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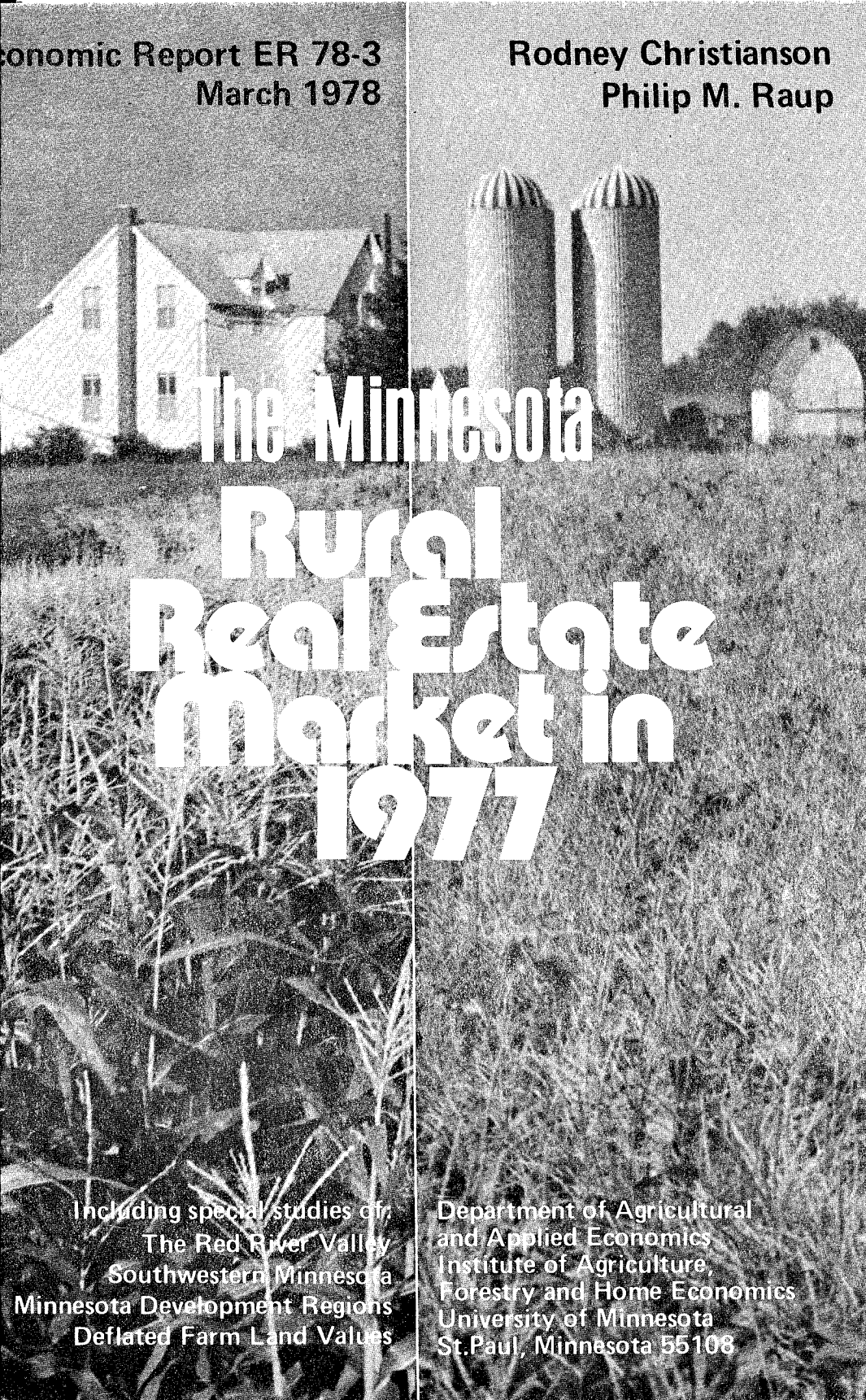

The Minnesota Rural Real Estate Market in 1977

Including special studies of:
The Red River Valley
Southwestern Minnesota
Minnesota Development Regions
Deflated Farm Land Values

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SUMMARY

The estimated statewide average value per acre of Minnesota farmland rose from $667 in July 1976 to $794 in July 1977, or 19 percent in 12 months. Although substantial, this was the smallest percentage increase of the last five years (from July to July, 1972 to 1976, increases were 20, 42, 24, and 27 percent respectively). By district, the largest percentage increases from 1972 to 1976 had been in the predominantly grain farming western half of the state. This pattern reversed in 1977, with the largest percentage increases in the eastern half where livestock farming, urban, residential, and recreational land uses predominate. Activity in the market was slightly higher than in 1976 but well below the high levels of 1973-75.

Farm expansion buyers dominated the market, accounting for 63 percent of all sales statewide, and 77, 67, and 68 percent of sales in the Southwest, West Central and Northwest districts. Further evidence of the importance of expansion buyers is given by the fact that, statewide, 67 percent of all buyers lived less than ten miles from the tracts they purchased; in the Southwest and West Central districts the figures were 79 and 71 percent, respectively.

Death and retirement accounted for 53 percent of all decisions to sell. Land contracts were used to finance 56 percent of the sales, mortgages for 28 percent and cash sales were 16 percent of the total.

The largest percentage increase in 1977 was for good quality land (26 percent), while prices for poor quality land showed a slight decline of 2 percent. This discrimination between good and poor quality land is evidence of increasing buyer resistance.

In the Red River Valley, land market activity in 1977 was sharply lower with the smallest number of reported sales of any year in the past decade. Although land prices increased six percent, this was one of the smallest increases for any area of the state. From 1973 to 1976 the annual land price increases in the Valley had been 79, 49, and 37 percent, the largest percentage increases for any district. These years witnessed a dramatic increase in the price of wheat relative to corn, which reached a peak in 1973-74. By 1977 this price advantage for wheat had been erased, with the relative prices of the two grains returning to the approximate levels that prevailed prior to 1972. When coupled with the fall in sugar prices after 1974, these commodity price movements explain much of the weakness in the Red River

Valley land market in 1977.

In West Central Minnesota, the drought of 1976 combined with low grain prices in 1976-77 had a similar depressing effect on land prices. In a group of nine west central counties subjected to high climatic risk, land prices in 1977 increased only one percent, while prices in a block of nine south central counties with low climatic risk increased 21 percent. The principal evidence of weakness in the land market was exhibited by prices paid in the high-risk counties for poor-quality farmland, which declined 7 percent from 1976 to 1977, while prices for good quality land in the same high risk counties increased 18 percent.

A better perspective on the magnitude of the increase in farmland prices since 1972 is provided by a comparison of land price trends with prices received by farmers, and with trends in the national consumer price index for food items at retail. When measured in current dollars, the estimated value of Minnesota farm land more than tripled in the five years 1972-77 ($248 to $794 per acre). When deflated by prices received by farmers or by the consumer price index for food items, the increase from 1972 to 1977 represented slightly more than a doubling in relative values.

The significance of recent trends in the market for long term investments providing maximum security is revealed by a comparison of Minnesota farmland prices with the yields on U.S. Government Bonds. From 1957 to 1972 the trends in land prices and bond yields were in close correspondence. From 1972 to 1976 land prices rose rapidly in comparison to bond yields. In 1977 this relationship reversed, with the index of Minnesota farmland prices deflated by the yield on government bonds showing a sharp downturn. This suggests that farmland as an investment has lost some of the glamour that characterized the 1972-76 period.

PROCEDURE

Data for the Minnesota Rural Real Estate Market Report in 1977 were collected through the use of mail questionnaires sent to 1700 individuals during the months of July and August 1977. Potential respondents included real estate brokers, agricultural loan specialists, bankers, and other people knowledgeable of farm land values in Minnesota.

The questionnaire was expanded in 1974 to include a third section dealing with rural land sales primarily for non-farm use. However, this report deals mainly with rural land sales and values in agricultural use. In the first section respondents were asked to estimate an average value for farm land, with separate estimates for land of high, medium and low quality in their area. These estimates were used to calculate percentage changes in land values during the past year. This was done by (1) weighting the average estimated value per acre of all respondents in a county by the number of acres of farm land in their county; (2) adding these values county by county for each district; and (3) dividing this total for all counties in a district by the total acreage of farm land in that district. In making comparisons with 1976, only estimates of the respondents who had answered in both 1976 and 1977 were used. On the basis of this rather rigorous restriction, a total of 590 estimates were usable.

The second section of the questionnaire requested data on actual farm sales. Reports were obtained on a total of 1332 sales. Data were supplied on type of buyers and sellers, method of financing, and quality of land and buildings. Reporters were requested not to include sales between close relatives or sales of less than 10 acres when filling out this part of the questionnaire.

Three types of agricultural buyers are distinguished in this report:

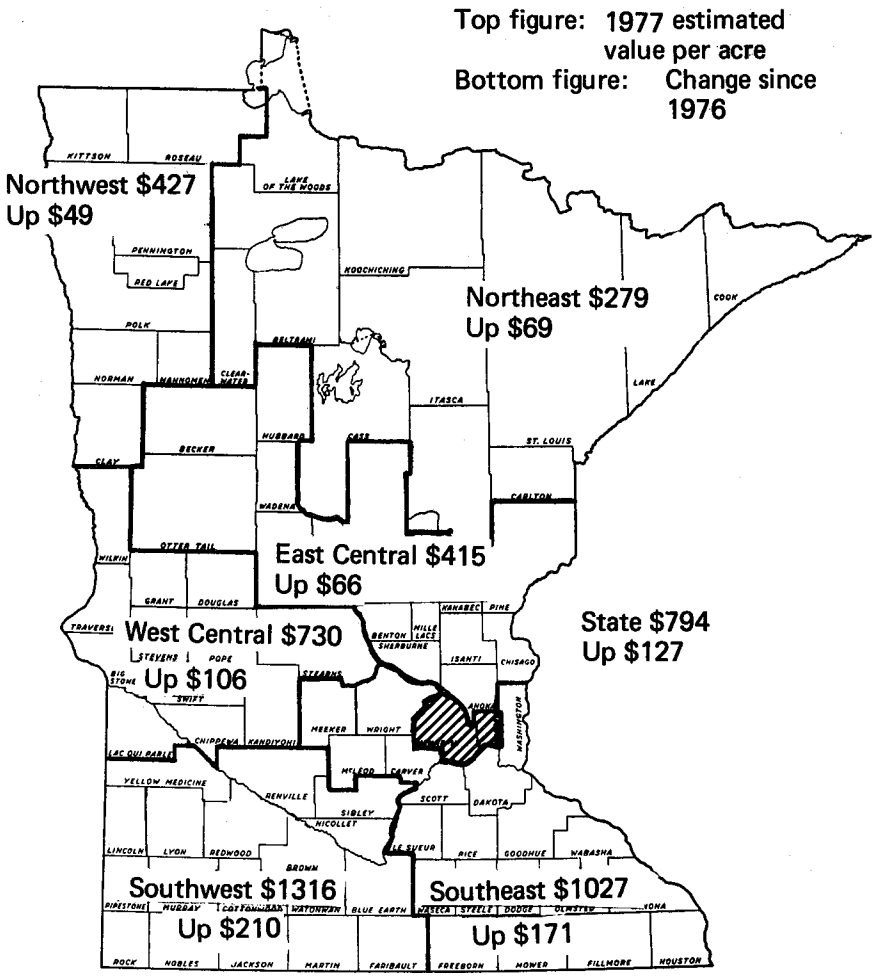
1. Operating farmers: Those buying complete farm units for operation as individual farms.
2. Expansion buyers: Those who already own some farm land either as farmers or landlords.
3. Agricultural investors: Those who buy farm land to be rented out or managed for farming purposes.

