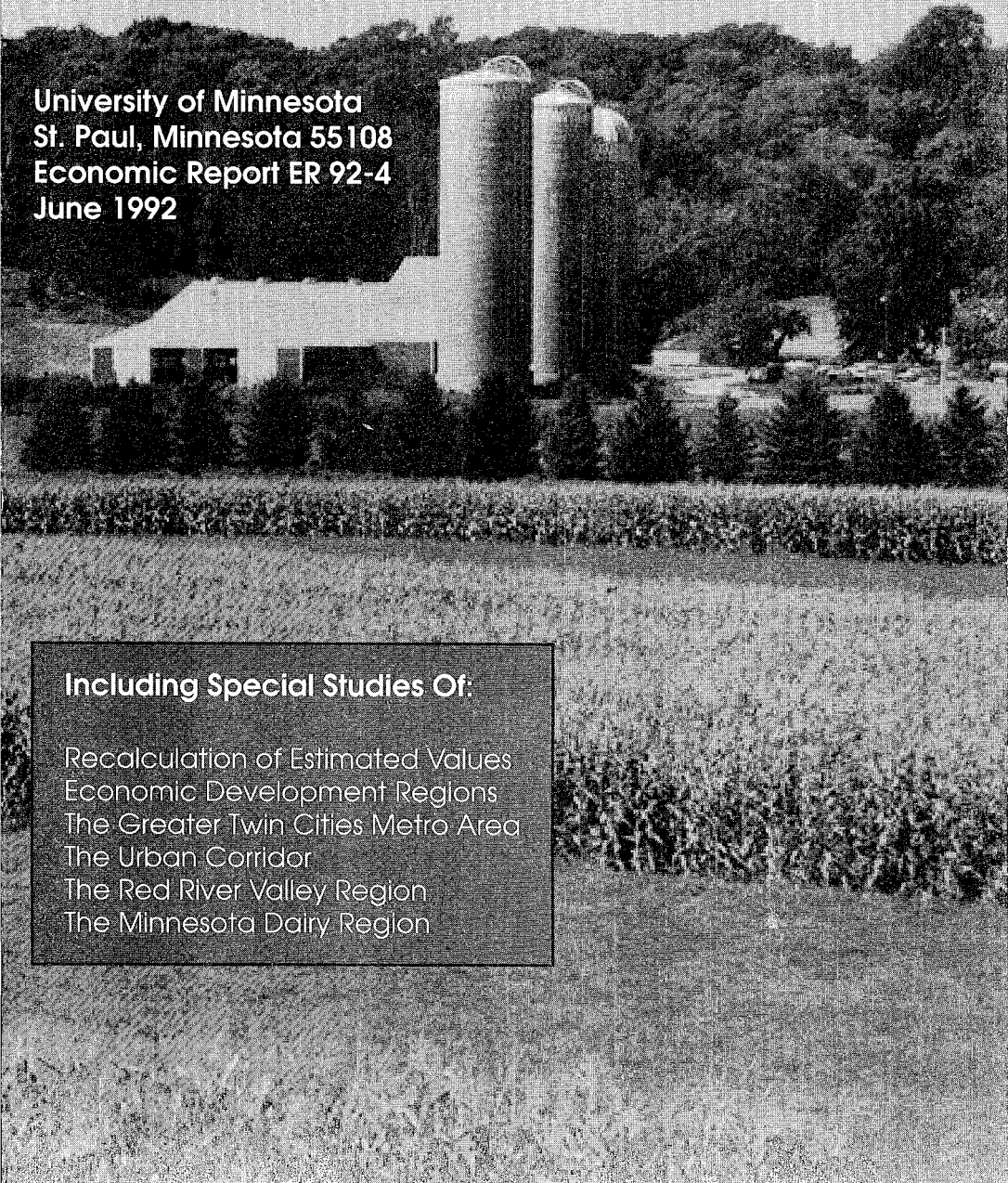
The Minnesota Rural Real Estate Market in 1991

by James Heintz and Philip M. Raup



University of Minnesota
St. Paul, Minnesota 55108
Economic Report ER 92-4
June 1992

Including Special Studies Of:

Recalculation of Estimated Values
Economic Development Regions
The Greater Twin Cities Metro Area
The Urban Corridor
The Red River Valley Region
The Minnesota Dairy Region

Table of Contents

The authors would like to thank Joy Gorr, Linda Schwartz, and Kelly Wesemann Seyid for their help in compiling this report.

Summary

The statewide average ***estimated value*** per acre of Minnesota rural real estate was $853, a decrease of 4 percent from July 1990 to July 1991. Each district in the state showed a decrease in value, except for the Southwest where estimated values climbed 4 percent.

The statewide unadjusted average ***sales price*** per acre received in actual sales from January to July 1991 increased 4 percent over 1990, reaching $891 per acre. The Southeast, Southwest, and West Central districts showed an increase in the average sale price per acre, while the East Central, Northwest, and Northeast districts reported declines in average sales price of 2, 15, and 35 percent, respectively.

Adjusting sales price per acre in order to remove the effect of a possible change in the mix of higher and lower priced land sold yielded a 11 percent increase in statewide sales price. In contrast, the unadjusted increase was 4 percent. The effect of the adjustment varied in size and magnitude among regions.

The total acreage in reported sales statewide declined 2 percent from 1990 to 1991 - its second lowest point since 1980. While this figure refers only to the first half of 1991, it indicates a relatively stable level of market activity throughout the past two years.

Retirement remains the primary reason to sell farm land, accounting for 28 percent of the total sales reported in the first half of 1991. Death accounted for another 21 percent. Sales due to financial difficulty continued a decline beginning in 1987 and accounting for only 12 percent of 1991 farm sales. Even if "left farming" (6 percent) and "reduce size" (10 percent) are included as possible indications of financial difficulty, the percentage of sales due to presumed financial problems summed to 28 percent, the lowest point in the last ten years.

Expansion buyers continued to play the largest role in the rural real estate market in 1991, buying 84 percent of the total tracts sold. Sole-tract

operators accounted for a steady 9 percent of purchases while investor activity dropped, accounting for only 7 percent of tracts sold.

Cash remained the predominant method of financing purchases, accounting for 40 percent of the tracts sold in 1991. Financing by contract for deed decreased from 33 percent in 1990 to 28 percent of reported sales, while mortgages were used to finance 32 percent of the sales, an increase from 29 percent in 1990.

Introduction

The University of Minnesota has collected and analyzed information on rural farm land markets for the State since 1910. Individuals familiar with the rural real estate market in Minnesota, including real estate brokers, appraisers, farm managers, county officials, and agricultural credit officials, supplied the data for this report. Over 1100 questionnaires were mailed in July 1991 and over 43 percent were returned. The questionnaires included questions concerning estimates of land value and actual sales prices. In addition, the 485 usable responses contained information about acreage, quality of land and buildings, reason for sale, methods of financing, and characteristics of the buyers and sellers. In analyzing the responses, duplicate reports of sales were eliminated, any data for Hennepin and Ramsey counties were omitted, and respondents were asked not to report sales between close relatives.

Two categories of data characterize this survey: questions related to ***estimated value*** and those related to ***sales price***. Respondents provided estimates of land value per acre as of July 1991 for farms of average size in their communities. Aggregated values for counties, districts, economic development regions, and for the state as a whole were calculated from the individual estimates. Weighting the estimated values by the acres of land in farms in each county as reported in the **1987 U.S. Census of Agriculture** produced the aggregate estimates.

Data on reported sales refer to farm land sales occurring between January 1 and July 1, 1991. Summing the total sales proceeds for each sale in an area and dividing by the total numbers of acres sold in that area yielded an average sales price for each county, district, and economic development region. In addition, an adjusted sales price which compensates for geographical shifts in real estate sales activity from year to year was calculated for each district and economic development region.

From January to July 1991, total acres sold remained roughly at the same level compared to 1990. Since the bulk of the sales in Minnesota occur in the first half of the year, the small change in acres sold indicates a corresponding

small change in market activity. The Southeast and the East Central regions showed a decrease in sales activity, while the West Central, Northwest and Northeast reported an increase in market activity. The Southwest, an area of higher-priced farm land, showed practically no variation in the amount of land reported sold from 1990 to 1991.

Recalculation of the Time Series of Estimated Values

A recurring problem in reporting trends in the rural land market arises from year-to-year shifts in the geographic distribution of land market activity. In Minnesota these shifts were large during the land boom of the 1970's and the collapse of land values in the 1980's.

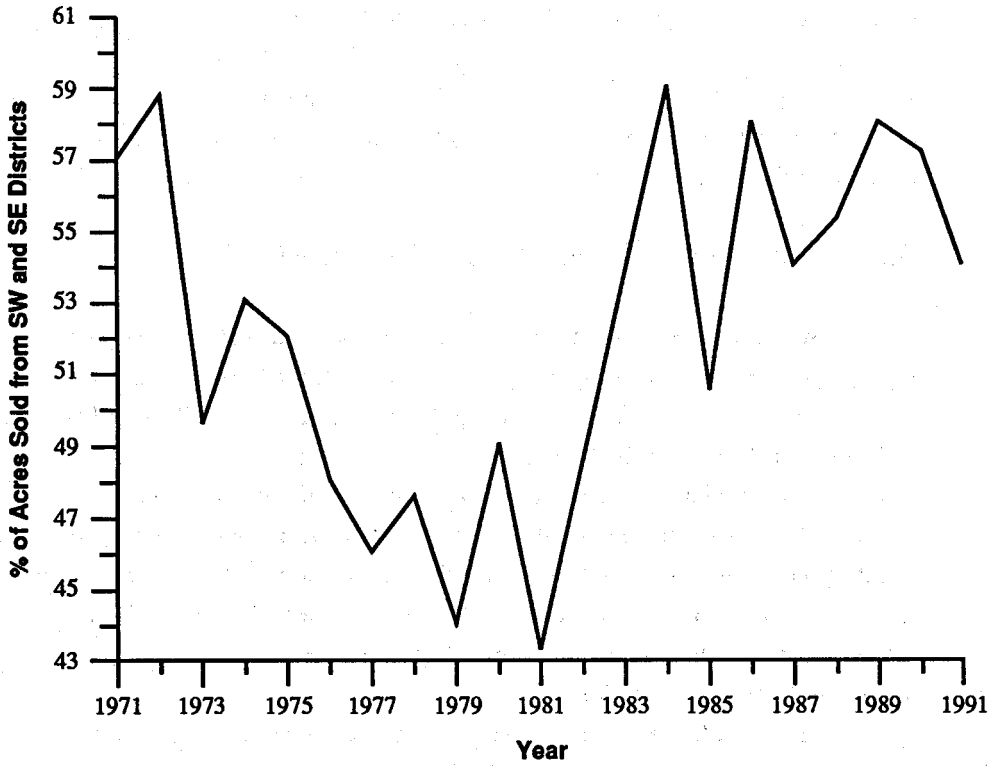
In some Minnesota counties and in some years during those two decades, the annual numbers of sales that were not between relatives averaged less than one per township. When measured in acres sold, the annual rate of turnover per county has varied from less than one percent of the acres of land in farms to four percent or more. This variability has not been uniform among regions of the state, or over time.

Figure 1 illustrates the magnitude of these shifts since 1970. Among the six land market reporting districts, the Southeast and Southwest have consistently reported the highest estimated values and highest average prices received in actual sales. Just before the beginning of the land boom these two districts accounted for 58 percent of the acres of land reported sold in the state in the first six months of each year. This percentage fell as land prices rose during the 1970's, to a low of 43 percent at the peak of the land boom in 1981.

As land prices collapsed after 1981 the statewide share of acres sold in the two highest-priced districts rose, and at the end of the 1980's was back to the levels prevailing before the boom.

This variability injected a distorting influence into comparisons of year-to-year changes in average estimated values, or average sales prices. To

Figure 1. Acres Sold in SE and SW Districts as Percent of Total Acres Sold, 1971 - 1991.



construct averages, it is necessary to weight the data by counties to derive district, regional, and statewide figures. In this study, the weights used are the acres of land in farms as reported in the U.S. Census of Agriculture for 1987, and earlier years.

At least three trends are involved: shifts in actual land values, shifts in land market activity, and shifts in acres of land in farms. Over the past two decades, an additional element of uncertainty was introduced by changes in the composition of reporters who supply the data for this survey. Former respondents dropped out and new ones were added, and the pace of this change accelerated in the 1980's.

To reduce the variations introduced by a constantly changing panel of respondents, this study in the past adopted the practice of using estimates of value only from respondents from whom an estimate had also been received in the previous year. The individual estimates were aggregated by counties and the percentage change was then used to update the estimated value for that county from the level of the previous year. This linkage helped reduce the probability that wild estimates would unduly influence estimated values for a district, a region, or the state.

This method worked well until the population of respondents began changing rapidly throughout the 1980's, prompting an investigation of alternative methods of calculating estimated value per acre. An obvious choice is to use all the reports of estimated values for a given year and not just those for whom an earlier estimate was recorded. The results are illustrated in Figures 2 and 3. From Figure 3, it is clear that this alternative series more closely follows the trends in reported sales prices.

Table 1 shows the average estimated values per acre for 1973-1991, by districts, using this new method of aggregating the data.*

* The authors are indebted to Andrew Schwab for his work in compiling most of the values for the revised estimates.

