	57.0	41.1	50.4
1989	39.6	34.0	29.3	70.3	57.1	67.8	50.6

\*Each acre is treated as a unit in calculating standard deviations and coefficients of variation.

**Table 43: Percentage Change of Average Reported Sales Price per Acre, District and Minnesota, 1980-1989**

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
1980-81	7.0	7.3	6.9	12.8	21.1	22.4	3.7
1981-82	-11.0	0.9	-0.2	9.6	-3.5	-16.0	-0.6
1982-83	-15.9	-7.4	-8.5	-9.0	-19.8	-19.3	-5.0
1983-84	-5.7	-11.4	-0.6	-5.0	-1.6	-31.9	-2.2
1984-85	-27.0	-28.8	-17.9	-20.9	-17.9	-0.5	-31.7
1985-86	-33.6	-29.8	-31.0	9.1	-28.5	-1.0	-24.7
1986-87	-7.7	-9.0	-18.1	-22.9	-18.0	-23.6	-14.0
1987-88	28.4	20.7	15.7	-7.8	21.8	9.7	23.7
1988-89	17.6	17.9	8.7	3.0	12.1	2.8	17.9

**Table 44: Average Estimated Value Per Acre of Farm Real Estate in Minnesota by Districts, 1910-11 through 1944-45, by Two-Year Periods, and Annually, 1946 through 1989**

Year	South- east	South- west	West Central	East Central	North- west	North- east	Minnesota
1910-11	58	54	39	24	24	11	41
1912-13	69	69	46	29	29	13	49
1914-15	82	84	56	34	32	14	58
1916-17	92	100	67	41	37	15	68
1918-19	117	118	78	50	40	18	82
1920-21	141	152	98	68	57	24	104
1922-23	114	119	82	56	44	23	85
1924-25	104	110	74	49	44	22	78
1926-27	106	109	72	49	36	22	76
1928-29	100	102	67	44	33	21	71
1930-31	88	88	51	36	22	18	60
1932-33	64	65	42	27	20	14	45
1934-35	52	58	38	26	22	15	40
1936-37	59	64	38	29	22	24	44
1938-39	60	68	37	28	22	25	45
1940-41	59	68	36	26	22	24	43
1942-43	65	76	40	29	24	25	48
1944-45	78	90	48	35	29	28	56
1946	88	104	56	39	33	32	65
1947	96	116	62	43	37	35	72
1948	104	129	69	47	41	38	79
1949	107	136	73	49	44	39	83
1950	109	141	76	50	46	40	85
1951	125	166	89	59	54	46	99
1952	131	175	96	65	68	42	107
1953	130	175	95	62	64	40	105
1954	139	187	99	66	72	40	113
1955	150	205	103	68	73	45	121
1956	156	214	107	70	76	42	126
1957	165	230	122	77	86	49	138
1958	179	242	123	84	90	65	147
1959	191	255	134	89	103	58	157



**Table 44: Average Estimated Value Per Acre of Farm Real Estate in Minnesota by Districts, (cont'd) 1910-11 through 1944-45, by Two-Year Periods, and Annually, 1946 through 1989**

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
1960	188	248	133	94	99	64	155
1961	189	247	133	95	100	64	156
1962	192	250	138	99	104	69	159
1963	194	246	142	103	114	68	161
1964	206	252	145	111	115	59	166
1965	219	261	146	112	113	51	171
1966	242	277	153	122	112	58	183
1967	262	303	163	128	108	62	194
1968	286	333	181	134	122	57	211
1969	308	350	196	146	120	54	223
1970	317	347	198	161	120	62	227
1971	333	351	204	155	119	63	232
1972	370	379	208	163	117	76	248
1973	433	459	247	194	146	115	298
1974	576	675	378	279	199	144	423
1975	674	844	503	296	295	163	525
1976	856	1106	624	349	378	210	667
1977	1027	1316	730	415	427	279	794
1978	1191	1421	803	498	483	304	889
1979	1453	1620	883	573	599	368	1040
1980	1526	1750	962	596	683	390	1120
1981	1709	2083	1135	679	813	460	1310
1982	1504	1875	1044	584	748	483	1179
1983	1354	1669	981	561	658	411	1065
1984	1164	1401	873	505	586	436	927
1985	861	967	690	374	510	362	686
1986	603	696	511	296	418	308	515
1987	558	671	472	259	375	283	480
1988	648	784	499	268	390	251	523
1989	719	902	544	273	421	246	581