The distinction between improved and unimproved land is determined by the presence of buildings. Land with buildings is classified as improved

land. Land with no buildings is unimproved. The quality of land for farming purposes is judged good, average, or poor by the respondents. Also building quality is rated as good, average, poor, or none by the respondents.

Land value changes determined by the estimate method have definite advantages over value changes based on reported sales. The quality of land and buildings has a marked effect upon land value and these factors can vary significantly from year to year and from sale to sale. The estimate method holds these factors constant, but memory bias is a problem. For this reason, only reports from respondents who report for at least two consecutive years are used in constructing the estimates of value.

Figure 1: Estimated Average Rural Land Values From Reporter's Estimates*



*Hennepin and Ramsey Counties excluded.

PART I: THE MINNESOTA FARM LAND MARKET IN 1977

A. Land Market Trends

Reporters' Estimates

The estimated statewide average value of farmland in Minnesota in (July) 1977 was $794 per acre (Table 1), an increase of $127 per acre or 19 percent over 1976. While still substantial, this is the smallest annual percentage increase since 1972 and reflects some slowdown in the farmland market in several regions of the state. The annual increases in farmland values from 1972 to 1976 were 20, 42, 24, and 27 percent respectively (Table 2). Several trends in land market activity that were prominent in 1974 and intensified in 1975 and 1976, softened and even shifted direction in 1977. For example, the reported sales price per acre of poor farmland declined in 1977, and the average price paid for improved land (with buildings) was once again higher than that paid for farmland without buildings (see the next section-analysis of reported sales). Overall, farmland values have more than tripled since grain prices moved significantly upward in late 1972 following the Russian wheat purchases ($794 in 1977 vs. $248 in 1972, Table 1).

During the 1970's two distinct land market regional groupings have emerged. In general, the three eastern districts—the Northeast, East Central, and Southeast—are most strongly influenced by urban, residential, and recreational land uses, and are more dependent upon livestock agriculture than the three western districts. Throughout the 1960's and to July 1972, the largest annual percentage increases in farmland values typically occurred in these three livestock and urban-oriented districts (Table 2). Over the next three years this trend was completely reversed as estimated farmland values rose substantially in the Southwest, West Central, and Northwest districts (ranging from 19 to 53 percent each year during 1973-1975).

In the three western districts cash crops dominate land use. Prices received by farmers for cash crops (corn, soybeans, wheat, barley, sugar beets) were remarkably stable until late 1973. After the Russian grain purchases, grain prices jumped dramatically upward, to be followed by sugar beets in mid-1973. These higher crop prices were quickly capitalized into higher farmland prices. Many farmers used their record incomes to buy additional land to expand the size of their holdings, thus putting further upward pressure on farmland prices. By 1975, farmland values rose by more

Table 1: Estimated Average Value Per Acre of Farm Land by District, Minnesota, 1967-1977.*

Years	South-east	South-west	West Central	East Central	North-west	North-east	Minn.
			—dollars per acre—				
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

*Based on reporters' estimates of average value per acre of farm land in their area.

Table 2: Annual Percentage Changes in Estimated Farm Land Value Per Acre, by District, Minnesota 1971-1977.

District	-----Percentage Change from July to July-----					
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
			—percent—			
Southeast	11	17	33	17	27	20
Southwest	8	21	47	25	31	19
West Central	2	19	53	33	24	17
East Central	5	19	44	6	18	19
Northwest	-2	25	36	48	28	13
Northeast	20	51	25	13	29	33
Minnesota	7	20	42	24	27	19

than the statewide average in the three western districts (25 to 48 percent) while farmland values increased by notably less than the statewide average (6 to 17 percent) in the eastern districts where livestock farming and urban, residential, and recreational land uses are prominent (Table 2).

By districts, the percentage increases in estimated farmland values for 1976-77 continue a readjustment in this regional balance that was first evident in 1976 (Figure 1). As Table 2 reveals, the higher percentage increases in 1977 took place in the livestock, urban, and recreationally oriented eastern districts (19 to 33 percent) while smaller increases occurred in the three western districts where cash crops dominate (13 to 19 percent). This slowdown in farmland value increases in the western districts is apparently associated with the downward movement of cash grain and sugar beet prices over the last two years along with recent drought conditions that were especially severe in parts of western Minnesota.

During the last decade the estimated value of Minnesota farmland has quadrupled, from $194 to $794 per acre. As Table 3 points out, this 309 percent increase has not been evenly distributed through time or over space. In the second half of the decade (1972-77) Minnesota farmland values more than tripled from $248 to $794 per acre, with over nine-tenths of the last decade's actual dollar increase occurring after 1972. A spatial breakdown of farmland value changes over the 1967-77 period reveals the same regional pattern discussed above. The eastern districts, where livestock production and urban and recreational demands are prevalent, dominated the first half of the decade while the western cash grain districts experienced greater percentage increases in the second half. It is interesting to note from Table 3 the uniform dollar differences in farmland values among the five more agricultural districts. Excluding the basically non-agricultural Northeast, there is a uniform $300 per acre differential as one moves from the most valuable farmland area, the Southwest, to the lower valued areas (from $1316 to $1027 to $730 to $427 and $415).

Table 3: Percentage Change in Estimated Farm Land Value Per Acre, by District, Minnesota, 1967-77, 1967-72, 1972-77, and 1976-1977.

District	Estimated 1977 Value Per Acre	-----Percent Change----- 1967-77	1967-72	1972-77	1976-77
	-dollars-		-percent-		
Southeast	1027	292	41	178	20
Southwest	1316	334	25	247	19
West Central	730	348	28	251	17
East Central	415	224	27	155	19
Northwest	427	295	8	265	13
Northeast	279	350	23	267	33
Minnesota	794	309	28	220	19

Actual Sales

Information was received on 1332 farm sales in the first six months of 1977. The statewide average reported sales price for farmland was $859 per acre (Table 4). This represents a 17 percent increase over the 1976 average sales price and is consistent with the slowdown indicated above for estimated farmland values when compared to the three previous years. The regional shift in land market activity toward the more livestock, urban, and recreationally oriented Southeast and East Central districts, evident above in the estimated values, is even more pronounced in the reported sales data. The average sales price rose by 30 and 39 percent in these two eastern districts, while the increase was 20 percent or less in the three western districts, where cash grain crops dominate land use. Among the five most agricultural districts, the percentage rise was smallest in the West Central, a district hit hard by both drought conditions and falling crop prices over the last two years (7 percent, Table 4, see also Part III).

The huge percentage increases in average sales price in the Southeast and East Central (30 and 39 percent), 1976-1977, can be explained in part by a disproportionately larger number of sales of high-priced land in these districts in 1977 compared to 1976. To remove the effect of this shift in the location of sales activity from lower priced to higher priced land, an adjusted sales price per acre was computed for each district to eliminate the effect of changes in the geographic distribution of acres sold between 1976 and 1977. The results, summarized in Table 5, show that the adjusted percentage changes in sales price were significantly smaller than the unadjusted changes

Table 4: Average Estimated Value Per Acre of Farm Land Compared with Prices Received in Actual Sales, by District, Minnesota, 1976-1977.

District	1976		1977		Percent Changes Over 1976	
	Estimated Value	Sales Price	Estimated Value	Sales Price	Estimated	Actual
	—dollars per acre—				—percent—	
Southeast	856	937	1027	1216	20	30
Southwest	1106	1116	1316	1340	19	20
West Central	624	664	730	709	17	7
East Central	349	321	415	446	19	39
Northwest	378	377	427	432	13	15
Northeast	210	210	279	198	33	-6
Minnesota	667	735	794	859	19	17

Table 5: Comparison of Average Sales Prices by District, 1976 and 1977, Adjusted to Remove the Effect of Shifts in the Geographic Distribution of Sales

District	Average Price Per Acre From Reported Sales		Adjusted Price Per Acre*	Percent Change in Sales Prices July 1976–July 1977	
	1976	1977	1977	Reported Sales	Adjusted to 1976 Volume*
	$	$	$	%	%
Southeast	937	1216	1156	30	23
Southwest	1116	1340	1334	20	20
West Central	664	709	714	7	8
East Central	321	446	423	39	32
Northwest	377	432	413	15	10
Northeast	210	198	226	-6	8
Minnesota	735	859	869	17	18

*The adjusted price per acre was computed as follows: For each county, the average price per acre from reported sales in 1977 was applied to the acres sold in 1976. The results were summed for each district and divided by total acres sold in that district in 1976. The adjusted price thus eliminates the effect of changes in the geographic distribution of acres sold between 1976 and 1977.

in the Southeast, East Central, and Northwest districts (23 vs. 30 percent, 32 vs. 39 percent, and 10 vs. 15 percent, respectively). The opposite geographic shift in sales activity (from higher-priced land to lower-priced land) occurred in the Northeast in 1977 since the adjusted percentage change in sales price was bigger than the unadjusted change in this district. (8 vs. -6 percent, Table 5).

The average reported sales price for individual districts ranged from $198 per acre in the Northeast to $1,340 per acre in the Southwest (Table 6). The 39 percent increment experienced in 1977 in the East Central district was substantial enough to place this district's average sales price ($446 per acre) above that now found in the Northwest ($432 per acre), thus reversing the trend of the previous two years (Table 6, see Part II). Regarding the two southern districts of the state, in the five year period prior to 1974 land in the Southeast sold for more than farmland in the Southwest. By 1976 the difference between the two southern districts had grown substantially ($179 per acre) but in 1977 this gap has once again narrowed to an average of $124 per acre. As a result of these two developments, the greatest percentage increases in actual sales prices over the last ten years (1967-1977) have occurred in the East Central and Southeast districts (380 and 347 percent, respectively, Table 7).

Table 6: Average Reported Sales Price Per Acre of Farm Land, by District, Minnesota, 1967-1977*

Years	District: South-east	South-west	West Central	East Central	North-west	North-east	Minn.
			—dollars per acre—				
1967	272	306	179	93	117	51	215
1968	316	329	186	104	90	47	232
1969	341	334	194	130	121	51	238
1970	346	340	206	141	113	45	243
1971	344	343	205	150	100	44	259
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	664	321	377	210	735
1977	1216	1340	709	446	432	198	859

*Based on reported farm sales, January 1 to July 1 of each year.

Table 7: Percentage Changes in Sales Price Per Acre, by District, Minnesota, 1967-77, 1967-72, 1972-77, and 1976-77.

District	Sales Price Per Acre in 1977	Percent Change: 1967-77	1967-72	1972-77	1976-77
	-dollars-		-percent-		
Southeast	1216	347	43	213	30
Southwest	1340	338	20	266	20
West Central	709	296	24	219	7
East Central	446	380	56	208	39
Northwest	432	269	-9	304	15
Northeast	198	288	49	161	-6
Minnesota	859	300	36	193	17

Activity in the Land Market

The U.S. Department of Agriculture has estimated that voluntary sales numbered 31.6 per 1,000 farms in Minnesota for the year ending February 1, 1977 (Table 8). This represents an 8 percent rise from 1976 and is consistent with the increased number of sales reported in this survey, particularly in the Southwest district (Table 9). However, the volume of sales activity is still significantly less than the 1974 record high of 47.7 voluntary transfers per 1,000 farms. Notably, the number of forced sales (foreclosures and tax delinquency) is again at a record low of 0.3 per thousand farms (three per

Table 8: Estimated Number of Farm Title Transfers Per Thousand Farms, by Methods of Transfer, Year Ending February 1, Minnesota 1962-1977.