Figure 2. Average Estimated Value and Sales Price.
Previous Calculation Method, 1973-91

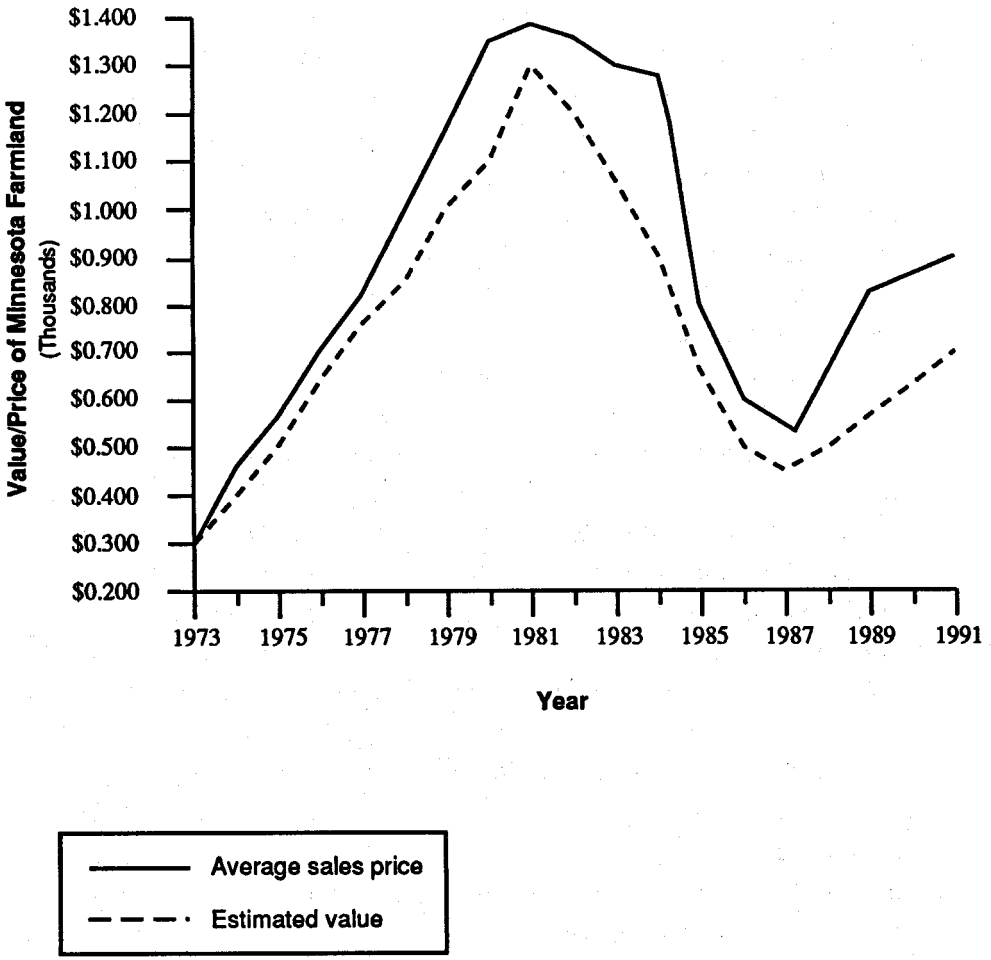
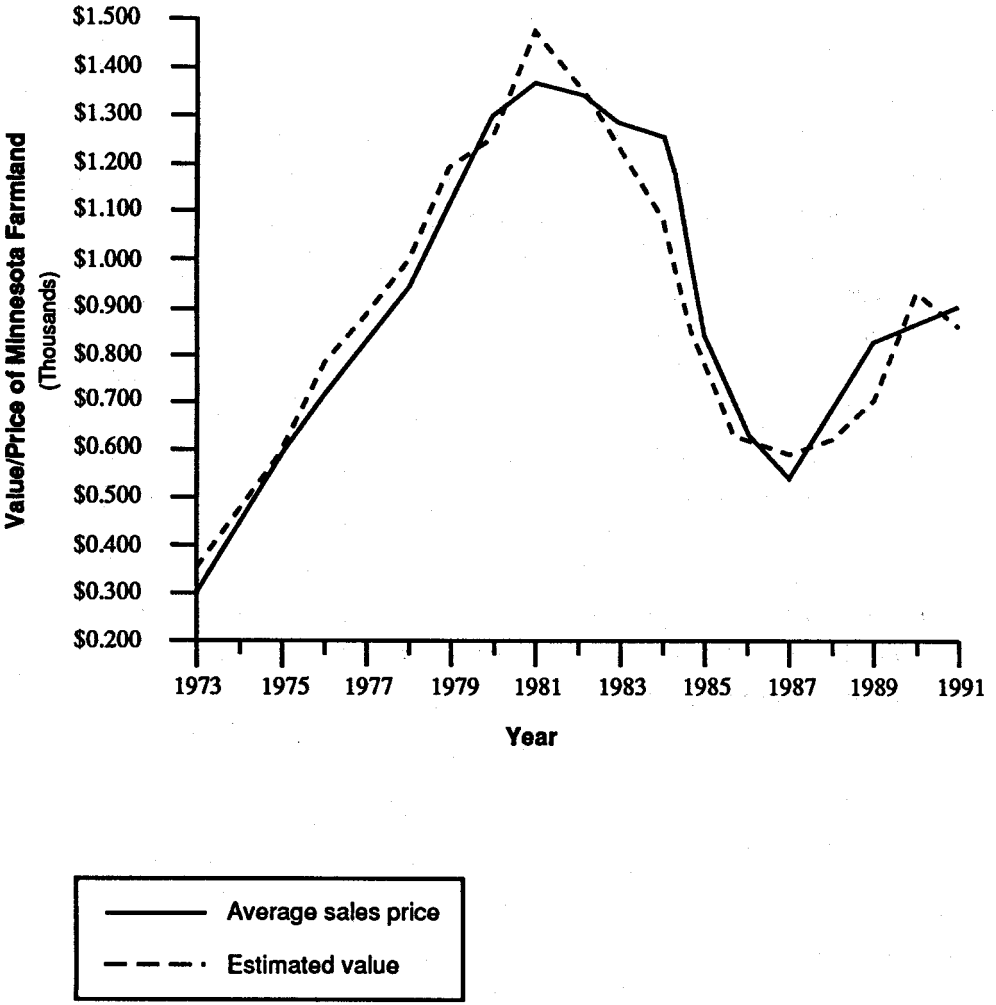


Figure 3. Average Estimated Value and Sales Price.
New Calculation Method, 1973-91.



Part I The Minnesota Rural Real Estate Market In 1991
A. Land Market Trends

Analysis of Estimated Values

The 1991 statewide average estimated value per acre decreased for the first time since 1987 to $853, a change of 4 percent from $892 in 1990 (Table 1). All of the districts reported a decrease in estimated value except the Southwest which reported a modest increase of 4 percent. The decreases were smaller in the Southeast (3 percent) and West Central (1 percent). If the Southeast, Southwest, and West Central, containing the most valuable agricultural land in the state, are considered as a whole, there was virtually no change in estimated values from 1990 to 1991.

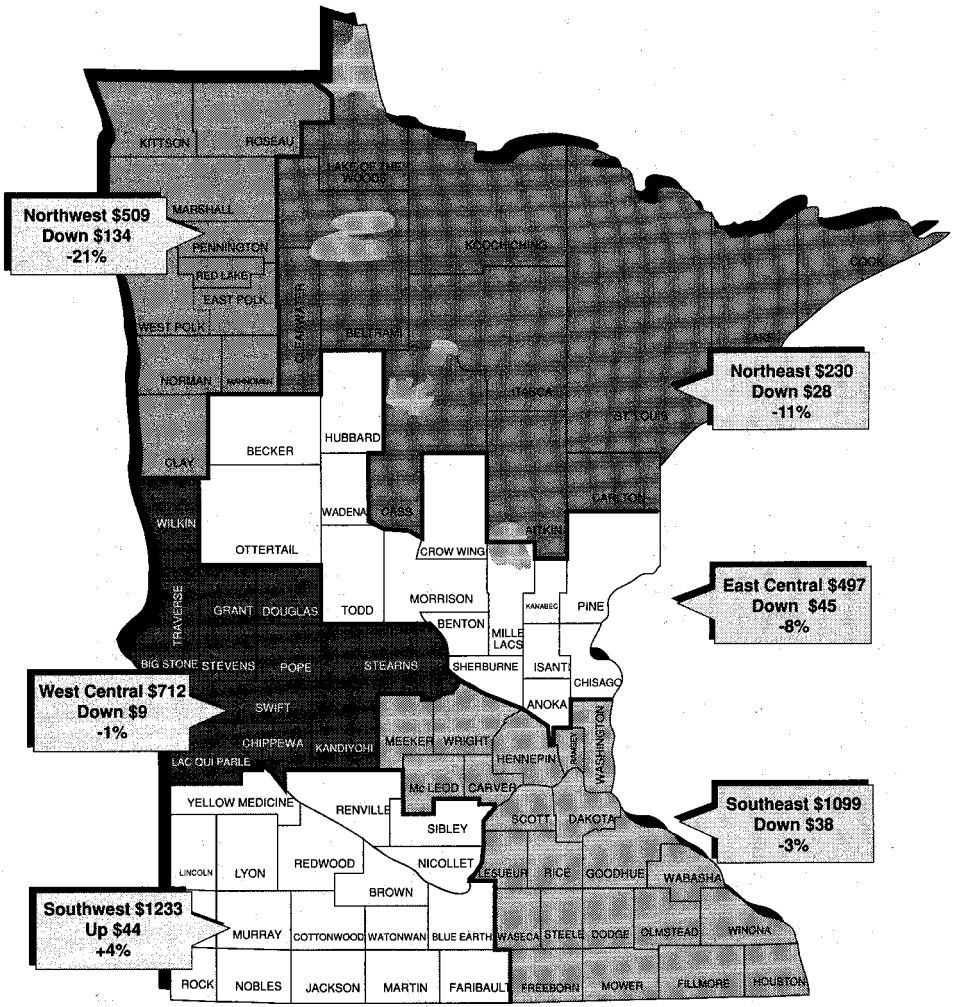
In contrast, the decreases were substantial in the East Central (down 8 percent), Northwest (down 21 percent), and Northeast (down 11 percent). The East Central district is heavily committed to dairying and almost two-thirds of the wheat acreage in Minnesota is contained in the Northwest district. Dairying and wheat were two sectors that suffered major declines in product prices in 1990-91, and this may well be an important part of the explanation for the drop in estimated values reported from those areas.

Table 1: Average Estimated Value Per Acre of Minnesota Farmland, by District, 1973-1991

Year	South-east	South-west	West Central	East Central	North-west	North-east	State Average
1973	498	470	261	230	187	112	338
1974	667	713	400	301	267	143	482
1975	782	890	532	341	426	166	607
1976	1000	1168	672	409	510	221	774
1977	1204	1413	788	475	535	294	908
1978	1380	1523	893	574	615	353	1023
1979	1678	1703	983	676	757	360	1191
1980	1737	1907	1074	721	803	438	1280
1981	1941	2226	1262	841	937	453	1472
1982	1727	2053	1149	740	925	410	1358
1983	1578	1766	1141	781	816	425	1240
1984	1323	1563	988	792	750	398	1100
1985	1016	1081	766	539	562	296	802
1986	708	809	589	473	468	288	616
1987	688	775	532	422	472	254	584
1988	782	920	570	442	505	218	653
1989	944	1073	643	410	450	249	721
1990	1137	1189	721	542	643	258	892
1991	1099	1233	712	497	509	230	853
Percent Change							
90-91	-3	4	-1	-8	-21	-11	-4
87-91	60	59	34	18	13[a]	6[b]	46
1991 As Percent of Peak in 1981 or 1982							
	57	55	56	59	54	51	58

[a] Low was in 1989
[b] Low was in 1988

Figure 4. Estimated Land Values per Acre in 1991 (Excluding Hennepin and Ramsey Counties)



Reported Sales

Information gathered on 825 reported sales that occurred between January 1 and July 1, 1991, is summarized in Tables 2 and 3. Based on the reported sales data, the unadjusted price per acre of Minnesota farm land in 1991 was $891, an increase of 4 percent above the average sales price of $853 reported for the first six months of 1990.

By districts, decreases in sales prices were reported for the same three districts for which marked declines in estimated values were recorded, the East Central, Northwest and Northeast. In general, both sales prices and estimated values were down north of a line from Moorhead to the Twin Cities.

South of this line, the pattern is less clear. Sales prices were up 9 percent in the Southeast, 11 percent in the Southwest, and 10 percent in the West Central, for an average increase for these three districts combined of approximately 10 percent. Recall that for the same three districts combined the estimated values in 1991 were almost unchanged from 1990.

One possible explanation of stagnant estimated value, and a 10 percent rise in sales prices is that land market activity in 1991 may have reflected a strengthened demand for higher priced land. The estimates of value reflect judgements based on all of the land in the respective communities. Sales prices refer only to lands that were sold. In 1991 and south of the Moorhead-Twin Cities line it seems apparent that the quality mix of lands sold was above average for their respective communities and districts.

Throughout the state market activity remained relatively constant when compared to 1990. Total reported acres sold decreased 2 percent, from 122,142 in 1990 to 119,335 in 1991. Table 3 shows that changes in market activity were not uniform throughout the state. In comparison with 1990, the Southeast and East Central districts demonstrated larger decreases of 19 and 35 percent, respectively, in acres reported sold. The Southwest remained steady with a decrease of only 1 percent. The West Central, Northwest, and Northeast had increases in reported acres sold of 16, 8, and 59 percent, respectively. In those parts of Minnesota north of the Moorhead-Twin Cities line, which showed a

Table 2: Average Reported Sales Price per Acre of Farmland by District, Minnesota, 1973-1991 (Unadjusted)

Year	South-east	South-west	West Central	East Central	North-west	North-east	State Average
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
1990	1005	1098	658	492	541	277	853
1991	1098	1215	724	484	458	180	891
Percent Change							
90-91	9	11	10	- 2	-15	-35	4
87-91	77	61	47	23[a]	36	7	59
1991 As Percent of Peak in 1981 or 1982							
	56	60	62	65	50	37	65

[a] Low was in 1988.

Table 3. Acreage of Rported Land Sold, Average Acres Per Sale, and Percentage of Total Acres Sold, by District, Minnesota, January1 - July 1, 1981-1991.

Acres Reported Sold

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
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
1990	33926	37302	23934	8405	15351	3224	122142
1991	27586	36915	27657	5456	16587	5134	119335
1990-1991 Percent Change	-19	-1	16	-35	8	59	-2

Reported Acres/Sale

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
1990	140	129	184	142	207	179	150
1991	136	116	169	147	210	214	145

Table 3. Acreage of Rported Land Sold, Average Acres Per Sale, (con't) and Percentage of Total Acres Sold, by District, Minnesota, January1 - July 1, 1981-1991.