**Table 45: Percentage Change in Estimated Value Per Acre, by District and Minnesota, 1910-89**

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
1910-13	19.0	27.8	17.9	20.8	20.8	18.2	19.5
1912-15	18.8	21.7	21.7	17.2	10.3	7.7	18.4
1914-17	12.2	19.0	19.6	20.6	15.6	7.1	17.2
1916-19	27.2	18.0	16.4	22.0	8.1	20.0	20.6
1918-21	20.5	28.8	25.6	36.0	42.5	33.3	26.8
1920-23	-19.1	-21.7	-16.3	-17.6	-22.8	-4.2	-18.3
1922-25	-8.8	-7.6	-9.8	-12.5	0.0	-4.3	-8.2
1924-27	1.9	-0.9	-2.7	0.0	-18.2	0.0	-2.6
1926-29	-5.7	-6.4	-6.9	-10.2	-8.3	-4.5	-6.6
1928-31	-12.0	-13.7	-23.9	-18.2	-33.3	-14.3	-15.5
1930-33	-27.3	-26.1	-17.6	-25.0	-9.1	-22.2	-25.0
1932-35	-18.8	-10.8	-9.5	-3.7	10.0	7.1	-11.1
1934-37	13.5	10.3	0.0	11.5	0.0	60.0	10.0
1936-39	1.7	6.3	-2.6	-3.4	0.0	4.2	2.3
1938-41	-1.7	0.0	-2.7	-7.1	0.0	-4.0	-4.4
1940-43	10.2	11.8	11.1	11.5	9.1	4.2	11.6
1942-45	20.0	18.4	20.0	20.7	20.8	12.0	16.7
1944-46	12.8	15.6	16.7	11.4	13.8	14.3	16.1
1946-47	9.1	11.5	10.7	10.3	12.1	9.4	10.8
1947-48	8.3	11.2	11.3	9.3	10.8	8.6	9.7
1948-49	2.9	5.4	5.8	4.3	7.3	2.6	5.1
1949-50	1.9	3.7	4.1	2.0	4.5	2.6	2.4
1950-51	14.7	17.7	17.1	18.0	17.4	15.0	16.5
1951-52	4.8	5.4	7.9	10.2	25.9	-8.7	8.1
1952-53	-0.8	0.0	-1.0	-4.6	-5.9	-4.8	-1.9
1953-54	6.9	6.9	4.2	6.5	12.5	0.0	7.6
1954-55	7.9	9.6	4.0	3.0	1.4	12.5	7.1
1955-56	4.0	4.4	3.9	2.9	4.1	-6.7	4.1
1956-57	5.8	7.5	14.0	10.0	13.2	16.7	9.5
1957-58	8.5	5.2	0.8	9.1	4.7	32.7	6.5
1958-59	6.7	5.4	8.9	6.0	14.4	-10.8	6.8
1959-60	-1.6	-2.7	-0.7	5.6	-3.9	10.3	-1.3

**Table 45: Percentage Change in Estimated Value Per Acre, by District and Minnesota,  
(cont'd) 1910-89**

Year	South- east	South- west	West Central	East Central	North- west	North- east	Minnesota
1960-61	0.5	-0.4	0.0	1.1	1.0	0.0	0.6
1961-62	1.6	1.2	3.8	4.2	4.0	7.8	1.9
1962-63	1.0	-1.6	2.9	4.0	9.6	-1.4	1.3
1963-64	6.2	2.4	2.1	7.8	0.9	-13.2	3.1
1964-65	6.3	3.6	0.7	0.9	-1.7	-13.6	3.0
1965-66	10.5	6.1	4.8	8.9	-0.9	13.7	7.0
1966-67	8.3	9.4	6.5	4.9	-3.6	6.9	6.0
1967-68	9.2	9.9	11.0	4.7	13.0	-8.1	8.8
1968-69	7.7	5.1	8.3	9.0	-1.6	-5.3	5.7
1969-70	2.9	-0.9	1.0	10.3	0.0	14.8	1.8
1970-71	5.0	1.2	3.0	-3.7	-0.8	1.6	2.2
1971-72	11.1	8.0	2.0	5.2	-1.7	20.6	6.9
1972-73	17.0	21.1	18.8	19.0	24.8	51.3	20.2
1973-74	33.0	47.1	53.0	43.8	36.3	25.2	41.9
1974-75	17.0	25.0	33.1	6.1	48.2	13.2	24.1
1975-76	27.0	31.0	24.1	17.9	28.1	28.8	27.0
1976-77	20.0	19.0	17.0	18.9	13.0	32.9	19.0
1977-78	16.0	8.0	10.0	20.0	13.1	9.0	12.0
1978-79	22.0	14.0	10.0	15.1	24.0	21.1	17.0
1979-80	5.0	8.0	8.9	4.0	14.0	6.0	7.7
1980-81	12.0	19.0	18.0	13.9	19.0	17.9	17.0
1981-82	-12.0	-10.0	-8.0	-14.0	-8.0	5.0	-10.0
1982-83	-10.0	-11.0	-6.0	-3.9	-12.0	-14.9	-9.7
1983-84	-14.0	-16.1	-11.0	-10.0	-10.9	6.1	-13.0
1984-85	-26.0	-31.0	-21.0	-25.9	-13.0	-17.0	-26.0
1985-86	-30.0	-28.0	-25.9	-20.9	-18.0	-14.9	-24.9
1986-87	-7.5	-3.6	-7.6	-12.5	-10.3	-8.1	-6.8
1987-88	16.1	16.8	5.7	3.5	4.0	-11.3	9.0
1988-89	11.0	15.1	9.0	1.9	7.9	-2.0	11.1

*University of Minnesota*

*Department of Agricultural and Applied Economics  
Room 337, Classroom Office Building  
1994 Buford Avenue  
St. Paul, Minnesota 55108*

Non Profit Org.

U.S. Postage

**P A I D**

Minneapolis, MN

Permit No. 155