Years	Voluntary Sales	Forced Sales (Foreclosures, Tax)	Inheritance, Gifts, and all Other Transfers	Total all Classes
1962	29.3	1.9	10.4	41.6
1963	24.1	1.9	10.1	36.1
1964	30.6	3.2	12.4	46.2
1965	29.7	2.8	10.6	43.1
1966	35.5	2.1	14.9	52.5
1967	37.5	1.4	14.2	53.1
1968	38.1	2.4	9.8	50.3
1969	33.5	2.0	11.8	47.3
1970	31.8	2.2	9.6	43.6
1971	36.1	2.2	10.4	48.7
1972	34.7	1.6	9.6	45.9
1973	42.3	2.4	11.9	56.6
1974	47.7	1.1	11.1	59.9
1975	37.4	0.3	10.0	47.6
1976	29.3	0.6	9.5	39.5
1977	31.6	0.3	9.7	41.6

Source: "Farm Real Estate Market Developments", CD-82, Economic Research Service, USDA, July 1977.

ten thousand) as was true in 1975. Statewide, the average size of tract sold dropped from 183 acres/sale in 1976 to 178 acres/sale in 1977 (Table 9). Over the past five years this decline has been fairly uniform in all the districts except the East Central and Northeast. This is to be expected since farm expansion buyers do not dominate in these two districts as they do in the other four agricultural districts of the state (see Table 16).

During the 1974-1976 period, there was apparently a decrease in the supply of farm tracts offered for sale. Evidence for this smaller supply is presented in Table 10, showing that the percentage of reporters indicating a decline in the number of farm tracts listed for sale with brokers increased notably for the survey period (January 1—July 1) in 1974 relative to the same period in 1973. This reduction in the number of listed farm tracts continued into the next two years as indicated by the increased percentages in the "changed little" columns for 1975 and 1976 relative to the corresponding 1974 column (Table 10). Consequently, a decreased supply of farm tracts offered for sale together with a strong demand for farmland (especially by expansion buyers) during 1974-1976 resulted in the record increases in farmland values for this period. In 1977, demand for farmland appears to have weakened due to declining cash grain prices and fewer expansion buyers. This alone would result in a slow-down in farmland value increases. The farmland market may also be experiencing an increase in the supply of farm tracts being offered for sale. Evidence of this larger supply comes from Tables 8, 9, and 10. Tables 8 and 9 both show a rise in the number of voluntary sales in 1977 while Table 10 reveals that the percentage of reporters indicating an increase in the number of farm tracts listed for sale with brokers rose in all six districts in 1977 relative to the same period in 1976.

During the 1970's the proportion of sales involving real estate brokers or agents has generally declined in the three western cash grain districts (Table 11). Two reasons for this decline have emerged from this study. First, respondents have commented upon the growing number of auction sales in these districts. Second, the percentage of purchases for farm expansion reached record levels over this period in the Southwest, West Central, and Northwest districts (see Table 16). These purchases are typically made from neighbors and often do not involve the services of a real estate broker or agent. Broker participation, 1971-1977, remained about the same or increased in the urban, residential, and recreationally-oriented eastern districts (Table 11). This is probably due to the larger proportion of urban buyers who have purchased farmland in the Southeast, East Central, and Northeast districts for investment, residential, and recreational purposes. Statewide, there has virtually been no change in broker participation in farmland sales, 1971-1977, with the exception of a small increase in 1974.

Insert Tables 8, 9, 10 and 11

Table 9: Number of Reported Sales, Acreage of Land Sold and Average Acres Per Sale, by District, Minnesota. January 1—July 1, 1975-1977.

District	No. of Sales*			Acres Sold			Acres/Sale		
	1975	1976	1977	1975	1976	1977	1975	1976	1977
Southeast	433	377	324	67,934	64,683	44,426	157	172	137
Southwest	402	347	431	65,387	52,079	64,696	163	150	150
West Central	228	227	231	46,032	50,377	44,691	202	222	193
East Central	188	187	161	33,074	27,181	25,952	176	145	161
Northwest	132	132	120	36,615	38,202	35,351	277	289	295
Northeast	46	44	65	7,339	8,274	21,939	160	188	338
Minnesota	1,429	1,314	1,332	256,381	240,796	237,055	179	183	178

*These sales should not be interpreted as a record of total farm land transactions for the years indicated. The majority of farm land sales occur in the first half of the calendar year, which explains the choice of the Jan. 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 above.

Table 10: Proportion of Reporters Indicating Changes in Number of Farm Tracts Listed for Sale with Brokers, by District, Minnesota, 1973-1977.

District	Percentage Indicating Listing Had Increased					Decreased					Changed Little				
	1973	1974	1975	1976	1977	1973	1974	1975	1976	1977	1973	1974	1975	1976	1977
	-percent-														
Southeast	18	6	4	4	7	30	40	38	26	24	52	53	58	70	69
Southwest	6	4	5	7	8	38	37	30	23	19	55	59	65	70	72
West-Central	12	4	8	13	15	27	41	28	21	33	61	55	64	66	52
East-Central	8	16	13	11	16	33	30	19	23	16	60	55	68	66	69
Northwest	4	4	4	8	10	38	44	15	12	14	58	52	81	81	76
Northeast	5	10	17	14	17	19	24	7	14	17	76	67	77	73	65

Table 11: Estimated Proportion of Farm Land Sales in which Brokers or Dealers Participate, Minnesota, by District, 1971-1977.

District	Sales With Broker's Services							Change
	1971	1972	1973	1974	1975	1976	1977	1971-1977
	-percent-							
Southeast	58	59	58	61	58	58	57	-1
Southwest	55	52	51	54	47	48	48	-7
West Central	55	56	54	53	52	50	50	-5
East Central	53	54	58	55	60	56	59	+6
Northwest	42	40	40	40	34	37	42	0
Northeast	47	50	46	58	54	57	57	+10
Minnesota	52	52	51	54	51	51	52	0

B. Analysis of Reported Sales

Reason for Sale

Retirement is the most frequent reason for selling farm land in Minnesota, accounting for about two-fifths of all decisions to sell in 1977 (Table 12). Over the past five years the number of sellers who left farming for another job has generally declined from over 20 percent to the present 15 percent. Departures from farming are still substantial in the East Central district (29 percent of all sales, Table 12), where agriculture is heavily dependent upon milk and livestock production. A significant change from previous years occurred in the West Central district, where sales due to exit from agriculture doubled from 8 percent in 1975 to 17 percent in 1977, perhaps another reflection of drought conditions and falling crop prices during this period. The "other" category, with 23 percent of sales in the state, includes such reasons as ill health, divorce, financial problems, and sales by speculators.

Table 12: Reason for Selling Land, by District, Minnesota, 1977.

Reason for Sales	South-east	South-west	West Central	East Central	North-west	North-east	Minn.
				-percent-			
Death	17	22	8	9	8	9	15
Retirement	40	36	34	36	43	48	38
Left Farming	16	10	17	29	16	11	15
Moved, Still Farming	7	8	12	9	8	11	9
Other	20	24	29	16	25	20	23

Improved and Unimproved Land

Improved land (that with buildings) accounted for only 60 percent of 1977 Minnesota farm sales. This proportion has been steadily declining since the 1960's when improved land consistently made up 80 percent or more of all sales (Table 13). Among the districts, there are the two familiar regional groupings. The three western cash grain districts, the Southwest, West Central, and Northwest, all had porportions of improved land transactions well below the statewide average. The three less agricultural eastern districts had proportions of improved land sales significantly above the average. (Table 13). This illustrates the major motivation for land purchase in the cash grain areas, which has been for farm expansion through acquisition of land without

buildings. Fewer farmers have increased the size of their holdings in the Southeast, East Central, and Northeast districts, and the demand for land with buildings for residential purposes has been stronger in these districts.

Prior to 1974 unimproved land prices consistently averaged 80 percent of prices paid for improved land (Table 14). In 1975 and 1976 this statewide trend was reversed and unimproved farmland sold for more than improved land in the three western district (Table 15), where farm expansion buyers placed a greater value on land without buildings than did other buyers. In 1977 the trend shifted again, for both the statewide average and regional groupings. Once more unimproved land prices averaged significantly less than the prices paid for improved land ($782 vs. $899, or 87 percent, Table 14). Among the districts, the absence of buildings is now associated with higher farmland prices in two of the eastern districts—the East Central and Northeast (Table 14).

Table 13: Proportion of Improved and Unimproved Land Sales, by District, Minnesota, 1967, 1976, and 1977.

District	Improved Land			Unimproved Land		
	1969	1976	1977	1969	1976	1977
	-percent-			-percent-		
Southeast	83	69	67	17	31	33
Southwest	81	57	55	19	43	45
West Central	73	66	58	27	34	42
East Central	80	76	75	20	24	25
Northwest	67	47	37	33	53	63
Northeast	80	80	63	20	20	37
Minnesota	79	65	60	21	35	40

Table 14: Average Sales Price Per Acre of Improved and Unimproved Farm Land, by District, Minnesota, 1976 and 1977.

District	Improved Land		Unimproved Land		Price of Unimproved Land as a Percent of Price of Improved Land	
	1976	1977	1976	1977	1976	1977
	-dollars per acre-				-percent-	
Southeast	950	1230	883	1167	93	95
Southwest	1069	1420	1213	1219	113	86
West Central	672	736	640	664	95	90
East Central	327	445	293	448	90	101
Northwest	332	512	438	360	132	70
Northeast	230	192	100	212	43	110
Minnesota	729	899	753	782	103	87

Table 15: Price Differential Between Improved and Unimproved Land Sold, Minnesota, 1967-1977.

Year	Improved Land	Unimproved Land	Difference	Price of Unimproved Land as a Percent of Price of Improved Land
	-dollars per acre-			-percent-
1967	222	177	45	80
1968	248	166	82	67
1969	245	206	39	84
1970	254	200	54	79
1971	271	207	64	76
1972	308	236	72	77
1973	317	234	83	74
1974	454	438	16	96
1975	605	613	-8	101
1976	729	753	-24	103
1977	899	782	117	87

Type of Buyer

Agricultural buyers are grouped into three classes in this survey, as follows: Operating farmers who buy complete farm units as owner-operators; farm expansion buyers, who may be operating farmers or investors increasing the size of their holdings; and agricultural investor buyers, who are non-farmers who have bought land to be rented out or managed for farming purposes (this land is not being used to expand the size of farms already owned). Over the five-year period 1969-1973 each class of buyers maintained its relative land market share at a remarkably constant proportion. For the state as a whole, the proportion of sales in those years to operating farmers, expansion buyers, and agricultural investors averaged 30, 53, and 17 percent, respectively. A significant shift occurred in the proportion of farmland sold to these three classes of buyers in 1974, and it intensified over the next two years. By 1976 expansion buyers accounted for 65 percent of all farm tracts purchased in Minnesota, while sales to both operating farmers and agricultural investors declined proportionately (Table 16). By districts, farm expansion buyers overwhelmingly dominated the land market in the three western cash grain areas with 79, 75, and 72 percent of the 1976 sales in the Southwest, Northwest, and West Central, districts, respectively.

In 1977, there has been a slight shift away from expansion buying statewide, particularly in the West Central, East Central, and Northwest districts (Table 16). However, in the West Central and Northwest districts, it should be emphasized that expansion buyers are still involved in two out of every three sales (67 and 68 percent, respectively). Operating farmer buyers continue to predominate in the East Central and Northeast, two districts associated with a larger proportion of part-time and "hobby" farms. Statewide, agricultural investors reversed a five-year decline in their market share of farmland purchases in 1977, with increases in all districts except the West Central (Table 16).

Table 16: Proportion of Tracts Purchased by Type of Buyer, by District, Minnesota, 1975, 1976, and 1977.