Percentage of Total Acres Reported Sold in State

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
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
1990	28	31	20	7	13	3	100
1991	23	31	23	5	14	4	100

decrease in reported sales price, there was a very modest increase in market activity with reported acres sold increasing less than 1 percent. Likewise, in the region south of this line, which showed an increase in reported sales price, acres reported sold decreased approximately 3 percent.

Adjusted Sales Price

Changes in average sales price can be the result of two different factors - a change in the price per acre of farm land or a change in the mix of the quality of the properties sold. The following analysis attempts to remove the effect of a change in the quality of land sold from year to year on the average reported sales price.

Multiplying each county's 1991 average reported sales price per acre by the number of acres sold in that county in 1990 gives a total value of land sold in the county based on 1991 prices and 1990 acres sold. Summing this value for every county in a district and dividing by the total acres sold in that district in 1990 produces an adjusted per acre sales price for each district in the state. These average district sales prices are the prices which would have resulted if the proportion of acres sold in each county had remained unchanged from 1990 to 1991. Removing the shift in the geographical distribution of sales activity reduces the effect of a shift in the quality of the land sold. Table 4 compares adjusted and unadjusted sales prices by district.

The statewide adjusted sales price was $944 per acre, an increase of $53 over the unadjusted price of $891. This indicates that, statewide, the mix of properties sold in 1991 included a larger proportion of sales from areas with lower priced land. This phenomenon is consistent with Figure 1, above, showing a drop in 1991 in the percentage of total acres sold in the Southeast and Southwest, the two districts containing the highest priced land.

All districts (SE, SW, and WC) showing an increase in unadjusted sales prices also showed increases in adjusted sales prices. In the remaining three

Table 4: Adjusted Sales Prices per Acre for 1991, by District, Minnesota

District	1991 Unadjusted Price	1991 Adjusted Price	1990 Unadjusted Price	Percent Change From: Unadjusted 1990 to Unadjusted 1991	Percent Change From: Unadjusted 1990 to Adjusted 1991
	(1)	(2)	(3)	(1)/(3)	(2)/(3)
Southeast	1098	1163	1005	9	16
Southwest	1215	1222	1098	11	11
West Central	724	711	658	10	8
East Central	484	533	492	- 2	8
Northwest	458	504	541	-15	-7
Northeast	180	152	277	-35	-45
Minnesota	891	944	853	4	11

districts (EC, NW, and NE) the pattern was mixed. An unadjusted decrease of 2 percent in the East Central district became an increase of 8 percent after adjustment. The implication is that sales activity in that district in 1991 included a larger proportion of lower-priced lands than had been transferred in 1990. This was also the implication in the Northwest district, where adjustment reduced the decrease to 7 percent from an unadjusted drop of 15 percent.

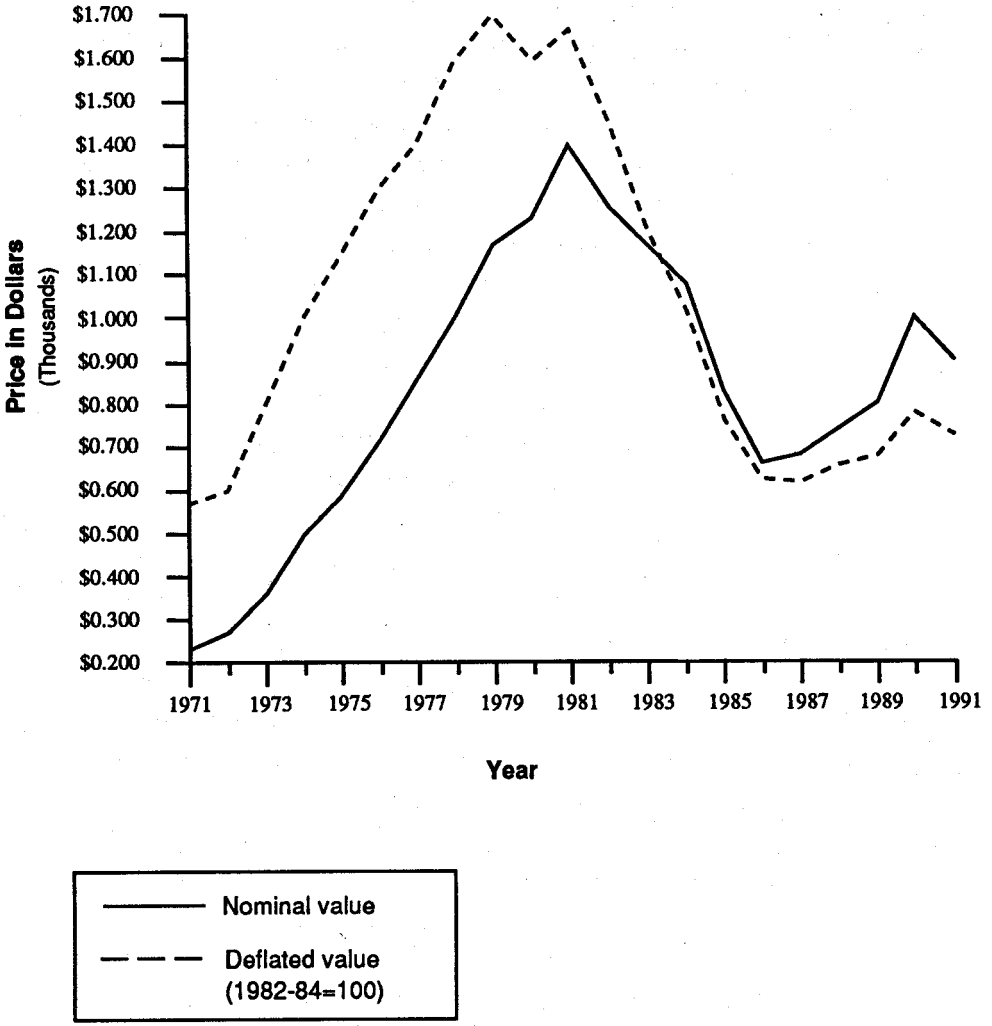
The sales price data for the Northeast are more difficult to interpret. This district has consistently shown the greatest variability in sales prices in the state in recent years, due to the relatively small number of sales and to the higher frequency of purchases for rural residential or recreation uses.

Nominal and Deflated Estimated Values and Reported Sales Price

The rate of inflation in the overall economy strongly influences the changes in the sales prices of farm land. One method of removing the effects of inflation is to deflate the prices with the consumer price index (CPI). Using the years 1982-1984 as a base of 100, the average CPI for the first six months of 1991 was 135.3. Dividing the 1991 prices by 1.353 will remove the effects of inflation. Figure 5 compares nominal and real estimated values per acre from 1971 to the present, while Figure 6 makes the same comparison for average reported sales price. In both graphs, the real values and prices were deflated by the average CPI for January through July (1982-84=100).

In 1991, after removing the effects of inflation, real average estimated value per acre of farm land in Minnesota decreased 9 percent from the level in 1990. The nominal decrease in Table 1 was only 4 percent. An analysis by district reveals that every district in the state reported a decrease in real estimated value, from a modest decrease of 1 percent in the Southwest to a de-

Figure 5. Estimated Value Per Acre.
Nominal and Real (1971-91)



crease of 25 percent in the Northwest. A detailed list of real estimated value for each district and the state as a whole appears in Table 23 in the Appendix.

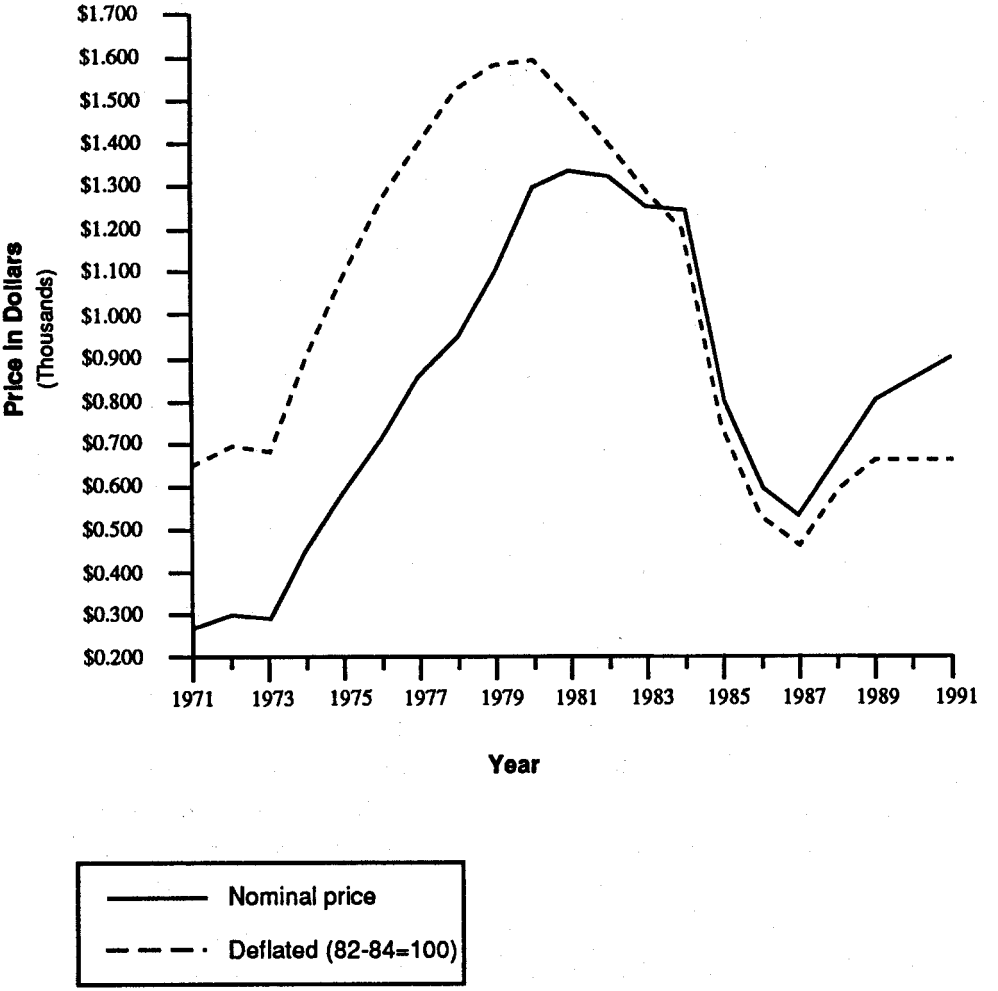
After adjustment for inflation, the real average reported sales price per acre of farm land in the state decreased less than 1 percent from the 1990 real (deflated) sales price. In Table 2, the current dollar increase in sales price was 4 percent, but inflation eroded this nominal gain. Looking at the district values, the strong decreases in real sales price in the East Central, the Northwest, and the Northeast districts pulled down the state average. Modest increases in real sales prices in the Southeast, the Southwest, and the West Central districts failed to offset the fall in real prices in the other districts. Hence, the state average fell. Table 24 in the Appendix shows the real reported sales price per acre by district and for the entire state.

The Southwest district had the highest real sales price for farm land at $898 per acre in 1982-84 dollars and also, along with the West Central district, displayed the largest real sales price increase in 1991 (5 percent). The Northeast, on the other hand, had the lowest real sales price at $133 per acre and also showed the sharpest decline in real prices (38 percent).

In 1991, the districts containing the higher priced farm land showed some growth in real sales price per acre whereas the lower-priced districts experienced relatively large decreases in real price per acre. The state average, practically unchanged from the 1990 value, reflects these countervailing factors.

In terms of real prices, the level of prices in 1991 was approximately the same as the average level of real prices over the five years, 1966-1971, for the state as a whole, and for all six districts. In dollars of constant purchasing power, the current level of farm land prices is back where it was before the boom and bust of the past two decades began.

Figure 6. Real and Nominal Sales Prices.
Minnesota 1971-1991



B. Analysis of Reported Sales

It is common to speak of the "real estate market" or the "farm land market" but these markets differ in several important respects from the wheat market, the soybean market, or other conventional commodity markets. Turnover happens infrequently, the product is not homogeneous, quality regulations are not standardized, financing occurs over long stretches of time, and decisions to buy or sell reflect choices which extend beyond traditional economic criteria. To allow a closer look at this diverse market, the following sections analyze characteristics of the sales of Minnesota farm land as reported by respondents from January to July 1991, with comparative data from previous years.

Reasons for Sale

In 1991, 49 percent of the sales statewide were attributed to death or retirement. This figure is unchanged from 1990 and reflects a sizable increase from the low point of 26 percent in 1987, when financial difficulty was the primary reason for selling. Table 5 shows the percentage of sales by reason for selling farm land in Minnesota from 1986 to 1991.

An encouraging sign is the continuation of the downward trend of the percentage of land sold due to financial difficulty. In 1991, only 12 percent of the reported sales occurred as a result of financial difficulty. Four years ago, in 1987, this figure was 60 percent. Even if the reasons for sale "to reduce size" (10 percent) and "left farming" (6 percent) are considered as a possible result of financial difficulty, the total becomes 28 percent of total reported sales - the lowest level in the past ten years. In addition, it should be noted that "other reasons" accounted for 21 percent of the total sales.

Table 5: Percentage of Sales by Reason for Selling Land, Minnesota, 1986-1991

Reason for Sale	1986	1987	1988	1989	1990	1991
Financial Difficulty	35	60	42	20	15	12
Reduce Size	17	6	8	11	10	10
Left Farming	11	5	6	5	6	6
Subtotal	63	71	56	36	31	28
Death	12	12	14	15	20	21
Retirement	18	14	23	29	29	28
Subtotal	30	26	37	44	49	49
Moved, Still Farming	1	0	0	2	0	2
Other*	6	3	7	18	20	21

* Some of the "other" reasons for selling farm land in 1991 included: insurance company sale, bank sold forclosed property, property sold to finance nursing home expenses, poor health, investor sold property for capital gain, divorce, and sale to current renter.

Type of Buyer

In this study, buyers of Minnesota farm land are classified into three categories. "Sole-tract operators" are those buyers who purchase intact farms and are not using the purchases to extend current land holdings. "Expansion buyers" add land they purchase to existing holdings. "Investors" do not plan to farm the land themselves, but presumably expect to rent the land or to hire a manager in order to operate the farm.