	Operating Farmer Buyer (Sole Tract)			Farm Expansion Buyer (Operator or Investor)			Agricultural Investor Buyer (Sole Tract)		
District	1975	1976	1977	1975	1976	1977	1975	1976	1977
					-percent-				
Southeast	25	22	20	55	64	63	20	14	18
Southwest	16	12	11	72	79	77	11	9	11
West Central	20	18	23	67	72	67	13	10	10
East Central	48	49	54	37	36	30	15	15	16
Northwest	15	15	12	75	75	68	10	11	20
Northeast	62	70	40	20	14	32	18	16	29
Minnesota	25	23	22	60	65	63	15	12	15

More evidence of a slow-down in the Minnesota land market in 1977 can be obtained by separating out the average sales price per acre by type of buyer (Table 17). Statewide, investor buyers paid less on the average in 1977 for farmland than they did in 1976 ($582 in 1977 vs. $592 in 1976). These slightly lower prices together with an increased market share for investor buyers in 1977 may indicate a future softening of prices paid by other buyers as well. Expansion buyers led all other buyers in average price paid in 1977, both statewide and in all districts except the Northeast. However, the price differentials were small in the eastern livetsock and urban oriented districts and much larger in the western cash grain districts. For operating farmers, the statewide average price paid per acre rose by twenty-two percent over 1976 (694/$569) which is the same percentage increase for expansion buyers ($1018/$831, Table 17).

Table 17: Average Sales Price Per Acre by Type of Buyer, by District, Minnesota, 1975, 1976, and 1977.

District	Operating Farmer			Expansion Buyer			Investor Buyer (Agricultural)		
	1975	1976	1977	1975	1976	1977	1975	1976	1977
	-dollars per acre-								
Southeast	725	963	1269	835	993	1280	745	737	1023
Southwest	668	894	1117	936	1187	1392	639	833	1160
West Central	434	607	649	551	686	743	334	624	667
East Central	294	300	460	318	366	463	249	298	364
Northwest	215	305	449	417	425	536	232	275	264
Northeast	162	213	233	151	206	216	164	204	135
Minnesota	495	569	694	690	831	1018	493	592	582

Land and Building Quality

Land of good and average quality increased in price by 26 and 24 percent over 1976, to $1187 and $813 per acre, respectively (Table 18). Statewide, good quality land has consistently sold for more than twice the price of poor quality land since 1974, and in 1977 this trend was strengthened ($1187 vs. $438 per acre for poor land). The noteworthy market shift in 1977 concerns the relative changes in sales price among the various land quality categories. For 1975-76, poor quality land experienced a larger percentage rise in price per acre than did land rated good or average in quality (26 percent vs. 22 and 16 percent, respectively). This had not occurred in the Minnesota farmland market since 1971. For 1976-77, the average price paid for land of poor quality fell from $449 to $438 per acre (Table 18). In the past, a decrease in the sales price of poor quality land has been associated with the beginning of an overall slow-down or decline in the entire farmland market.

Table 18: Proportion of Sales and Price Paid Per Acre for Land of Various Quality, Minnesota, 1975, 1976, and 1977.

Land Quality	Proportions			Price Per Acre			Change in Price	
	1975	1976	1977	1975	1976	1977	1975-76	1976-77
	-percent-			-dollars per acre-			-percent-	
Good	37	39	38	771	941	1187	22	26
Average	48	46	48	565	655	813	16	24
Poor	15	15	14	357	449	438	26	-2
All	100	100	100	607	735	859	21	17

As was true in the last two years, farm expansion buyers in 1977 paid substantially more than other buyers for all land, regardless of land quality (Table 19). Before 1975, expansion buyers generally paid less than other

types of buyers for poor land, while agricutlural investors consistently outbid all other buyers for land of good and average quality. In 1977 investor buyers were willing to pay more than operating farmers for only one quality category-good land ($1075 vs. $856, Table 19). They paid substantially less for poor land, compared both to other buyers ($252 vs. $546 and $411 per acre) and to their purchases in 1976, ($252 vs. $351 per acre). In addition, the proportion of poor quality land purchases by investors dropped significantly from previous years (to 18 percent in 1977 compared to 24, 25, and 31 percent in 1976, 1975, and 1974, respectively). At the beginning of an overall land market decline, one might reasonably expect the first signals of a down-turn to come from poor quality land sales and from investor buyers, who have alternative investment opportunities.

Table 19: Proportion of Purchases and Price Paid Per Acre by Type of Buyer for Land of Various Quality, Minnesota, 1976 and 1977.

Type of Buyer	Land Quality											
	Good				Average				Poor			
	1976		1977		1976		1977		1976		1977	
	%	$	%	$	%	$	%	$	%	$	%	$
Operating Farmer	32	670	40	856	54	575	47	643	14	354	13	411
Expansion Buyer	44	1030	40	1335	42	713	46	942	14	535	14	546
Agricultural Investor	24	860	24	1075	52	595	58	642	24	351	18	252
All	39	941	38	1187	46	655	48	813	15	449	14	438

Before 1974, land without buildings consistently sold for less than land with buildings, in spite of their quality. This trend was altered in 1974 and further intensified in 1975 and 1976 when land without buildings sold for notably more than land with either poor or average quality buildings. As mentioned previously, this was chiefly due to the dominance of expansion buyers in the land market who placed a higher value on land without buildings than did other buyers. In 1977, this trend shifted direction toward the pre-1974 price pattern. Land without buildings again sold for less than land with average quality buildings and brought about the same price as land with poor quality buildings ($795 vs. $791 per acre, Table 20). Farm expansion buyers continued to pay considerably more than did other buyers regardless of building quality. The significance of building quality still varies widely among classes of buyers when proportion or purcahses is considered. While 72 percent of purchases by operating farmers included buildings of good or average quality, only 34 percent of purchases by expansion buyers had average or better buildings (Table 20).

Table 20: Proportion of Purchases and Price Paid Per Acre by Type of Buyer for Land with Various Quality of Buildings, Minnesota, 1977.

Type of Buyer	Building Quality: Good		Average		Poor		None	
	%	$	%	$	%	$	%	$
Operating Farmer	31	835	41	619	14	531	14	726
Expansion Buyer	11	1372	23	1048	17	1033	49	877
Agricultural Investor	15	826	26	749	16	360	43	545
All	16	1065	27	872	16	791	40	795

Method of Financing

Use of contracts for deed (or land contracts) to finance Minnesota farmland transfers increased gradually from the mid-1950's to the mid-1970's, reaching an all time high in 1974 of 60 percent of purchases (Table 21). Mortgage sales dropped to 24 percent by 1974, the lowest proportion ever reported in this survey. Since 1974 mortgage financing has risen statewide (to 28 percent in 1977) while contract for deed sales have fallen to 56 percent and cash sales have remained steady at 16 percent (Table 21). The various proportions regarding method of financing are most stable from year to year in the more agricultural Southwest and West Central districts while considerable annual variation exists in the other four districts.

Table 21: Proportion of Farm Sales by Method of Financing, By District, Minnesota, 1964, 1974-1977.

Method of Financing	District: South-east	South-west	West Central	East Central	North-west	North-east	Minn.
				-percent-			
Cash							
1964	19	17	16	30	24	36	20
1974	12	15	13	24	22	28	16
1975	12	16	13	15	18	30	15
1976	12	16	15	23	18	16	16
1977	16	15	16	17	14	19	16
Mortgage							
1964	29	42	46	30	31	37	36
1974	19	26	26	27	24	26	24
1975	28	27	24	36	30	25	28
1976	21	31	23	28	33	34	26
1977	27	29	23	29	27	38	28
Contract for Deed							
1964	52	41	38	40	45	27	44
1974	68	59	61	49	54	47	60
1975	60	58	63	49	52	45	57
1976	68	54	62	49	50	50	58
1977	57	56	61	53	59	44	56

Statewide and prior to 1975, the highest prices per acre were consistently paid in sales financed by contract for deed. This resulted from the heavy use of contracts for deed in areas of higher priced lands (the Southwest and Southeast districts), due probably to the tax advantage to sellers achieved by spreading capital gains over a period of years. In 1975 cash sales brought the top price per acre as greater agricultural incomes over the 1973-75 period apparently enabled expansion buyers financing with cash in the Southwest and Northwest districts to outbid other buyers. The higher prices offered by cash buyers in these districts evidently outweighed any tax advantage to sellers from the use of contracts for deed. The general downward movement of cash grain and sugar beet prices over the last two years has returned cash pruchases to their pre-1975 position, below mortgage and contract for deed purchases (Table 22). In 1977 mortgage financed sales were associated with the highest prices per acre, statewide ($939 vs. $838 for contract for deed and $820 per acre for cash sales), although the pattern varied widely among the districts. When ranked by price per acre and method of financing, cash purchases led in the Southwest, mortgage financing in the Southeast and Northeast, and contracts for deed were ahead in the West Central, East Central, and Northeast districts in 1977 (Table 22). Interestingly, the average prices paid per acre dropped for both cash and mortgage purchases, 1976-1977, in the Northwest and West Central districts (see Parts II and III).

Table 22: Average Sales Price per Acre of Farm Land by Method of Financing, by District, Minnesota, 1975, 1976 and 1977.

Method of Financing	District						
	South-east	South-west	West Central	East Central	North-west	North-east	Minn.
	-dollars per acre-						
Cash							
1975	742	995	476	288	440	149	645
1976	919	1131	659	286	355	127	719
1977	1066	1417	586	327	300	207	820
Mortgage							
1975	723	912	462	316	371	176	603
1976	911	1098	659	347	407	210	740
1977	1358	1345	643	436	394	218	939
Contract for Deed							
1975	824	773	493	298	334	155	597
1976	934	1111	668	319	369	246	736
1977	1217	1313	759	468	471	181	838

The method of financing is related to the quality of land and to price paid per acre and proportion of sales in Table 23. Before 1974, the highest prices paid for good and average quality land were typically associated with sales financed by contract for deed. In 1975, cash buyers paid more for land rated good and average in quality than did other buyers and this trend continued for average quality land in 1976 ($678 vs. $646 and $654 per acre, Table 23). In 1977 the highest prices paid for good and average quality land were associated with sales financed by mortgages (Table 23).

Table 23: Price Paid Per Acre and Proportion of Sales, by Method of Financing and Quality of Land, Minnesota, 1976 and 1977.

Land Quality Class	Method of Financing: Cash		Mortgage		Contract for Deed		All Sales	
	1976	1977	1976	1977	1976	1977	1976	1977
Good								
$ per acre	924	1271	957	1334	936	1108	941	1181
% of Sales	28	33	42	36	41	40	39	37
Average								
$ per acre	678	720	646	850	654	816	655	803
% of sales	49	49	45	48	45	47	46	48
Poor								
$ per acre	466	487	465	493	451	387	449	435
% of sales	22	18	13	16	14	13	15	15
All Grades								
$ per acre	719	820	740	939	736	838	735	859
% of sales	100	100	100	100	100	100	100	100

Distance of Buyer from Tract Purchased

During 1975-1976, the Minnesota farmland market, always distinctly local in character, became even more localized due to heavy expansion buying in those years. Beginning in 1975, the median distance of buyer from purchased tract declined, statewide, from 5 to 4 miles and this trend continued into 1976 (Table 24). By 1976, 69 percent of all buyers lived less than 10 miles from their purchased tract, and over 50 percent less than 5 miles. In 1977, this trend also has shifted direction as the median distance, statewide rose once again to 5 miles. Among districts, the proportion of purchases less than 5 miles from the buyer's residence dropped noticeably, 1976-1977, in the West Central (49 to 44 percent), East Central, (39 to 26 percent) and Northwest (49 to 41 percent, Table 24). As discussed previously, these three districts experienced significant reductions in the proportion of expansion buyers active in their land markets in 1977 (see Table 16 and Parts II and III).

Table 24: Classification of Farm Land Sales by Distance of Buyer's Residence from Tract, by District, Minnesota, 1975, 1976, and 1977.

Distance of Buyer's Residence from Tract Purchased	District						
	South-east	South-west	West Central	East Central	North-west	North-east	Minn.
				-percent-			
Less than 2 miles							
1975	25	27	25	16	21	14	24
1976	28	27	20	22	25	7	25
1977	23	23	19	16	23	17	21
2–4 miles							
1975	27	34	29	17	32	12	28
1976	23	36	29	17	24	7	26
1977	33	39	25	10	18	11	28
5–9 miles							
1975	17	15	16	12	19	5	15
1976	18	18	19	11	22	13	18
1977	13	17	27	19	16	11	18
10–49 miles							
1975	19	15	14	21	18	31	17
1976	19	14	15	22	17	27	17
1977	20	12	14	25	21	28	17
50-299 miles							
1975	8	8	14	25	4	19	11
1976	9	3	14	20	8	25	10
1977	7	8	13	21	13	17	11
300 miles & over							
1975	4	2	2	10	5	19	4
1976	2	2	3	8	2	20	4
1977	5	1	2	10	9	16	5
Median Distance in Miles							
1975	4	3	4	10	4	15	4
1976	4	3	5	9	5	28	4
1977	4	3	5	10	6	15	5

Total Purchase Price

The average size of farm tract purchased has generally declined over the last five years, statewide, due to the predominance of expansion buying during this period (from 184 acres/purchase in 1972 to 178 in 1977, Table 25). In contrast, from the mid-1950's until 1972 the average size of tract purchased had been slowly, though erratically rising (from 164 acres/purchase in 1955 to 184 in 1972). Also, during this period the average price paid per acre moved gradually but irregularly upward (see Statistical Appendix, Table 44). As a result, the total purchase price of the average Minnesota farm sales tract increased from approximately $25,000 in 1957 to about $54,000 by 1972-roughly doubling in 15 years (Table 25). It is interesting to note that after 1972 it took only three years for the total purchase amount to double again (from $53,912 in 1972 to $108,653 in 1975—$607 per acre times 179 acre/purchase, see Tables 6 & 9). By 1977, the total sales price of the average farm tract sold in Minnesota has tripled when compared to its 1972 level ($152,902 vs. $53,912, Table 25).

Similar patterns emerge from each of the districts (Table 25). In 1977, the average farm tract sold for over $200,000 in the Southwest; in two south central counties in this district, Faribault and Martin, the total purchase price per tract averaged over $300,000. This figure gains significance when it is recalled that over three-fourths (77 percent) of all purchases in the Southwest district in 1977 were made by farm expansion buyers (see Table 16).

Additional trends and patterns in the Minnesota farm land market over the last 20 years will be presented in Part V. First, a closer examination will be made of two areas experiencing slow-downs and declines in land market activity in 1977 due to falling cash grain prices and/or drought conditions—the Red River Valley (Part II) and West Central Minnesota ("high-risk area" of Part III.)

Table 25: Average Sales Price Per Acre, Average Size of Tract Purchased, and Total Purchase Price, by District, Minnesota, 1957, 1967, 1972, and 1977.

Years	South-east	South-west	West Central	East Central	North-west	North-east	Minn.
$/acre							
1957	175	217	110	67	88	39	144
1967	272	306	179	93	117	51	215
1972	389	366	222	145	107	76	293
1977	1216	1340	709	446	432	198	859
Acres/Purchase							
1957	151	161	204	139	298	142	174
1967	157	173	209	160	255	206	181
1972	166	173	206	174	272	209	184
1977	137	150	193	161	295	338	178
$/Purchase							
1957	26,425	34,937	22,440	9,313	26,224	5,538	25,056
1967	42,704	52,938	37,411	14,880	29,835	10,506	38,915
1972	64,574	63,318	45,732	25,230	29,104	15,884	53,912
1977	166,592	201,000	136,837	71,806	127,440	66,924	152,902

PART II: THE FARMLAND MARKET IN THE RED RIVER VALLEY

The Northwest district is sharply divided into two parts by soil differences. The Red River Valley, comprising the western part of the district, has fertile soil and relatively large-scale farming. The non-Valley Comparison Area to the East contrasts sharply in soil fertility, type of farming, and prices paid for land (Figure 2).*

During the 1973-76 period, the Red River Valley was the most active part of the Minnesota farmland market, consistently reporting the highest annual percentage increases in sales prices. In the three years from July 1973 to 1976 the average price paid per acre climbed from $201 to $733, at annual rates of increase of 79, 49, and 37 percent, respectively. From July 1976 to July 1977 this remarkable rate of increase slowed to 6 percent with the resultant average sales price standing at $780 per acre in 1977 in the Red River Valley (Table 26). The price paid per acre in the Non-Valley Comparison Area rose 10 percent over 1976, going from $279 to $306 per acre. The slowdown in the land market in the Red River Valley is also evident in fewer reported farm sales in 1977 when compared to previous years (Table 26).

The Red River Valley continues to lead all areas of the state in the proportion of sales of unimproved land, with 70 percent of 1977 farm sales comprising land without buildings (Table 27). Reversing the trend of the last three years, improved land now sells for more per acre than unimproved land, due partly to the somewhat reduced role played by expansion buyers in the Valley when compared to prior years. In the Non-Valley Comparison Area, the proportion of sales of unimproved land exceeded improved land sales for the first time (63 vs. 37 percent), but improved land continues to sell for more than the average price paid for unimproved land ($345 per acre vs. $278, Table 27).

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*While most of the area designated as a "non-valley comparison area" lies within the drainage basin of the Red River and in this sense is within the Red River Valley broadly defined, the term Red River Valley is used here in a narrower sense to describe the much higher valued lands of the Red River Valley Lake Plain.

Figure 2: The Red River Valley and Comparison Area

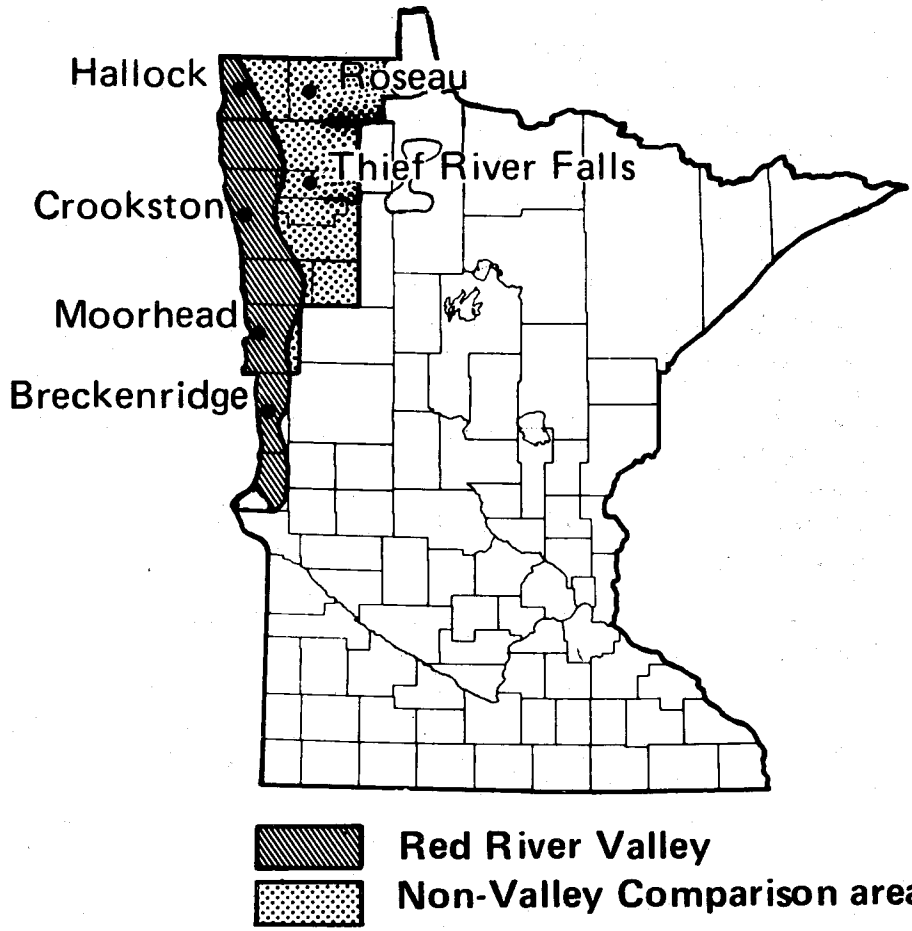

Table 26: Analysis of Reported Farm Sales in the Red River Valley and Non-Valley Areas, Northwest District, Minnesota, 1975, 1976, and 1977.

Item	Red River Valley			Non-Valley Area		
	1975	1976	1977	1975	1976	1977
Number of Sales (Jan.-June)	63	54	37	76	88	75
Average Size of Tract (Acres)	219	216	284	270	325	287
Average Sales Price Per Acre (dollars)	535	733	780	227	279	306
Change in Sales Price over preceding year (percent)	49	37	6	49	23	10
Standard Deviation of Sales Price* (dollars)	249	348	313	102	112	165
Coefficient of Variation* (percent)	47	47	40	45	40	54

*See Statistical Appendix

Table 27: Proportion of Sales and Average Sales Price Per Acre of Improved and Unimproved Land in the Red River Valley and Non-Valley Comparison Area, Minnesota, 1974-1977.

Area and Year	Percent of Sales		Price Per Acre		Price of Unimproved Land as a Percent of Price of Improved Land
	Improved	Unimproved	Improved	Unimproved	
Red River Valley	%	%	$	$	%
1974	49	51	358	359	100
1975	29	71	487	559	115
1976	33	67	677	769	114
1977	30	70	790	767	97
Non-Valley Comparison Area					
1974	60	40	167	126	75
1975	55	45	233	213	91
1976	53	47	281	275	98
1977	37	63	345	278	81

Expansion buyers still dominate the land market in both the Red River Valley and Non-Valley Comparison Areas, but their influence has decreased somewhat from the 1973-1975 period. Farm expansion buying accounted for 94 percent of Valley purchases in 1975, but declined to 86 percent in 1977, while Non-Valley expansion buying has dropped to 62 percent of sales over the last two years (Table 28). In 1977, expansion buyers continued to pay higher prices than other buyers in the Red River Valley ($831 per acre, vs. $558 and $499) but in the Non-Valley Area operating farmers again paid the highest prices per acre after being outbid by expansion buyers in 1975 and 1976 (Table 28). Investor buying was up in both areas of the Northwest district in 1977, comprising almost one-fourth of Non-Valley purchases. The average price paid by investors in the Non-Valley Comparison Area, however, dropped notably from 1976 (from $240 to $205 per acre, Table 28). These lower prices paid combined with an increased market share for investor buyers in 1977 may indicate future declines in prices paid by other buyers as well.

Table 28: Proportion of Sales and Price Paid Per Acre by Type of Buyer, Red River Valley and Non-Valley Comparison Area, Minnesota, 1975, 1976, 1977.