Expansion buyers continued to dominate the market in 1991, accounting for 84 percent of sales statewide. In 1990, this figure was 80 percent (Table 6 and Figure 7). Expansion buyers accounted for two-thirds of more of the sales in each district, from a low of 67 percent in the East Central district to a high of 88 percent in the Southwest and the Northwest districts.

Sole-tract operators accounted for 9 percent of sales in both 1990 and 1991. This remains the lowest percentage of sales to sole-tract buyers ever reported since this classification of buyers was introduced in 1954. The East Central and the Northeast districts reported the strongest percentages of sales to sole-tract buyers in the state at 30 and 26 percent, respectively. The lowest percentage of purchases by sole-tract operators was in the Southwest district, with only 4 percent of reported sales.

In 1991, the number of sales to investors dropped to 7 percent statewide, from 11 percent in 1990. As with the category of sole-tract operator buyers, the 1991 figure of 7 percent is the lowest since 1954. The strongest activity of investors was in the Southeast, with 9 percent of reported sales. The lowest activity was in the East Central District.

Methods of Finance

Compared to 1990, a smaller percentage of buyers financed their purchases of farm land by contract for deed in 1991. A larger percentage, however, financed their purchases by cash and mortgage. Buyers used contracts for deeds to finance 33 percent of their purchases in 1990, but only 28

Table 6: Proportion of Farm Land Sales and Average Sales Price per Acre by Type of Buyer, by District and Minnesota, 1990-1991

Sole-Tract Operator Buyer

District	1990 % of sales	1990 $ per acre	1991 % of sales	1991 $ per acre
Southeast	10	1231	10	1071
Southwest	5	624	4	1148
Weat Central	13	547	9	853
East Central	20	501	30	462
Northwest	0	0	8	296
Northeast	22	294	26	258
Minnesota	9	680	9	757

Expansion Buyer

	1990 % of sales	1990 $ per acre	1991 % of sales	1991 $ per acre
Southeast	76	1003	81	1118
Southwest	90	1150	88	1239
Weat Central	76	696	85	729
East Central	62	502	67	485
Northwest	90	596	88	488
Northeast	56	286	70	162
Minnesota	80	899	84	915

Investor Buyer

	1990 % of sales	1990 $ per acre	1991 % of sales	1991 $ per acre
Southeast	14	886	9	1063
Southwest	5	1113	7	1039
Weat Central	11	615	6	601
East Central	18	440	3	630
Northwest	10	378	4	431
Northeast	22	230	4	208
Minnesota	11	730	7	820

Figure 7. Percentage of Farm Sales, 1954-1991. By Type of Buyer, Minnesota.

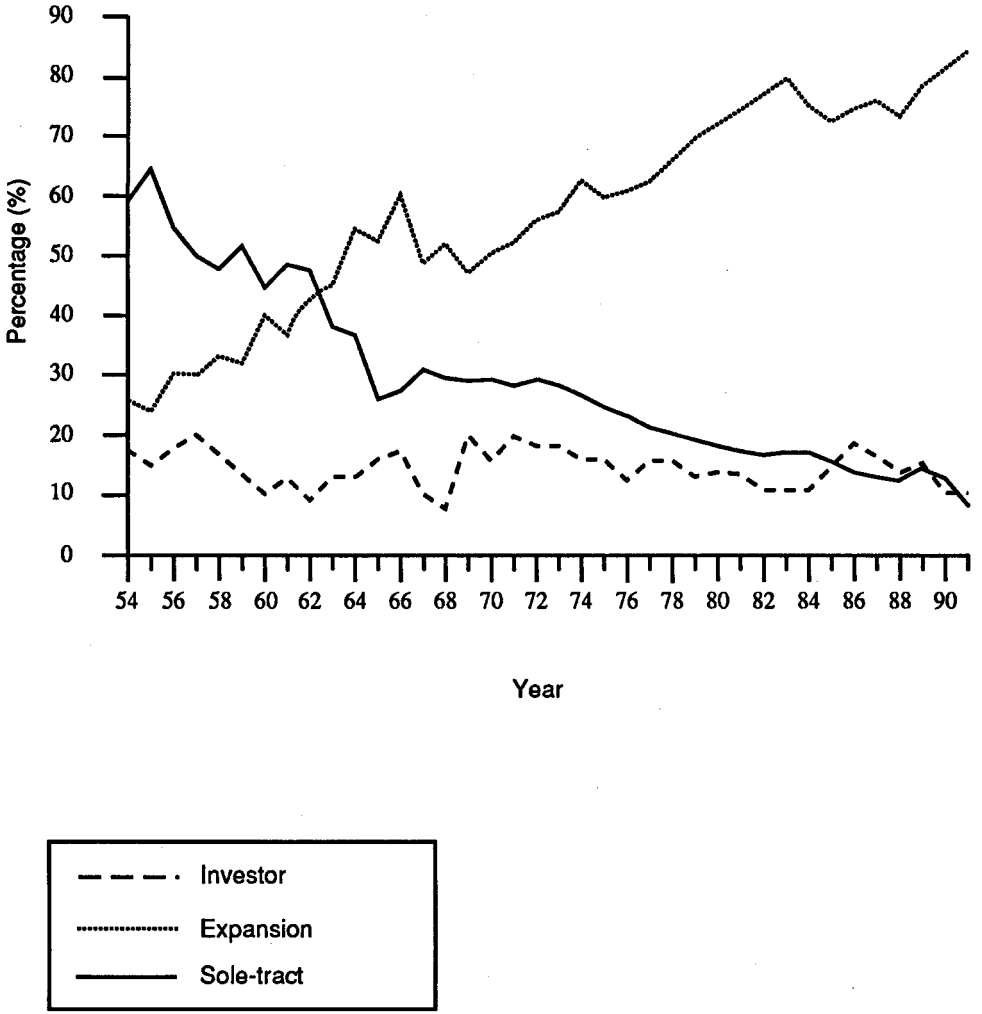


Table 7: Proportion of Farm Land Sales by Method of Financing, by Districts, Minnesota 1990-91

Districts	Cash		Mortgage		Contract for Deed	
	1990	1991	1990	1991	1990	1991
	.....PERCENTAGE.....					
Southeast	32	30	31	36	37	34
Southwest	40	48	34	30	25	22
West Central	24	34	25	32	50	34
East Central	45	44	20	32	35	24
Northwest	59	42	23	37	18	22
Northeast	33	43	11	17	56	39
Minnesota	38	40	29	32	33	28

percent in 1991. Table 7 illustrates the proportion of farm land sales by method of financing. In 1991, cash financing was the primary method of financing, accounting for 40 percent of all sales. This is a slight increase over 1990, when buyers financed 38 percent of their purchases with cash. Financing by mortgages accounted for 32 percent of reported sales in 1991, an increase from 29 percent in 1990, and the highest percentage use of mortgage financing since 1971. This can be interpreted as evidence of a return to more stable conditions in farm land financing, after the boom and bust cycle of the past two decades.

Distance of Buyer's Residence From Tract Purchased

The distance of a buyer's residence from the tract purchased reflects the extent to which the Minnesota land market is a local market. In the entire state, as well as in each district except the East Central, over half the sales were made to buyers who lived less than 5 miles from the tract purchased. In Minnesota as a whole, 56 percent of sales were to buyers living less than 5 miles from the tract purchased, buyers in 78 percent of sales were within 10 miles, and in 93 percent of sales less than 50 miles. (Table 8.)

In the different districts, the percentage of sales to local buyers was greatest for the Southwest, with 86 percent of sales within 10 miles. The West Central and Northwest districts follow, both with 79 percent of sales to buyers living within 10 miles. The Northeast is the least localized of the districts with only 57 percent of the sales to buyers living less than 10 miles from the tract purchased.

Table 9 shows the percentage of acres sold, rather than the number of sales, by the distance of the buyer's residence from the tract purchased. Statewide, 52 percent of farm land acres were sold to buyers residing within 5 miles of the tract purchased, 75 percent of acres were sold to buyers living within 10 miles, and 93 percent of acres sold were to buyers living within 50 miles.

When considering the percentage of acres sold, instead of number of

Table 8: Percentage of Sales by Distance of Buyer's Residence from Tract, by District, Minnesota, 1986-1991

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							
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
1990	25	24	16	38	13	25	23
1991	25	24	29	18	17	26	24
2-4 Miles							
1986	31	38	41	24	43	15	36
1987	30	37	42	13	33	0	33
1988	30	38	25	23	40	21	31
1989	34	37	21	13	49	9	31
1990	34	40	28	24	53	25	36
1991	25	41	25	18	40	22	32
5-9 Miles							
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
1990	19	22	27	16	19	0	21
1991	23	21	25	25	22	9	22
10-49 Miles							
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
1990	16	10	21	11	9	13	14
1991	17	13	15	25	17	9	15

Table 8: Percentage of Sales by Distance of Buyer's Residence from Tract, by District, Minnesota, 1986-1991 (con't.)

Distance of Buyer's Residence from Tract Purchased	South-east	South-west	West Central	East Central	North-west	North-east	MN
	— — — — — — percent — — — — — — — —						
50-299 Miles							
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
1990	4	2	5	9	5	19	4
1991	7	1	5	4	1	17	4
300 Miles and Over							
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
1990	1	2	3	2	2	19	2
1991	2	0	0	11	3	17	2

Table 9: Percentage of Acres Sold by Distance of Buyer's Residence from Tract Purchased, Minnesota, 1991

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	21	21	24	14	17	14	20
2-4 miles	32	40	25	14	31	33	32
5-9 miles	19	23	29	28	22	15	23
Total Under 10 miles	72	84	78	56	70	62	75
10-49 miles	17	14	18	31	23	18	18
50-299 miles	8	1	5	3	5	12	5
300 miles and over	3	0	0	10	3	8	2

sales, to buyers living within a certain distance from the tract purchased, the break-down by districts shifts. The Southwest still claims the largest percentage, with 84 percent of acres sold to buyers residing less than 10 miles from the purchased tracts. The West Central and Southeast districts follow with 78 and 72 percent respectively. The lowest percentage of acres sold to buyers living within 10 miles was in the East Central district at 56 percent.

Quality of Land

Throughout the 1980's, the relative proportions of land sales classified by quality (good, poor, medium) was generally stable. In 1991 and for Minnesota as a whole, 45 percent of all sales were of "good" quality land, 43 percent were of "average" quality land, and 12 percent were of "poor" quality land. In the years since 1980, the proportion of sales of good quality land has not exceeded the 1991 value of 45 percent. Table 10 shows the relative proportions of sales for land of varying quality since 1986.

Expansion buyers favored land of good quality, accounting for 48 percent of all reported sales to expansion buyers. Both sole tract operators and investors preferred average quality land, with percentage sales of average quality land of 47 and 55 percent, respectively. Sole tract operators purchased the largest percentage of poor land, within the different categories of buyer, with 18 percent of sales.

Land With and Without Buildings

The survey classifies reported sales into sales of land with and without buildings. The results are shown in Table 11 and Table 12. In 1991, expansion buyers continued to prefer land without buildings, with 70 percent of their purchases involving land with no buildings. Sole tract operators preferred land with existing buildings. Only 24 percent of sales to sole tract operators had no

Table 10: Percent of Sales by Type of Buyer for Land of Varying Quality, Minnesota, 1986-1991

Year	Sole-tract	Expansion	Investor	All Sales
		Good Quality		
	— — — — —	percent of sales	— — — — — — —	
1986	29	44	34	41
1987	35	44	30	41
1988	30	49	34	45
1989	36	45	27	43
1990	30	43	27	39
1991	35	48	30	45
		Average Quality		
	— — — — —	percent of sales	— — — — — — —	
1986	61	44	51	47
1987	47	43	48	44
1988	55	43	44	44
1989	50	44	47	45
1990	55	45	41	46
1991	47	41	55	43
		Poor Quality		
	— — — — —	percent of sales	— — — — — — —	
1986	10	12	15	12
1987	18	13	22	15
1988	15	8	22	11
1989	14	11	26	12
1990	15	13	31	15
1991	18	11	15	12

buildings. Sales of land with no buildings to investors accounted for 69 percent. Statewide, two-thirds of all reported sales were tracts of land without buildings. This 1991 statewide level is the highest reported percentage of sales of land without buildings since 1980.

The average reported sales price of land with buildings increased in 1991 to $888, from a 1990 level of $868. Likewise, the average reported sales price of land without buildings increased to a 1991 level of $894, from the 1990 price of $840. Statewide, in 1991, the average price of land without buildings was slightly higher than the average price of land with buildings (Table 13). In the Southeast, West Central, and Northeast districts, the average reported sales price of land without buildings was less than the sales price of land with buildings.

In the Southwest district, the sales prices were more or less identical, despite the existence or absence of buildings. In the East Central and Northwest districts, the price of land that sold without buildings was higher than the price of land with buildings.

Table 11: Percent of Farm Land Sales without Buildings by Type of Buyer, Minnesota 1986-1991.

Year	Sole-tract	Expansion	Investor	All Sales
		No Buildings		
		— — — — — percent of sales — — — — — — —		
1986	21	65	52	58
1987	23	68	62	62
1988	28	69	63	63
1989	21	67	54	61
1990	15	69	61	63
1991	24	70	69	66

Table 12: Type of Buyer (With and Without Buildings), Minnesota, 1991.

	With Bldgs.		Without Bldgs		Total Minnesota	
	Number of Sales	Percent	Number of Sales	Percent	Number of Sales	Percent
Type of Buyer						
Sole Tract	54	7	17	2	71	9
Expansion	194	25	456	59	650	84
Investor	18	2	38	5	56	7
Total	266	34	511	66	777	100

Table 13: Proportion of Sales and Average Sales Price per Acre of Farm Land With and Without Bldgs., by District, Minnesota, 1990 and 1991.