Type of Buyer	Red River Valley						Non-Valley Area					
	1975		1976		1977		1975		1976		1977	
	%	$	%	$	%	$	%	$	%	$	%	$
Operating Farmer	3	217	9	538	6	558	20	208	16	245	15	424
Expansion Buyer	94	563	89	743	86	831	67	248	70	304	62	364
Investor (Agricultural)	3	427	2	2,000	8	499	13	201	14	240	23	205

Good and average quality land made up 92 percent of all Valley sales in 1977, while accounting for only 79 percent of the land sold in the Non-Valley Comparison Area (Table 29). These quality categories are relative terms, used to compare land quality within an area, not between areas. The sharp contrast in land quality between the Valley and Non-Valley Comparison Area is obvious, with Valley land selling for two to three times as much as Non-Valley land in all quality categories in 1977. Further evidence of a slowdown in the Northwestern farmland market is apparent in Table 29, with poor Non-Valley land selling for less in 1977 than in 1976 ($178 vs. $200 per acre), and with only small price increases for land rated average in both areas. The price of land judged poor in the Valley went up substantially over 1976 but it should be pointed out that only a very small number of sales of poor Valley land are reported in any given year, making year to year comparisons less reliable.

Use of contract for deed financing has generally been increasing in both areas of the Northwest district during the 1970's, associated with the much higher-priced land now found in this district. Well over half of both Valley and Non-Valley sales were financed with contracts for deed in 1977 (65 and 57 percent, respectively, Table 30). Cash purchases have declined significantly over the last two years, both as to frequency and average price paid in the Valley ($788 per acre in 1977 vs. $860 in 1976) and Non-Valley ($258 per acre 1977 vs. $302 in 1976, Table 30). This again emphasizes the decrease in activity by farm expansion buyers.

Table 29: Proportion of Sales and Price Paid Per Acre by Quality of Land, Red River Valley and Non-Valley Comparison Area, Minnesota, 1976-1977.

Land Quality	Red River Valley				Non-Valley Area			
	1976		1977		1976		1977	
	%	$	%	$	%	$	%	$
Good	62	920	56	1058	30	311	35	454
Average	25	615	36	633	48	304	44	325
Poor	13	243	8	558	22	200	21	178

Table 30: Proportion of Sales and Price Paid Per Acre by Method of Finance, Red River Valley and Non-Valley Comparison Area, Minnesota, 1976-1977.

Method of Financing	Red River Valley				Non-Valley Area			
	1976		1977		1976		1977	
	%	$	%	$	%	$	%	$
Cash	8	860	6	788	23	302	13	258
Mortgage	40	704	29	836	25	251	30	333
Contract for Deed	52	763	65	804	52	279	57	305

As discussed previously, two distinct regional groupings have emerged in the Minnesota land market districts during the 1970's. In the three eastern districts (the Northeast, East Central, and Southeast) livestock farming and urban, residential, and recreational land uses are prominent while in the three western districts (the Southwest, West Central, and Northwest) cash crops dominate land use. Part I of this report compared land market trends between the two groupings during the 1970's, noting that a readjustment process was occurring in land value changes between the two regions (see Table 2). Table 31 presents evidence of a similar readjustment process taking place among the three western cash grain districts as well.

Table 31: Comparison of Annual Percentage Changes in Estimated Land Values and Actual Sales Price Per Acre of Farm Land for the Three Western Cash Grain Districts of Minnesota 1969-1977.

Year	—Percent Change in Estimated (Est.) and Actual (Act.) Sales Price—					
	Northwest		Southwest		West Central	
	Est.	Act.	Est.	Act.	Est.	Act.
	-percent-					
1969-70	0	-6	-1	2	1	6
1970-71	-1	-12	1	1	3	0
1971-72	-2	7	8	7	2	8
1972-73	25	12	21	12	19	0
1973-74	36	70	47	54	53	52
1974-75	48	73	25	34	33	45
1975-76	28	7	31	32	24	35
1976-77	13	15	19	20	17	7

During the 1970's there have been significant differences in relative (percentage) land value changes among the three western districts. In the three years preceding 1973 estimated land values and actual sales prices had generally been falling in the Northwest, while they were generally on the upswing in the Southwest and West Central districts (Table 31). Over the next there years (1973-1975) both estimated land values and actual sales prices rose substantially in all three western cash grain districts. Only the Northwest, however, experienced an uninterrupted upward movement in annual percentage increases in both estimated land values (25, 36, and 48 percent) and actual sales prices (12, 70, and 73 percent, Table 31). In comparison, for the Southwest and West Central districts, the percentage increments in both measures of land values were generally smaller than in the Northwest and the rate of increase slowed down during 1975 relative to 1973 and 1974. In 1976 and 1977 these extraordinary rates of increase in the Northwest district slowed dramatically while the percentage land value increments were larger in the Southwest and West Central during the last two years (Table 31).

The significant and changing price differentials between wheat, barley, and sugar beets grown in the Northwest and the corn and soybeans raised in the Southwest and West Central districts may account for some of this disparity in relative land value changes during the 1970's. Among the principal cash grain crops of western Minnesota, the predominance of the Northwest is greatest in wheat and barley, while corn is the major grain produced in the

Southwest and West Central districts. To illustrate the significant shifts in relative grain prices between the western districts, wheat-to-corn and barley-to-corn price ratios were computed for the 1970's. The results are displayed in Figures 3 and 4.* These figures both show that, to mid-1972, wheat and barley prices had generally been stable or falling relative to corn prices. As mentioned above, Northwest land values were also declining during this period.

For wheat, this downward trend reversed itself in the latter part of 1972 following the Russian wheat purchases (Figure 3). Due to the greater desirability of wheat as a food grain, one would expect wheat prices to be at a premium over corn prices. But this premium exhibited a strong upward shift from late 1972 through 1975. Although the peaks shortened from their 1973 record high points, the troughs in 1974 and 1975 were not as deep as they were before 1972 (Figure 3). For barley, a closer substitute for corn than wheat, the reversal occurred in mid-1973. From mid-1973 to late 1975 barley continually sold at a premium over corn and this price differential was definitely trending upward (Figure 4). During this 1973-1975 period the Northwest district also experienced notably larger and more consistent upward movements in annual (percentage) land value increases than did the Southwest and West Central districts.

These significant and increasing price differentials among grains grown in the Northwest and grain produced in the other two western districts of Minnesota apparently explain some of the variation in relative land value increases between these two areas for 1973-1975. They may also account for the different rates of slow-down in 1976-1977. In Figure 3, it appears that the premium of wheat over corn prices has now shifted down from its 1973-75 level; the troughs in particular have been lower over the last two years. Likewise, the price differential between barley and corn has narrowed noticeably since late 1975 (Figure 4). An apparent downward trend is now occurring as both the peaks and troughs have successively fallen, in contrast to their progressively upward trends during 1973-1975.

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*Minnesota Agricultural Statistics 1977, Crop and Livestock Reporting Service, Minnesota Department of Agriculture, St. Paul MN. For purposes of comparison, the prices per bushel were converted to prices per pound since wheat has a 60 pound bushel, corn has a 56 pound bushel, and barley a 48 pound bushel.

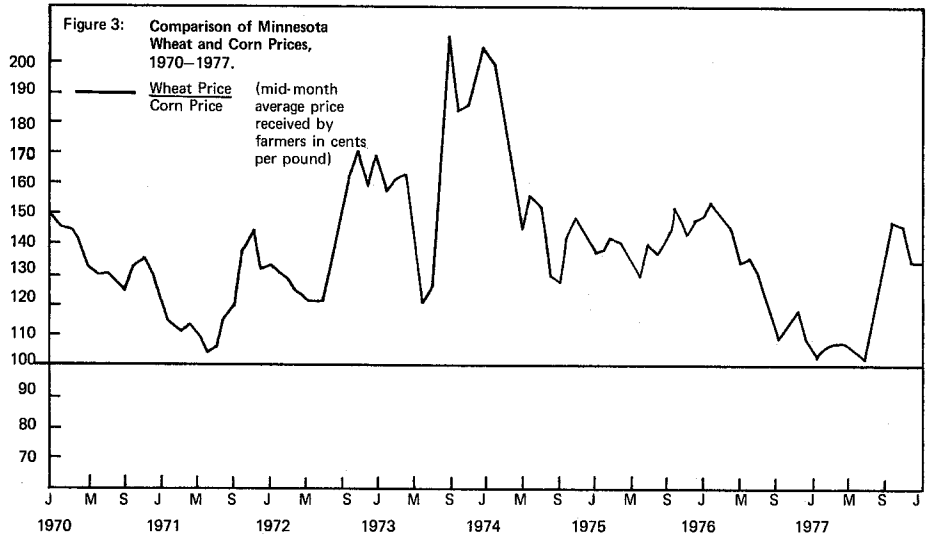
Figure 3: Comparison of Minnesota Wheat and Corn Prices, 1970–1977.
Wheat Price / Corn Price (mid-month average price received by farmers in cents per pound)
200
190
180
170
160
150
140
130
120
110
100
90
80
70
J M S J M S J M S J M S J M S J M S J M S J M S J
1970 1971 1972 1973 1974 1975 1976 1977

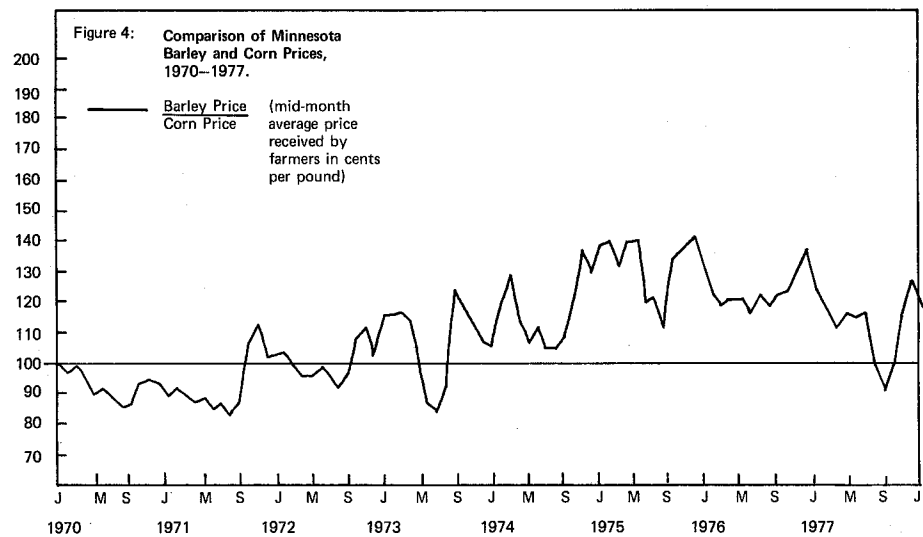
Figure 4: Comparison of Minnesota Barley and Corn Prices, 1970–1977.
Barley Price / Corn Price (mid-month average price received by farmers in cents per pound)
200
190
180
170
160
150
140
130
120
110
100
90
80
70
J M S J M S J M S J M S J M S J M S J M S J M S J
1970 1971 1972 1973 1974 1975 1976 1977

PART III: THE FARMLAND MARKET IN SOUTHWESTERN MINNESOTA

The Southwestern quarter of Minnesota contains most of the best farmland in the state, but it also has some of the areas more vulnerable to climatic risk. In 1976 parts of western Minnesota experienced the driest summer ever recorded. To test the impact of this drought, the Southwestern quarter of the state was divided into three areas on the basis of variability in crop yields over time (Figure 5). The "high risk" farming area comprises a group of nine counties in west central Minnesota with large crop yield fluctuations from year to year due to occassionally severe weather conditions (principally drought). In contrast, the "low risk" farming area consists of a fairly well-defined block of nine counties in south central Minnesota containing the highest priced farmland in the state. Linking these two extremes is the "transitional belt" of ten counties where land is of roughly the same quality found in the high risk area, but climatic risks are less.

The difference between the three areas is obvious when comparing land price levels over the last four years (Table 32). Farmland in the low-risk counties averaged considerably more than double the price paid for land in the high-risk group from 1974 to 1976. In 1977 the differential between the two areas approached three-fold, with land prices increasing 21 percent in the low-risk block while rising only 1 percent in the high-risk counties. This substantial slow-down in the 1977 land market in the west central counties of Minnesota apparently stems from the combination of drought conditions and declining prices experienced for the principal crops in this area over the last two years. An analysis of the data by type of buyer and quality of land purchased reveals not only further slow-down, but also several instances of significant land price declines over the past year.

Although expansion buyers generally predominated in all three areas over the last four years, both as to proportion of purchases and average price paid per acre, this dominance was less marked in 1977 (Table 33). The proportion of sales to expansion buyers declined in the transitional and low-risk areas in 1977, and the price differential among types of buyers in these two areas narrowed appreciably over the last year. In contrast, the gap widened in the high-risk counties in 1977 as the average price paid by both operating farmers and agricultural investors dropped markedly from 1976 levels, from $619 to $494 per acre, and from $731 to $540 per acre, res-

Figure 5: High Risk, Transitional and Low Risk Areas in Southwest Minnesota

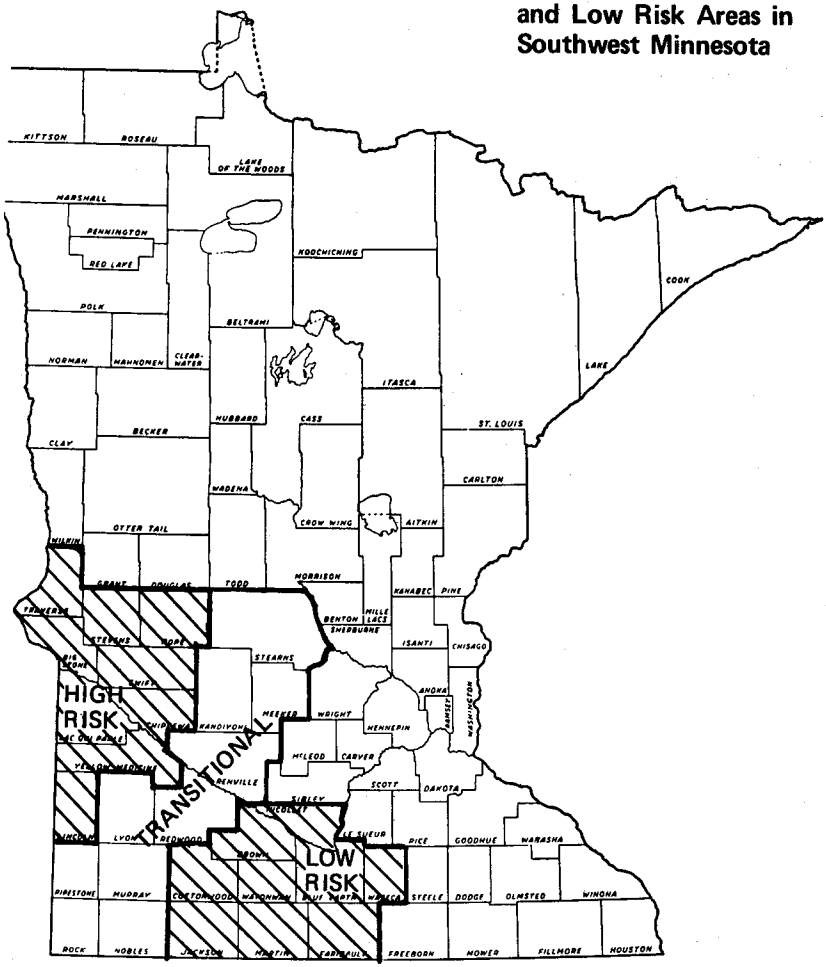

Table 32: Analysis of Reported Farm Sales in the High Risk, Transition and Low Risk Areas, Minnesota, 1974-1977.

Item	High Risk Area				Transition Area				Low Risk Area			
	1974	1975	1976	1977	1974	1975	1976	1977	1974	1975	1976	1977
Number of Sales (Jan-June)	234	169	162	185	344	259	223	265	200	181	159	198
Average Size of Tract (acres)	217	205	236	195	174	175	161	157	156	139	135	133
Average Sales Price Per Acre (dollars)	325	480	638	644	532	653	852	1025	794	1145	1495	1812
Change in Sales Price over Preceding Year (percent)	50	48	33	1	53	23	30	20	52	44	31	21
Standard Deviation of Sales* Price (dollars)	131	230	228	261	216	261	333	380	329	359	486	574
Coefficient of Variation* (percent)	40	48	36	41	41	40	39	37	41	31	33	32

*See Statistical Appendix

Table 33: Proportion of Sales and Average Price Paid Per Acre, by Type of Buyer in the High Risk, Transitional and Low Risk Areas, Minnesota, 1974-1977.

Type of Buyer and Year	High Risk Area		Transitional Area		Low Risk Area	
	%	$	%	$	%	$
Operating Farmer						
1974	30	323	23	477	9	727
1975	22	440	23	578	8	1061
1976	16	619	18	788	10	1106
1977	19	494	17	953	10	1694
Expansion Buyer						
1974	57	338	64	564	84	834
1975	61	550	62	702	88	1170
1976	70	625	71	892	86	1558
1977	70	708	69	1046	81	1831
Agricultural Investor						
1974	14	307	14	504	7	499
1975	17	346	15	611	4	860
1976	14	731	11	682	4	1100
1977	11	540	14	1017	9	1726

During the last four years, land rated poor in quality in the low-risk area consistently sold for more per acre than land judged good in the high-risk area (Table 34). This difference widened sharply in 1976 and 1977. The sales prices per acre of poor land in the low-risk area exceeded the prices of good land in the high-risk area by only 7 and 2 percent respectively, in 1974 and 1975. In 1976 this difference was 38 percent, and in 1977, 45 percent ($1221 over $841). As was emphasized for the Red River Valley, these quality categories are relative terms, primarily useful in comparing land qualities within an area. The interesting observation is that the relative differences between average prices paid in the low-risk counties and in the other two areas for all qualities of land have been growing wider over the last four years.

Table 34: Proportion of Sales and Price Paid Per Acre, by Quality of Land in the High Risk, Transitional and Low Risk Areas, Minnesota, 1974-1977.

Quality of Land and Year	High Risk Area		Transitional Area		Low Risk Area	
	%	$	%	$	%	$
Good						
1974	35	412	38	655	40	956
1975	36	692	37	748	43	1313
1976	37	710	39	1013	48	1775
1977	28	841	42	1237	51	2058
Average						
1974	48	308	42	512	42	798
1975	46	447	47	654	46	1117
1976	47	619	44	829	42	1332
1977	50	660	40	1004	41	1604
Poor						
1974	18	206	20	359	19	442
1975	18	249	16	429	11	704
1976	16	427	17	593	10	982
1977	22	398	18	645	8	1221

The price of poor quality land in the low-risk area surpassed the price of average quality "transitional" land in 1975 and is about to overtake the price paid for good quality land in the transitional belt, as well ($1221 vs. $1237 per acre in 1977, Table 34). In the high-risk area, the frequency of sales of poor quality land rose from 16 percent in 1976 to 22 percent in 1977 while the average price paid for poor land declined from $427 to $398 per acre. The price rise for poor land slowed substantially in the transitional belt in 1976-77, but not in the low-risk area.

Methods of financing land purchases have shifted back and forth over the past four years in Southwestern Minnesota. Cash purchases in the low-risk area climbed to 25 percent of sales in 1975, a year of record farm incomes and expansion buying, then fell over the next two years (Table 35). Use of contract for deed financing has generally been increasing in the low-risk and high-risk areas, while mortgage sales recently appear to have regained some of their former popularity in the transitional belt. More evidence of the selective downward movement of farmland prices in the high-risk area is seen in the declining average prices paid in cash and mortgage purchases, 1976-1977, from $555 to $494 per acre, and from $670 to $630 per acre, respectively (Table 35).

Table 35: Proportion of Sales and Price Paid Per Acre, by Method of Finance in the High Risk, Transitional and Low Risk Areas, Minnesota, 1974-1977.

Method of Financing and Year	High Risk Area		Transitional Area		Low Risk Area	
	%	$	%	$	%	$
Cash						
1974	13	268	15	624	15	802
1975	14	452	8	658	25	1216
1976	12	555	15	935	14	1486
1977	15	494	14	985	17	1831
Mortgage						
1974	31	315	22	528	34	741
1975	32	560	25	639	28	1254
1976	28	670	30	847	34	1471
1977	22	630	31	1034	29	1927
Contract for Deed						
1974	56	336	63	516	51	852
1975	54	434	67	657	47	1074
1976	60	643	55	827	52	1533
1977	63	681	55	1034	54	1815

PART IV: FARMLAND PRICES AND TRENDS BY DEVELOPMENT REGIONS

The State of Minnesota in 1967 recognized the need for a common set of regional delineations (at the sub-state level) in order to facilitate developmental planning, state and federal program implementation, state agency administration, and local inter-governmental cooperation. Prior to 1967 over 160 mostly different regional delineations existed in Minnesota. For example, these were 4 political regions, 10 economic regions, 24 federal agency regions, and 88 state agency regions. Through research efforts at the University of Minnesota and the State Planning Agency, and as a result of federal, state, and local government decisions, a common set of 13 development regions emerged. The present development regions are illustrated in Figure 6, and the average reported sales price for farm land in each of these regions 1971-1977 is presented in Table 36.

Table 36: Average Reported Sales Price Per Acre of Farm Land, by Economic Development Regions, Minnesota, 1971-1977.

Economic Development Region	1971	1972	1973	1974	1975	1976	1977
			-dollars per acre-				
1	93	105	114	199	344	330	367
2	53	83	108	141	206	250	277
3	39	81	126	148	157	162	179
4	176	170	192	317	446	542	558
5	93	127	164	197	259	235	297
6W	216	238	233	341	537	696	746
6E	319	361	374	569	691	923	1027
7W	230	290	291	430	472	596	778
7E	228	216	203	254	316	455	473
8	298	323	354	534	710	906	1058
9	400	461	534	829	1115	1464	1835
10	314	368	411	565	753	915	1197
11	465	586	698	882	1035	1150	1437
MN	259	293	298	450	607	735	859

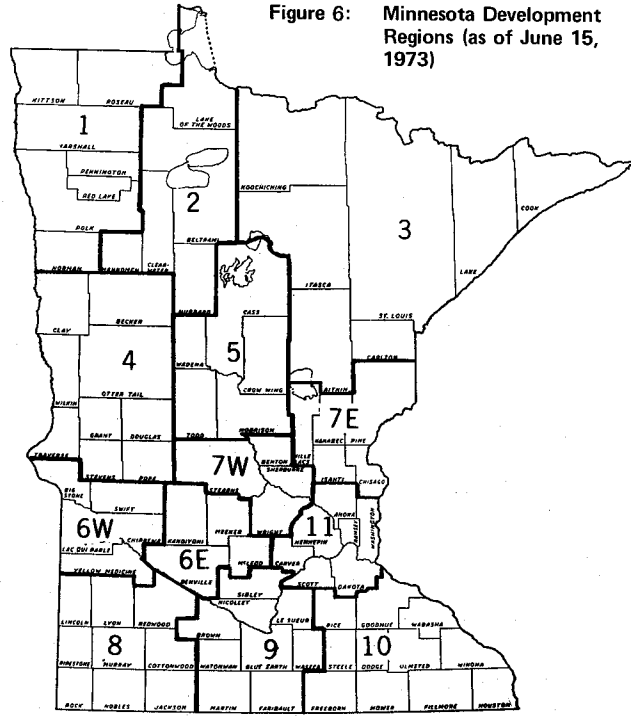

Figure 6: Minnesota Development Regions (as of June 15, 1973)