	With Bldgs.				Without Bldgs.				Price of Land Without Bldgs as a % of Price of Land With Bldgs.	
	1990		1991		1990		1991		1990	1991
District	%	$	%	$	%	$	%	$	%	%
Southeast	45	1079	40	1149	55	913	60	1045	85	91
Southwest	28	1116	32	1213	72	1089	68	1216	98	100
W. Central	48	654	34	786	52	663	66	684	101	87
E. Central	58	481	57	468	42	517	43	510	107	109
Northwest	19	607	32	397	81	526	68	499	87	126
Northeast	61	322	71	214	39	154	29	119	48	56
Minnesota	38	868	37	888	62	840	63	894	97	101

C. Trends in Sales by Economic Development Regions

Classifying sales data by the state's 13 economic development regions (Figure 8) helps to emphasize the effects of year-to-year shifts in the geographic frequency of sales on the average sales price. A comparison of 1991 adjusted sales prices with 1990 unadjusted sales prices reveals changes attributable to price shifts alone, without the distorting influence in regional variations in the frequency of sales of higher and lower quality land.

Table 14 presents unadjusted average sales price by economic development region for the seventeen years from 1975 through 1991. It compares the percentage change in sales prices from 1990 to 1991 for each region, first for the unadjusted sales prices for 1991, followed by the adjusted 1991 sales prices. From the unadjusted analysis, the decreases in sales price are all clustered in the first four economic development regions. In 1991, all other regions showed an increase in the average reported sales price. When the sales prices are adjusted for geographical shifts, the pattern remains much the same. After adjustment, economic development regions 1, 2, 3, and 4 showed a decrease in sales price while the remaining regions demonstrated an increase.

Of the regions with an increase in the adjusted price, the percentage changes in regions 5, 9 and 10 were the most pronounced. Most notably, region 5 showed a dramatic change after adjustment, from a 49 percent increase to a 3 percent increase. In region 9, an unadjusted increase of 3 percent became an adjusted increase of 10 percent and, in region 10, an increase of 11 percent became an increase of 17 percent. In the remaining economic development regions with an increase in the adjusted price, the percentage changes were either roughly the same between the adjusted and unadjusted values, or the adjusted percentage change was smaller.

In 1991, the Twin Cities metro region, region 11, reported the highest unadjusted sales price of farm land at $1,766 per acre. The next highest unadjusted average sales price was in region 9 at $1,343 per acre. The lowest unadjusted sales prices per acre were in regions 2 and 3 at $198 and $204, respectively.

Figure 8. Minnesota Economic Development Regions and the Greater Twin Cities Metro Area

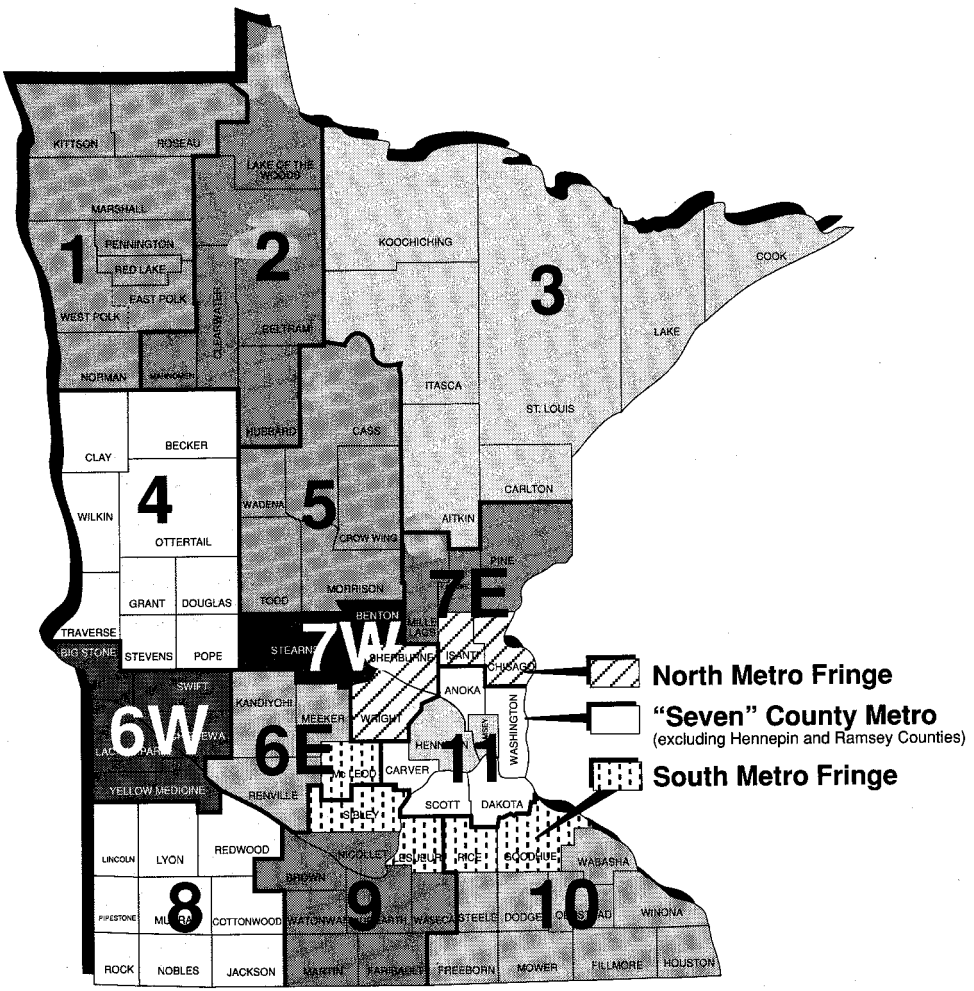


Table 14: Average Reported Sales Price per Acre of Farmland by Economic Development Regions, Minnesota, 1975-1991 (Unadjusted) and 1991 Adjusted Sales Price

	Economic Development Regions													
Year	1	2	3	4	5	6W	6E	7W	7E	8	9	10	11	State
Unadjusted														
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
1990	487	237	279	591	286	634	964	758	492	944	1300	985	1304	853
1991	428	198	204	569	425	829	1028	897	497	1114	1343	1092	1766	891
%Change of Unadjusted Prices 1990-1991	-12	-16	-27	-4	49	31	7	18	1	18	3	11	35	4
Adjusted 1991 Prices	462	151	204	565	369	808	1028	807	497	1051	1433	1150	1663	944
Percentage Change from 1990 Unadjusted to Adjusted 1991 Prices	-5	-36	-27	-4	3	27	7	6	1	11	10	17	28	11

The economic development regions with the strongest percentage increases over 1990 prices, both before and after adjustment, were region 6W and region 11. The largest decreases, in percentage terms, occurred in regions 2 and 3.

Part II Analysis of Changes in the Minnesota Rural Real Estate Market

Minnesota land prices in the past twenty years have behaved much like a roller coaster - climbing throughout the 1970's and then plummeting throughout the early and mid-1980's. From 1972 to the peak in 1981, prices in current dollars increased more than five-fold. From 1981 to 1987, nominal prices fell over 60 percent in Minnesota. Only in the past four or five years has farm land begun to recover its value. The following cluster of special reports analyzes trends in the price of land over these two dynamic decades for specific regions in the state. This disaggregation will illustrate the extent to which land prices in different regions were affected by the boom and the bust, as well as the degree to which they have recovered in recent years.

Statewide, in 1991, the rural real estate market was weak. Estimated value per acre decreased 4 percent in nominal terms, but, removing the effects of inflation, it declined 9 percent. The average reported sales price per acre increased 4 percent in nominal terms, but the real (deflated) sales price of farm land remained unchanged. The following group of reports reveals that many parts of the state have not fully recovered from the lows of 1987, and may not be expected to do so in the near future. In 1991, the districts showing some strength in deflated sales price per acre were the higher priced districts in the state, namely the Southeast, the Southwest, and the West Central.

The Greater Twin Cities Metro Area

In this study, the Greater Twin Cities Metropolitan area is defined as the 14 counties surrounding the Twin Cities counties of Hennepin and Ramsey. The creation of three sub-areas facilitates a detailed analysis of the region. The definition of the sub-areas arises from population levels, the productivity of surrounding land, and the historical trends in land values in the different counties.

The first sub-area is the Twin Cities Metro Area consisting of Anoka,

Table 15: Average Reported Sales Price per Acre For Farm Land, Greater Twin Cities Metropolitan Area and Sub-areas, 1974-1991

Year	"Seven" County Metro[1]	South Metro Fringe[2]	North Metro Fringe[3]	Greater T.C. Metro (14 counties)[4]	Minnesota
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
1990	1304	994	943	1044	853
1991	1766	1144	1239	1222	891
Percent Change 1990-1991	35	15	31	17	4

[1]Anoka, Carver, Dakota, Scott, Washington Counties (Hennepin and Ramsey are excluded for reporting purposes.)
[2]Goodhue, McLeod, Le Sueur, Rice and Sibley Counties
[3]Chisago, Isanti, Sherburne, Wright Counties
[4]All fourteen counties named above

Carver, Dakota, Scott, and Washington Counties (ie. economic development region 11 without Hennepin and Ramsey counties). The second sub-area is the South Metro Fringe made up of Goodhue, LeSueur, McLeod, Rice, and Sibley. The third division is the North Metro Fringe made up of Chisago, Isanti, Sherburne, and Wright.

In 1991, all three areas experienced an increase in average reported sales price (Table 15). The Twin Cities Metro Area reached $1,766 per acre, an increase of 35 percent over 1990 and the highest value since 1983. The South Metro Fringe reported an increase of 15 percent, to $1,144 per acre, and the North Metro Fringe reported an increase of 31 percent, reaching $1,239 per acre. Overall, the Greater Twin Cities Metropolitan Area showed an increase of 17 percent, with an average reported price of $1,222 per acre. The average sales prices for the Twin Cities regions should be interpreted with some caution due to the small number of respondants reporting sales. A larger number of reported sales from one county can influence the average sales price for the entire area. For example, in 1991, there was a proportionately smaller number of reported sales for the area east of the Mississippi in the North Metro Fringe Area, limiting the influence of the lower priced counties. In the North Metro Fringe, the 1991 average sales price of $1,239 and the increase of 31 percent are most likely overstatements for the region.

The strength in the Greater Twin Cities Metro Area, experiencing a powerful urban impact on the market for farm land, is a return to the patterns that prevailed before the land boom of the 1970s. At the height of the boom in 1978-81, the urban influence on farm land prices was overwhelmed by the run-up in prices in the explicitly rural south-central counties. In 1981, South-Central region 9 reported sales prices averaging $2865 per acre compared to $1830 per acre in region 11, the 7-county Twin Cities area. By 1991 this relationship had reversed, with the highest farm land prices centered again on the Twin Cities.

The Urban Corridor (1971-91)

The influence of urban development in Minnesota is not confined to the Twin Cities Metropolitan Region. Growth in other Minnesota cities, development along the interstates, and the increase in commuters willing to live far outside built-up areas all contribute a growing urban influence in what used to be a traditionally rural land market. In order to trace the possible effects of growing urbanization, this study has defined a region of the state designated the "Urban Corridor." The urban corridor consists of those counties surrounding an imaginary line beginning in Rochester, extending through the Twin Cities, and ending in St. Cloud; this region contains all of Economic Development Region 11 and parts of 10 and 7W. The urban corridor is illustrated in Figure 9.

In 1991, the average reported sales price for counties in the urban corridor was $1084, a 13 percent increase from the 1990 level (Table 16). The price in 1991 reflects a 66 percent increase from the low of $652 in 1987. The average reported sales prices for farm land within the urban corridor are listed in Table 16 for the years 1971-1991. To put the shifts in land prices within the urban corridor into perspective, it will be useful to compare them to the reported sales prices in those economic development regions immediately adjacent to the corridor - that is, to economic development regions 6E and 9. In 1991, economic development region 6E reported a 7 percent increase in sales price while region 9 reported a 3 percent increase. The percent increase of reported sales price was greater within the urban corridor than in these two comparison regions.

The real price of land in the urban corridor for 1991 was $801 (in 1982-84 dollars). This real price reflected an increase of 8 percent from the 1990 level and is comparable to the value twenty years earlier. The 1971 reported sales price per acre was $833 (in 1982-84 dollars). The land prices within the urban corridor have almost returned to their real value before the boom and bust period of the 1970's and 80's. For comparison, Table 17 shows the deflated price of land for Economic Development Regions 6E and 9. Both regions showed a slower recovery from the boom and bust of the past two decades. In

Figure 9. The Urban Corridor and Economic Development Regions 6E and 9.

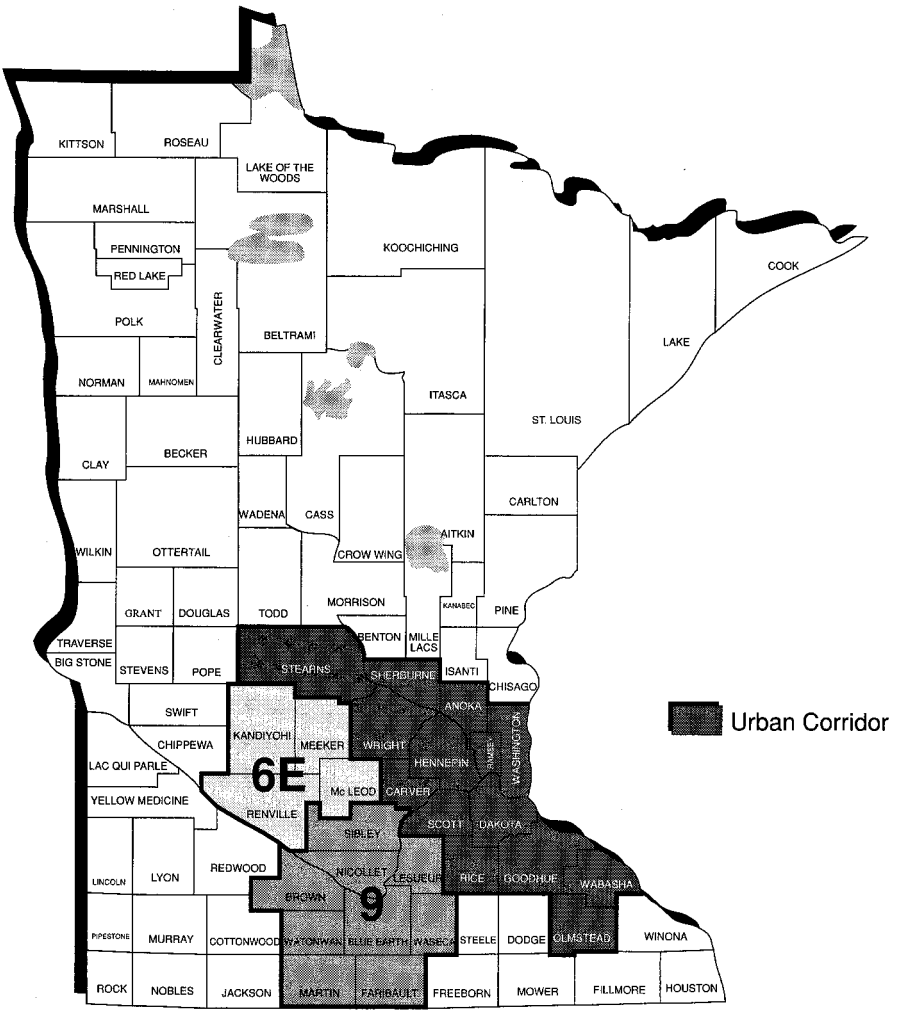


Table 16. The Urban Corridor. Sales Price per Acre of Minnesota Farm land within the Corridor. Nominal and Deflated Values, 1971-1991.

Year	Nominal Price/ Acre	% Change from prev. year.	Deflated Price(*)	% Change from prev. year.
1971	$335	—	$833	—
1972	376	12%	906	9%
1973	434	15%	998	10%
1974	590	36%	1227	23%
1975	689	17%	1300	6%
1976	925	34%	1643	26%
1977	1036	12%	1730	5%
1978	1181	14%	1845	7%
1979	1561	32%	2208	20%
1980	1658	6%	2055	- 7%
1981	1545	- 7%	1732	-16%
1982	1577	2%	1651	- 5%
1983	1396	-11%	1414	-14%
1984	1313	- 6%	1275	-10%
1985	994	-24%	884	-31%
1986	846	-15%	775	-12%
1987	652	-23%	579	-25%
1988	763	17%	652	13%
1989	937	23%	762	17%
1990	956	2%	742	- 3%
1991	1084	13%	801	8%

% Change in price per acre 1987-91 —— +66%
% Change in real price per acre 1987-91 - +38%

1991 price as % of peak in 1980 ——— 65%
1991 real price as % of peak in 1979 —— 39%

(*) Price per acre deflated by the average CPI (1982-84 = 100) for the months January through July.

Table 17. Economic Development Regions 6E and 9. Sales Price per Acre of Minnesota Farm Land. Deflated Values. (1982-84=100) 1974-1991.

Year	EDR 6E Price	% Change from prev. year.	EDR 9 Price	% Change from prev. year.
1974	1183	—	1723	—
1975	1304	10%	2104	22%
1976	1639	26%	2600	24%
1977	1715	5%	3063	18%
1978	1830	7%	2628	-14%
1979	2161	18%	2986	14%
1980	2150	- 1%	2875	- 4%
1981	2185	2%	3212	12%
1982	1964	-10%	2601	-19%
1983	1590	-19%	2167	-17%
1984	1350	-15%	1907	-12%
1985	1089	-19%	1303	-32%
1986	683	-37%	873	-33%
1987	564	-17%	780	-11%
1988	710	26%	907	16%
1989	716	1%	930	3%
1990	748	4%	1009	8%
1991	760	2%	993	- 2%

% Change in deflated price per acre 1987-91
—Economic Development Region 6E —— 35%
—Economic Development Region 9 —— 27%

1991 price as % of peak in 1981
—Economic Development Region 6E —— 35%
—Economic Development Region 9 —— 31%

1991, deflated farm land prices in the Urban Corridor increased 38 percent over the low in 1987, while deflated prices in Economic Development Regions 6E and 9 increased 35 percent and 27 percent over the 1987 level, respectively. The 1991 deflated price in the Urban Corridor was 39 percent of the peak value of the past two decades, while in regions 6E and 9 the deflated price was 35 percent and 31 percent of the peak price, respectively.

The Red River Valley Area

The Red River Valley, a former glacial lake plain, possesses higher productivity than the surrounding areas. Since the analysis of trends for the Northwest District, as well as for Economic Development Regions 1 and 4, includes both Red River Valley and non-Valley land, specific trends in the price of Valley land will be hidden. In order to reduce the effect of these sharp differences in land quality, two sub-areas are studied: the Red River Valley and a Comparison Area of Non-Valley townships lying adjacent to the Valley land. These two areas are illustrated in Figure 10.

In 1991, the gap between the prices in the two different areas decreased (Table 18). Within the Red River Valley, average sales price decreased 1 percent, with a 1991 price per acre of $699. This is the first time since the low in 1987 that the sales price of Valley land decreased. The 40 percent drop in the price of wheat during 1991 may have had a strong impact on the price of Valley land. The Comparison Area, however, showed a 23 percent increase, reaching a level of $349. The Comparison Area includes counties or parts of counties in which there is a large percentage of farm land entered in the Conservation Reserve Program (CRP). Heavy CRP entries could reduce the frequency of sales of lower-priced tracts, leading to an upward drift in the average price of tracts which did sell. If this effect was present, it could explain part of the increase in sales price of non-Valley land.

Expansion buyers continued to dominate the markets in both the Red

Figure 10. The Red River Valley and Comparison Areas.

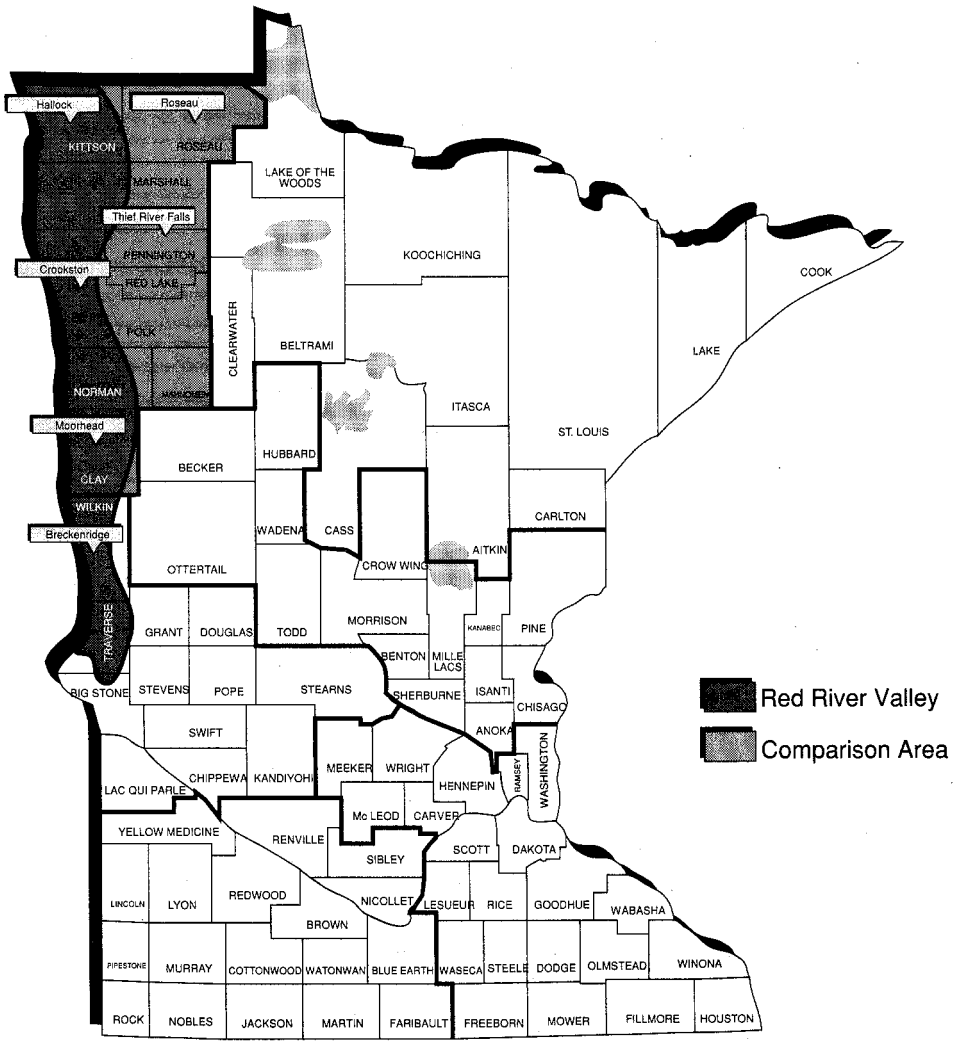


Table 18: Farm Land Sales Prices, Average Tract Size, and Number of Sales Red River Valley and Comparison Area, 1971-1991

	Red River Valley			
Year	Price Per Acre	Change from Previous Year	Sales	Average Size of Tract Sold
	Dollars	Percent	Number	Acres
1971	166	-14	50	255
1972	151	- 9	53	316
1973	201	33	76	252
1974	359	79	47	231
1975	535	49	63	219
1976	733	37	54	216
1977	780	6	37	284
1978	849	9	65	270
1979	993	17	56	257
1980	1,112	12	56	204
1981	1,195	7	55	281
1982	1,239	4	56	164
1983	998	-19	55	190
1984	939	-6	52	186
1985	755	-20	64	180
1986	625	-17	47	187
1987	493	-21	70	231
1988	612	23	87	186
1989	644	5	44	193
1990	708	10	54	198
1991	699	- 1	39	169

Year	Non-Valley Comparison Area			
	Price Per Acre	Change from Previous Year	Sales	Average Size of Tract Sold
	Dollars	Percent	Number	Acres
1971	66	- 4	67	255
1972	78	18	53	260
1973	90	15	77	358
1974	152	69	86	337
1975	227	49	76	270
1976	279	23	88	325
1977	306	10	75	287
1978	385	26	77	290
1979	461	20	84	321
1980	638	38	64	317
1981	788	24	82	284
1982	629	-20	40	287
1983	561	-11	57	249
1984	524	- 7	30	248
1985	387	-26	36	203
1986	266	-31	33	265
1987	244	- 8	71	369
1988	281	16	48	256
1989	294	5	36	220
1990	284	- 3	25	223
1991	349	23	48	232

River Valley and the Comparison Area, accounting for 95 and 82 percent of the sales in each region, respectively (Table 19). In 1991, there were no reported sales to investors in the Valley, although, in the Comparison Area, 7 percent of sales were to investors. Sole-tract operators accounted for 5 percent of sales within the Valley and 11 percent of sales in the Comparison Area. In cash-crop areas of Minnesota, the absence of buildings can enhance the selling price of land. In 1991, this was true for both the Red River Valley and the non-Valley regions (Table 20). Within the Red River Valley, the average reported sales price of land with buildings was $630, while the price without buildings was $724. Likewise, in the comparison area, the price with buildings was $328 and the price without buildings was $366.

In the Valley region, mortgages were the primary method of financing land purchases, accounting for 49 percent of the sales. In the Comparison Area, the primary method of financing was cash purchases, with 38 percent of the sales. Contracts for deed were more common in the Comparison Area, with 29 percent of the sales, than in the Valley, with only 13 percent of the sales. This is a shift downwards in the use of contract for deed from the years 1988-89. (Table 21.)

Counties With a High Prportion of Rented Land

Another way to classify the different counties in Minnesota is to group together those counties with a higher proportion of the land in farms made up of rented land. From the 1987 Census of Agriculture, those counties in which rented land comprised more than one-third of the land in farms are grouped as a sub-region of the state, excluding counties in the Twin Cities Metropolitan area. This region is illustrated in Figure 11. Many of the counties in this region primarily produce cash crops. In this region, the area of rented land as a proportion of total land in farms is 49%. For the remainder of Minnesota, excluding the Greater Metropolitan Region, the amount of rented land as a

Table 19: Proportion of Sales by Type of Buyer (top number) and Average Price per Acre (bottom number), 1984-1991

Type of Buyer		1984	1985	1986	1987	1988	1989	1990	1991
					Red River Valley				
Sole-Tract	%	2	0	2	0	4	4	0	5
Buyer	$	1250	—	513	—	389	681	—	1043
Expansion	%	98	92	96	100	94	96	94	95
Buyer	$	1005	740	626	506	605	644	708	692
Investor	%	0	8	2	0	2	0	6	0
Buyer	$	—	857	897	—	502	—	676	—
					Comparison Area				
Sole-Tract	%	17	9	6	13	19	3	0	11
Buyer	$	445	578	356	387	243	292	—	273
Expansion	%	80	68	88	77	81	88	83	82
Buyer	$	544	402	258	232	290	291	313	369
Investor	%	3	23	6	10	0	9	17	7
Buyer	$	350	289	393	184	—	307	244	431

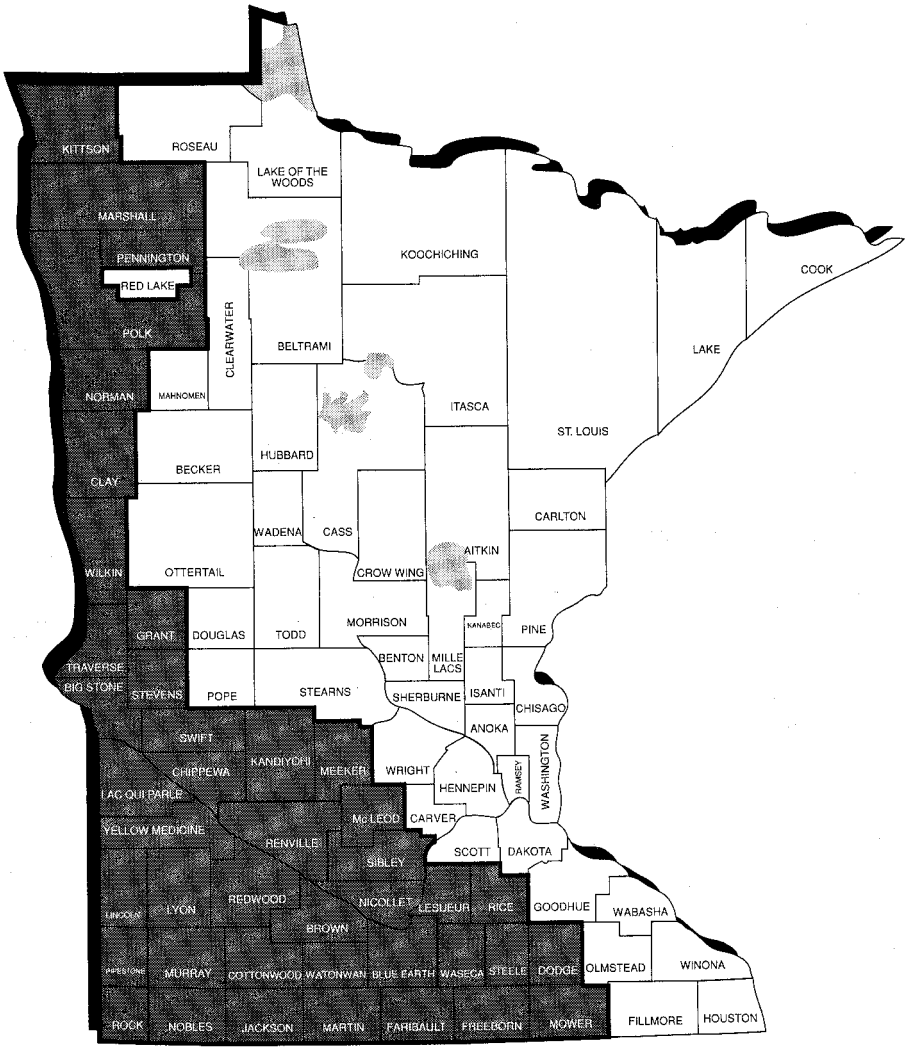
Table 20: Proportion of Sales and Average Sales Price Per Acre of Land With and Without Blgds., Red River Valley and Comparison Area, 1981-1991.

Area and Year	Percentage of Sales With %	Percentage of Sales Without %	Price Per Acre With $	Price Per Acre Without $	Price of Land Without Bldg. as a % of Price of Land With %
Red River Valley			(1)	(2)	(2)/(1)
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
1990	24	76	801	674	84
1991	18	82	630	724	115
Non-Valley Comparison Area					
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
1990	20	80	297	281	95
1991	40	60	328	366	112

Table 21: Proportion of Sales (Top Figures) and Price Paid Per Acre (Bottom Figures) by Method of Finance, Red River Valley and Comparison Area, 1984-1991

Method of Finance		1984	1985	1986	1987	1988	1989	1990	1991
					Red River Valley				
Cash	%	27	52	49	60	39	52	74	38
	$	911	675	715	592	651	577	718	768
Mortgage	%	38	37	13	21	15	22	17	49
	$	1008	834	601	429	558	792	682	664
Contract for Deed	%	35	11	38	19	45	55	9	13
	$	1037	801	598	447	616	590	670	648
					Comparison Area				
Cash	%	21	23	45	39	35	55	24	38
	$	550	235	279	291	262	288	301	335
Mortgage	%	38	31	32	36	17	5	38	33
	$	551	439	303	245	295	192	320	369
Contract for Deed	%	41	46	23	25	48	40	38	29
	$	485	463	202	175	283	315	268	346

Figure 11. Counties in Which Over One-Third of Farmland is Rented Land (excluding Twin Cities Metro Area)



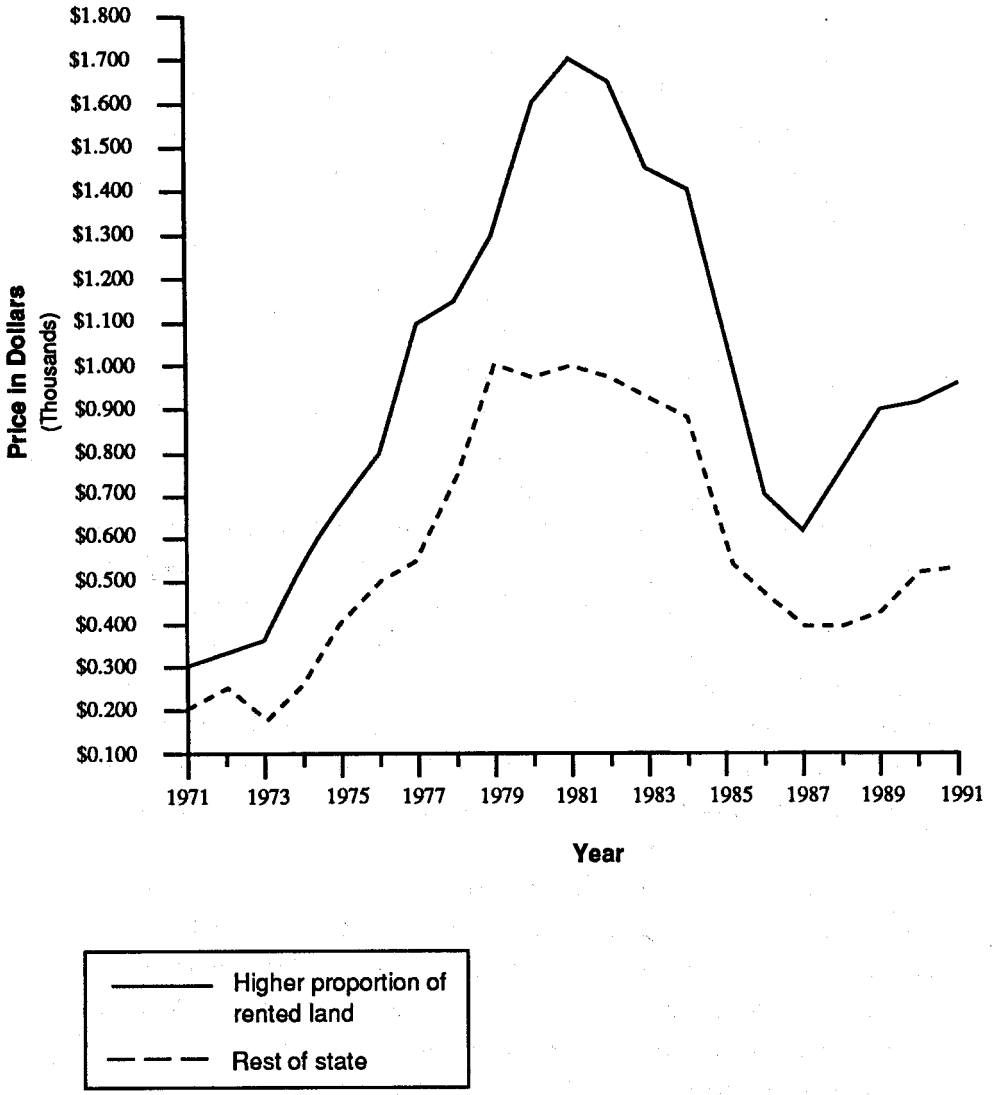
proportion of total farm land is 25%.

In order to provide a basis for analysis, the trend in price per acre of farm land in the region with a higher proportion of rented land is compared to the price per acre of farm land in the rest of the state, excluding the 7-county Twin Cities Metropolitan area. The results for the years 1971-1991 are illustrated in Figure 12.

During the boom and bust cycle of the last two decades, the reported sales price of land in the region with a higher proportion of rented land showed a stronger reaction than in the comparison area of the rest of the state, particularly in the late 70's and early 80's. While the price of farm land in the comparison area leveled off in the years 1979-1983, the sales prices in the region with a higher proportion of rented land climbed to a much higher peak in 1980 and then fell sharply. To measure the difference in variability of the price of farm land within these two regions during the boom and bust period, we can calculate the coefficient of variation for each time series. The coefficient of variation is the standard deviation of the price expressed as a percentage of the mean. Taking the years 1979-1984 as the "core" years of the boom and bust cycle, the coefficient of variation for the region with a higher proportion of rented land is 10 while the coefficient for the comparison area is 2. During these years, the region with a higher proportion of rented farm land, and engaged primarily in the production of cash crops, exhibited a much greater degree of variability in sales prices than did the rest of the state.

The fall from the peak in 1981 to the low in 1987 was more severe for the region with higher priced land and a higher proportion of rented land, with an average annual decline in reported sales prices per acre $152 for the years 1981 to 1987. During the same time period, the average decline of sales prices in the comparison area was $77 per year. Expressed in annual percent declines, the reported sales price of the region with a higher proportion of rented land declined an average of 13 percent each year from 1981 to 1987, while the rest of the state exhibited a 11 percent annual decline in sales price.

Figure 12. Price Per Acre, Minnesota Farm Land. 1971-1991.



The Minnesota Dairy Region

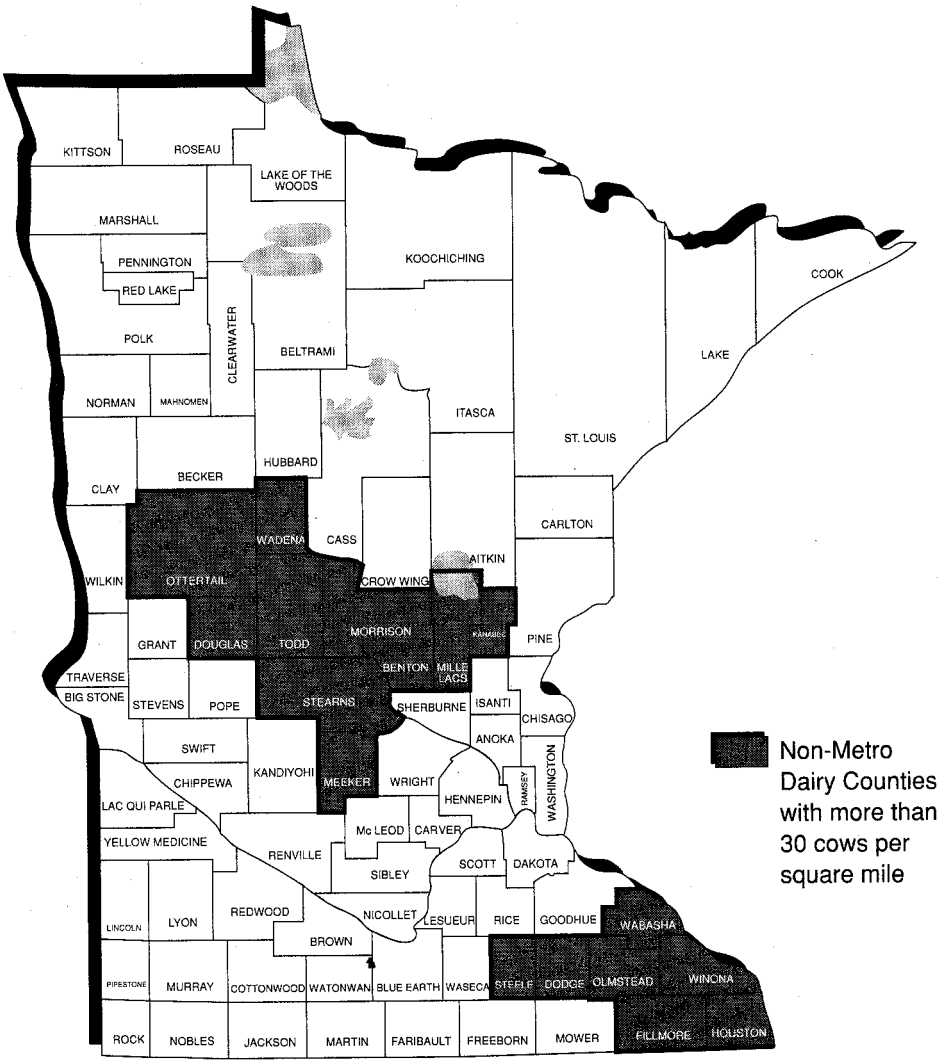
In an effort to study the trends over the last two decades in the Minnesota land market and the recovery of sales prices of the last several years, the dairy sector was identified as deserving special attention. The dairy region is an important agricultural production sector in Minnesota, with a below-average dependency on cash crops. Recent declines in the price of milk in Minnesota may have had some impact on the recovery of land prices in dairy counties outside of the Metropolitan Area.

For this study, two dairy regions are identified based on counties in which the cow density per square mile of farm land is greater than 30. Since a greater variety of alternative uses of land and urban factors influence the price of farm land in dairy production areas near large population centers, only those counties outside of the Greater Metropolitan area are considered. In addition, Chisago and Pine counties are not included in order to avoid any effect of highway I-35 on land prices. The counties selected fall into two main clusters: the Central Dairy Region (Ottertail, Wadena, Douglas, Todd, Morrison, Stearns, Meeker, Benton, Mille Lacs, and Kanabec) and the South Dairy Region (Wabasha, Steele, Dodge, Olmsted, Winona, Fillmore, and Houston). (Figure 13.)

In 1991, the price per acre of farm land in the South Dairy Region was $979, an increase of 3 percent over the 1990 price. In the Central Dairy Region, the 1991 price per acre reached $635, an increase of 7 percent. Table 22 gives the average sales price for both regions for the years 1971-1991. While in both regions the reported sales price increased, the rate of increase was smaller in 1991 than it was in 1990. In 1990, the reported sales price for the South Dairy Region had increased 13 percent while the sales price for the Central Dairy Region increased 15 percent. The slowdown, to 3 and 7 percent, in the rate of recovery from the low in 1987 may be a result of the drop in milk prices during the second half of 1990.

Figure 14 shows graphically the trend in reported sales price for both dairy regions from 1971-1991. The South Dairy Region shows the typical

Figure 13. The Minnesota Dairy Regions.



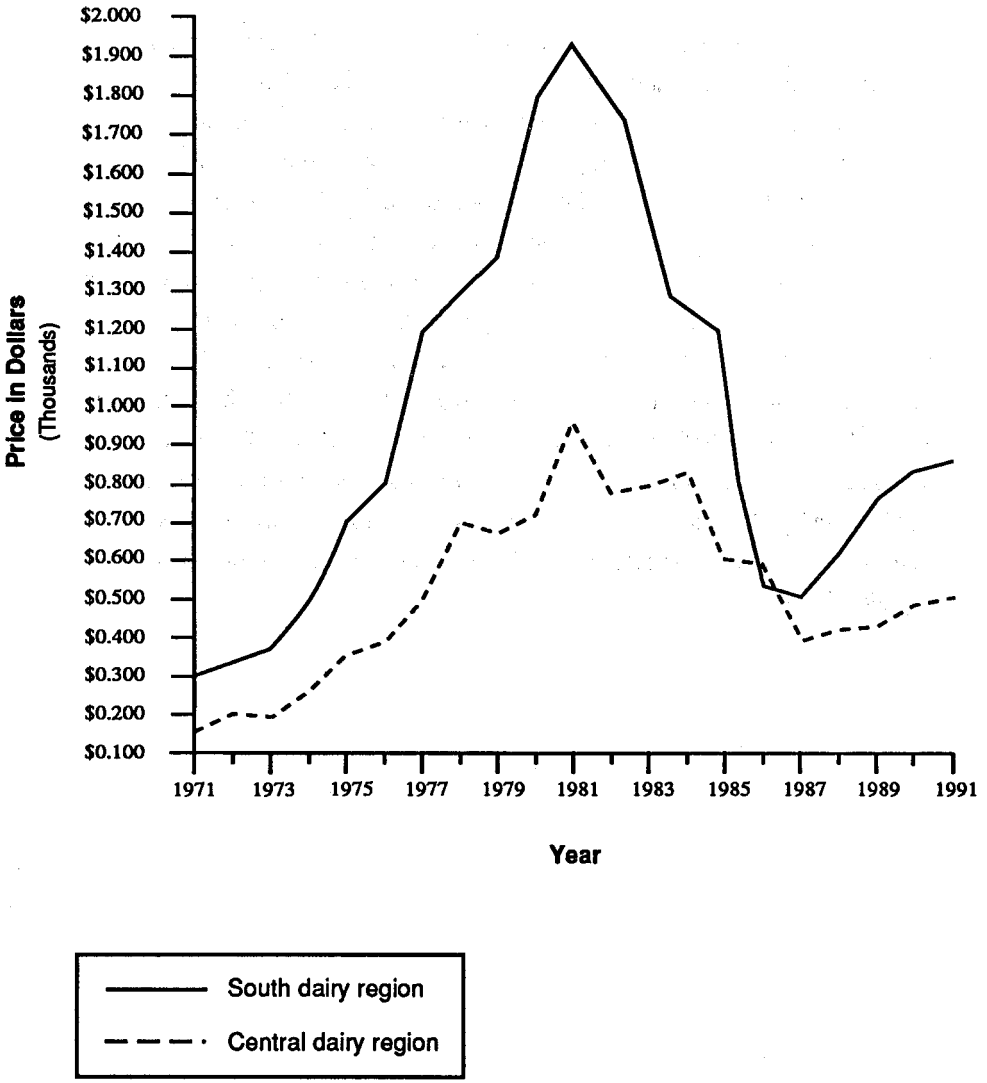
pattern for Minnesota farm land with an increase in price during the 1970's, a peak in 1981, and a subsequent decline until 1988. The prices in the Central Dairy Region, however, behaved differently. They do not exhibit the well-defined peak of the South Dairy Region in 1981. Throughout the two decades, the Central Dairy Region shows less fluctuation than does its southern counterpart. Part of the answer to this difference in sales price behavior may have to do with the relative proportions of cash crops and rented land in the two regions. The entire Central Dairy Region, except for Meeker County, lies outside of the region with a higher proportion of rented land identified in the previous section. The percentage of rented land to total land in farms is 0.20 for the Central Dairy Region and 0.30 for the South Dairy Region. As noted in the previous analysis, those counties with a higher proportion of cash crops and rented land demonstrated greater variability in sales prices through the boom and bust period. This conclusion may explain the differences in behavior of sales prices for the two dairy regions.

In addition to the trends in average reported sales price per acre, the dairy industry has become increasingly concentrated in the dairy region defined in this study. In 1974, 43.4 percent of the farms selling dairy products were located in the South and Central Dairy Regions. In 1991, 50 percent of the dairy farms were located in these two regions. The total number of farms selling dairy products, however, has decreased. Between 1974 and 1991, the number of farms selling dairy products in the South Dairy Region decreased 52 percent, while the number of dairy farms in the Central Dairy Region decreased 51 percent.

Table 22. The Minnesota Dairy Region. Price per Acre of Farm land in the South and Central Dairy Regions. 1971-1991.

	---South Dairy Region----------		----------Central Dairy Region-----	
Year	Price Per Acre	% Change Prev. Yr.	Price Per Acre	% Change Prev. Yr.
1971	294	—	154	—
1972	336	14%	195	27%
1973	398	18%	198	2%
1974	510	28%	281	42%
1975	707	39%	366	30%
1976	831	18%	415	13%
1977	1188	43%	525	27%
1978	1357	14%	732	39%
1979	1470	8%	695	- 5%
1980	1814	23%	740	6%
1981	1922	6%	979	32%
1982	1678	-13%	818	-16%
1983	1317	-22%	824	1%
1984	1220	- 7%	859	4%
1985	855	-30%	626	-27%
1986	575	-33%	623	0%
1987	539	- 6%	464	-26%
1988	717	33%	509	10%
1989	842	17%	519	2%
1990	955	13%	595	15%
1991	979	3%	635	7%

Figure 14. Price Per Acre, Minnesota Dairy Region. Reported Sales Price 1971-1991.



Statistical Appendex

When averages are used to describe the rural real estate market in Minnesota, the variation around the average is not apparent. In the statistics and special studies of this report, averages appear extensively without a corresponding variance. A greater degree of variation reduces the reliability of the reported data while a smaller variation increases the significance of the results.

Two measurements of variability are the standard deviation and the coefficient of variation. The standard deviation reveals the range, expressed in dollars, within which two-thirds of the reported sales fall. For example, in 1991 the Southwest district had an average sales price of $1,215 with a standard deviation of $364. This means that approximately two-thirds of the sales in that district fell between $851 and $1,579 per acre. The coefficent of variation is calculated by dividing the standard deviation by the average sales price and multiplying by 100. In 1991, the coefficient of variation for the Southwest district would be $364 divided by $1,215, or 0.299, and then multiplied by 100 to yield 29.9%.

Table 23: Average Estimated Value Per Acre, State and Districts, Deflated by the CPI, Minnesota, 1961-1991

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota	CPI[1] (82-84 =100)
	dollars per acre (1982-84=100)							
1961	634	829	446	319	336	215	523	29.8
1962	636	828	457	328	344	228	526	30.2
1963	636	807	466	338	374	223	528	30.5
1964	667	816	469	359	372	191	537	30.9
1965	697	831	465	357	360	162	545	31.4
1966	752	860	475	379	348	180	568	32.2
1967	792	915	492	387	326	187	586	33.1
1968	831	968	526	390	355	166	613	34.4
1969	851	967	541	403	331	149	616	36.2
1970	906	938	555	378	352	164	646	38.4
1971	965	908	535	430	361	194	659	40.2
1972	1060	949	537	431	345	186	682	41.5
1973	1145	1080	600	529	430	257	777	43.5
1974	1387	1482	832	626	555	297	1002	48.1
1975	1475	1679	1004	643	804	313	1145	53.0
1976	1776	2075	1194	726	906	393	1375	56.3
1977	2010	2359	1316	793	893	491	1516	59.9
1978	2156	2380	1395	897	961	552	1598	64.0
1979	2373	2409	1390	956	1071	509	1685	70.7
1980	2152	2363	1331	893	995	543	1586	80.7
1981	2177	2496	1415	943	1050	508	1650	89.2
1982	1808	2150	1203	775	969	429	1422	95.5
1983	1599	1789	1156	791	827	431	1256	98.7
1984	1284	1517	959	769	728	386	1068	103.0
1985	951	1012	717	505	526	277	751	106.8
1986	648	741	539	433	429	264	564	109.2
1987	611	687	472	375	419	226	519	112.6
1988	668	786	487	378	432	186	558	117.0
1989	768	873	523	334	366	203	587	122.9
1990	882	922	559	420	499	200	692	128.9
1991	812	911	526	367	376	170	63	135.3
Percent Change								
1990-91	- 8	- 1	- 6	-13	-25	-15	- 9	5

[1] U.S.Dept. of Labor Handbook of Labor Statistics

Table 24: Average Price Per Acre of Reported Farm Sales, State and Districts, Deflated by the CPI, Minnesota, 1961-1991

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
	dollars per acre (1982-84 = 100)						
1961	634	859	436	299	309	128	554
1962	649	758	467	252	245	99	533
1963	702	728	446	282	357	157	551
1964	689	757	485	278	337	168	576
1965	643	742	424	306	338	127	567
1966	786	807	509	351	320	96	630
1967	822	924	541	281	353	154	650
1968	919	956	541	302	262	137	674
1969	942	923	536	359	334	141	657
1970	901	885	536	367	294	117	633
1971	856	853	510	373	249	109	644
1972	937	882	535	349	258	183	706
1973	1021	943	513	409	276	280	685
1974	1243	1310	707	505	424	299	936
1975	1494	1592	930	564	666	300	1145
1976	1664	1982	1179	570	670	373	1306
1977	2030	2237	1184	745	721	331	1434
1978	2113	2064	1419	866	788	400	1531
1979	2369	2376	847	874	866	581	1612
1980	2276	2315	1374	747	941	489	1634
1981	2203	2248	1313	762	1030	541	1533
1982	1831	2117	1223	781	929	425	1424
1983	1489	1897	1082	688	720	332	1308
1984	1346	1610	1031	625	680	217	1226
1985	949	1106	816	478	538	208	807

Table 24: Average Price Per Acre of Reported Farm Sales, State and Districts, Deflated by the CPI, Minnesota, 1961-1991
(con't)

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
	dollars per acre (1982-84 = 100)						
1986	616	760	551	509	376	201	595
1987	552	671	438	381	299	149	496
1988	681	779	488	338	351	157	591
1989	763	874	504	331	375	154	663
1990	780	852	510	382	420	215	662
1991	812	898	535	358	339	133	659
Percent Change 1990-1991	4	5	5	- 6	-19	-38	0

Table 25: Average Price Per Acre of Reported Farm Sales, Standard Deviation and Coefficient of Variation, Minnesota and districts, 1981-1991*

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
			Average Price Per Acre (dollars)				
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
1990	1005.7	1098.1	658.4	492.1	541.9	277.0	853.0
1991	1098.1	1214.7	724.4	484.4	458.2	180.2	891.1

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
			Standard Deviation				
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
1990	412.7	449.6	269.1	230.8	318.0	173.3	450.0
1991	412.0	363.7	284.6	220.9	223.0	134.8	461.5

Table 25: Average Price Per Acre of Reported Farm Sales, Standard Deviation and Coefficient of Variation, Minnesota and districts, 1981-1991*
(con't)

Year	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
			Coefficient of Variation (percent)				
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
1990	41.0	40.9	40.9	46.9	58.7	62.6	52.8
1991	37.5	29.9	39.3	45.6	48.7	74.8	51.8

*Each acre is treated as a unit in calculating standard deviations and

Table 26: Percentage Change of Average Reported Sales Price per Acre, by Districts and Minnesota, 1980-1991

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
1989-90	7.1	2.2	6.1	20.9	17.4	46.6	4.7
1990-91	9.2	10.6	10.0	- 1.6	-15.4	-34.9	4.5

Table 27: 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 1991

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 27: 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 1991
(con't)

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	348	360	213	145	135	63	248
1971	388	365	215	173	145	78	265
1972	440	394	223	179	143	77	283
1973	498	470	261	230	187	112	338
1974	667	713	400	301	267	143	482
1975	782	890	532	341	426	166	607
1976	1000	1168	672	409	510	221	774
1977	1204	1413	788	475	535	294	908
1978	1380	1523	893	574	615	353	1023
1979	1678	1703	983	676	757	360	1191
1980	1737	1907	1074	721	803	438	1280
1981	1941	2226	1262	841	937	453	1472
1982	1727	2053	1149	740	925	410	1358
1983	1578	1766	1141	781	816	425	1240
1984	1323	1563	988	792	750	398	1100
1985	1016	1081	766	539	562	296	802
1986	708	809	589	473	468	288	616
1987	688	775	532	422	472	254	584
1988	782	920	570	442	505	218	653
1989	944	1073	643	410	450	249	721
1990	1137	1189	721	542	643	258	892
1991	1099	1233	712	497	509	230	853

Table 28: Percentage Change in Estimated Value per Acre, by District and Minnesota, 1910-1991

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 28: Percentage Change in Estimated Value per Acre, by District and Minnesota, 1910-1991
(con't)

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	13.0	2.9	8.7	- 0.7	12.5	16.7	11.2
1970-71	11.5	1.4	0.9	19.3	7.4	23.8	6.9
1971-72	13.4	7.9	3.7	3.5	-1.4	- 1.3	6.8
1972-73	13.2	19.3	17.0	28.5	30.8	45.5	19.4
1973-74	33.9	51.7	53.3	30.9	42.8	27.7	42.6
1974-75	17.2	24.8	33.0	13.3	59.6	16.1	25.9
1975-76	27.9	31.2	26.3	19.9	19.7	33.1	27.5
1976-77	20.4	21.0	17.3	16.1	4.9	33.0	17.3
1977-78	14.6	7.8	13.3	20.8	15.0	20.1	12.7
1978-79	21.6	11.8	10.1	17.8	23.1	2.0	16.4
1979-80	3.5	12.0	9.3	6.7	6.1	21.7	7.5
1980-81	11.8	16.7	17.5	16.6	15.0	3.4	15.0
1981-82	-11.1	- 7.8	-9.0	-12.0	- 8.0	- 9.5	- 7.7
1982-83	- 8.6	-14.0	-0.7	5.5	-11.8	3.7	- 8.7
1983-84	-16.2	-11.5	-13.4	1.4	- 8.9	- 6.4	-11.3
1984-85	-23.2	-30.8	-22.5	-31.9	- 25.1	-25.6	-27.1
1985-86	-30.3	-25.2	-23.1	-12.2	-16.7	- 2.7	-23.2
1986-87	-2.8	-4.3	-9.7	-10.8	0.9	-11.8	- 5.2
1987-88	13.7	18.9	7.1	4.7	7.0	-14.3	11.8
1988-89	20.7	16.6	12.8	- 7.2	-10.9	14.2	10.4
1989-90	20.4	10.8	12.1	32.2	42.9	3.6	23.7
1990-91	- 3.3	3.7	- 1.2	- 8.3	-20.8	-10.9	- 4.4

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