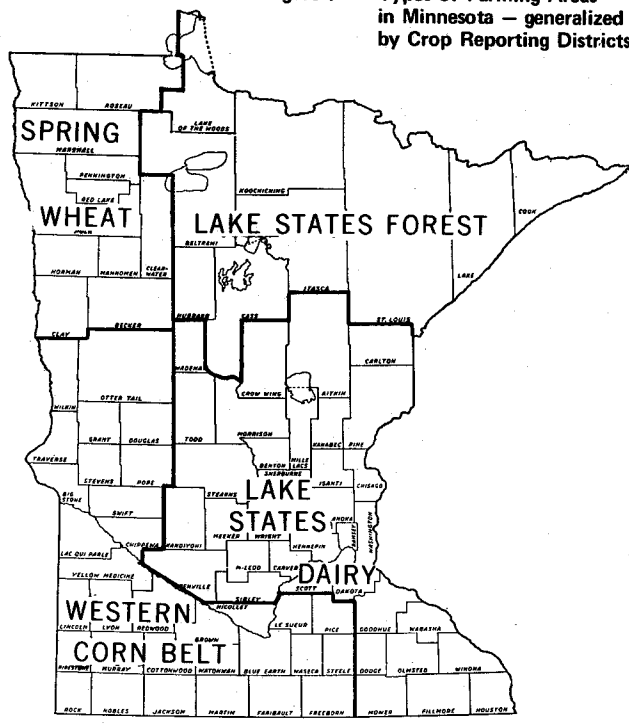

Figure 7: Types of Farming Areas in Minnesota — generalized by Crop Reporting Districts

The most agricultural areas of the state, where cash grain dominates land use, embrace Regions 1, 4, 6W, 8, and 9 in western and southwestern Minnesota. These five regions correspond closely to the "spring wheat" and "western corn belt" farming areas of Minnesota as delineated by the U.S. Department of Agriculture in Figure 7. The average sales prices of farm land more than doubled in each of these five regions from 1973 to 1975 (increases of 202, 132, 130, 101, and 109 percent, respectively, Table 37). In contrast, Regions 5, 6E, 7W, 7E, 10, and 11, which fit fairly well into the "lake states dairy" area (compare Figures 6 and 7), experienced considerably smaller increases in sales prices during the 1973-1975 period. In these six eastern regions, which have agricultural economies heavily dependent upon milk and livestock production and are more influenced by residential and other urban land uses, farmland prices rose by rates ranging from 48 to 85 percent 1973-1975 (Table 37). This was a reversal of the pattern of previous years, when the largest annual percentage increases in farmland prices typically occurred in these six dairy and urban-oriented regions and in the two recreation-oriented regions of northeast Minnesota (Regions 2 and 3). Farmland prices rose by 17 to 223 percent in these regions during 1971-1973 while they increased at a slower rate in the five cash grain regions (8 to 34 percent, 1971-73, Table 37).

Table 37: Percentage Changes in Sales Price Per Acre, by Economic Development Region, Minnesota, Annually and Every Two Years, 1971-1977.

Economic Development Region	Percent Change in Sales Price								
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1971-73	1973-75	1975-77
	-percent-								
1	13	9	75	73	-4	11	23	202	7
2	57	30	31	46	21	11	104	91	34
3	108	56	17	6	3	10	223	25	14
4	-3	13	65	41	22	3	9	132	25
5	37	29	20	31	-9	26	76	58	15
6W	10	-2	46	57	30	7	8	130	39
6E	13	4	52	21	34	11	17	85	49
7W	26	0	48	10	26	31	27	62	65
7E	-5	-6	25	24	44	4	-11	56	50
8	8	10	51	33	28	17	19	101	49
9	15	16	55	35	31	25	34	109	65
10	17	12	37	33	22	31	31	83	59
11	26	19	26	17	11	25	50	48	39
MN	13	2	51	35	21	17	15	104	42

The greater rates of land price increases in the cash-grain regions for 1973-1975 reflected the record grain prices and incomes received by farmers during this period. Over the last two years there has been a general downward movement in cash grain prices and farm income, accompanied by severe drought conditions in parts of western Minnesota. As a result, the rates of farmland price rises slowed substantially in all five cash grain regions over the 1975-1977 period when compared to their 1973-1975 increments. The larger annual percentage increases are once again found in the dairy, residential, and recreational-oriented regions (Table 37). For 1976-1977 the rates of increase were greatest in Regions 7W and 10, which embrace the urbanizing corridor of the state running from St. Cloud southeast through the Twin Cities to Rochester. However, the average level of farmland prices is still considerably higher in Region 9, which contains some of the best grain producing land in Minnesota, than in either Regions 10 or 11, which include the Rochester and Twin Cities areas of urban influence ($1835 per acre vs. $1187 and $1437, respectively, Table 36).

Farm expansion buyers overwhelmingly dominated the land market, 1975-1977, in the five cash grain regions (Regions 1, 4, 6W, 8, and 9) when compared to the other regions of the state (Table 38). Among these other regions, Region 6E is the exception. It should be noted that this region is part of the agriculturally rich Southwestern quarter of Minnesota (see Part III), and is a transition region from dairy to cash grain farming. Two cash grain regions (Regions 1 and 4) experienced notable declines in expansion buying in 1977. Operating farmers continue to predominate in Regions, 3, 5, and 7E which have larger proportion of part time and "hobby farms" (Table 38). Investment buying was heaviest in 1977 for urban and recreationally influenced regions, particularly Regions 3, 5, and 10. In the most urbanized region, the Twin City metropolitan area (Region 11), investment purchases dropped substantially over the last three years (from 33 to 13 to 12 percent, Table 38), with expansion buyers picking up all of this reduction. In 1977 operating farmer buyers paid more than did other buyers in 6 of the 13 regions (Regions 1, 2, 5, 7W, 7E, and 11), while expansion buyers offered more than other buyers in the remaining 7 regions (Table 39). The interesting change is that in 1975 and 1976 operating farmers outbid other buyers in only three regions each year.

The effect of land and building quality upon the average price paid for farm land varies noticeably among the regions, largely dependent upon the strength of the dominant land market forces within the region. Heavy urban pressures within a region will apparently distort the historically "normal" relationship between land quality and land sales price, while strong agricultural influences will distort the relationship between building quality and sales price. A normal relationship between sales price and quality of land

prevailed in all regions of the state in 1976 and 1977. However, during 1975 in Region 7W, land rated average in quality for farming sold for more than good quality land ($486 vs. $466 per acre, Table 40). This distortion in the normal relationship between price and quality of land was evident during previous years in urban and recreation influenced regions like Regions 3, 5, and 11. In Regions 7W and 11, buyers of farmland in certain areas were apparently speculating on future urban development and thus placing a smaller premium on quality of land as it relates to agricultural use. Hilly and wooded land that might be considered poor quality for farming purposes may be highly desirable for future housing development.

Table 38: Proportion of Tracts Purchased by Type of Buyer, by Region, Minnesota, 1975, 1976, and 1977.

	Operating Farmer Buyer (Sole Tract)			Farm Expansion Buyer (Operator or Investor)			Agricultural Investor Buyer (Sole Tract)		
Region	1975	1976	1977	1975	1976	1977	1975	1976	1977
					-percent-				
1	13	13	7	77	75	70	10	13	23
2	39	55	38	48	34	55	13	10	7
3	86	64	45	5	23	18	9	14	36
4	24	25	33	60	65	53	16	10	14
5	58	52	63	23	30	13	19	18	24
6W	21	10	10	68	77	86	11	13	5
6E	17	17	19	72	71	63	10	12	19
7W	25	39	34	52	40	60	23	21	6
7E	60	51	57	26	36	28	15	13	15
8	21	14	12	64	73	75	15	13	13
9	11	12	10	82	83	80	6	4	10
10	26	23	21	55	63	59	19	14	21
11	29	21	24	38	66	64	33	13	12
MN	25	23	22	60	65	63	15	12	15

Table 39: Average Sales Price Per Acre by Type of Buyer, by Region, Minnesota, 1975, 1976, and 1977.

	Operating Farmer			Expansion Buyer			Investor Buyer (Agricultural)		
Region	1975	1976	1977	1975	1976	1977	1975	1976	1977
					-dollars per acre-				
1	187	266	460	417	376	453	223	240	257
2	197	238	313	220	278	257	193	220	182
3	163	171	232	150	133	269	86	151	124
4	290	422	474	540	635	675	320	419	337
5	321	209	310	155	305	280	182	282	248
6W	529	738	686	568	655	757	367	962	631
6E	577	822	1021	722	928	1033	590	1039	1007
7W	554	563	820	398	733	741	515	426	729
7E	323	519	518	332	406	392	238	353	486
8	568	811	881	802	957	1106	614	727	953
9	997	1093	1750	1160	1545	1862	801	903	1662
10	695	941	1215	802	999	1298	693	659	999
11	1030	1183	1623	970	1138	1343	1097	1103	1595
MN	495	569	694	690	831	1018	493	592	582

Table 40: Average Sales Price Per Acre of Farm Land by Quality of Land, by Region, Minnesota, 1975, 1976, 1977.

Region	Quality of Land: Good			Average			Poor		
	1975	1976	1977	1975	1976	1977	1975	1976	1977
	-dollars per acre-								
1	557	469	593	253	311	365	137	204	176
2	266	282	356	192	233	293	127	140	177
3	189	233	276	159	180	206	93	98	82
4	592	708	833	405	484	473	230	325	418
5	385	269	535	191	236	278	174	204	227
6W	749	777	879	500	666	724	263	448	439
6E	844	1071	1207	652	903	1095	426	590	657
7W	466	767	856	486	558	806	357	372	446
7E	400	578	612	324	441	443	188	243	234
8	862	1115	1341	669	814	981	443	727	640
9	1314	1751	2107	1106	1307	1611	682	933	1305
10	915	1166	1579	693	738	1101	544	671	774
11	1118	1351	1612	973	1095	1317	556	703	1242
MN	771	941	1187	565	655	813	357	449	438

From 1974 to 1976 the relationship between sales price and quality of buildings became more and more distorted each year. Before 1974, unimproved land (without buildings) consistently sold for less than land with buildings, regardless of their quality (see Table 15). In 1974 land without buildings sold for more, statewide, than land with poor quality buildings. By 1976 the average price paid for unimproved land was notably higher, statewide, than the average price paid for land with buildings ($753 vs. $724 per acre, see Table 14) and land without buildings sold for significanlty more than land with either poor or average quality buildings (Table 41). Among the regions in 1976, land without buildings even brought higher prices than land with good quality buildings in four regions (Regions 1, 4. 5, and 7W, Table 41). This relationship reversed in 1977, when the prices paid for unimproved land again averaged significantly less than the prices paid for land with buildings ($782 vs. $899 per acre, see Table 14) and land with poor quality buildings sold for about the same price as land without buildings $791 vs. $795 per acre, Table 41). Land with good quality buildings brought higher prices than land without buildings in every region in 1977. Apparently, falling grain prices over the last two years have sufficiently weakened agricultural forces in the rural land market so that a more normal relationship between sales price and building quality has been restored.

Table 41: Average Sales Price Per Acre of Farm Land by Quality of Buildings, by Region, Minnesota 1976 and 1977.

Region	Quality of Buildings							
	Good		Average		Poor		None	
	1976	1977	1976	1977	1976	1977	1976	1977
	-dollars per acre-							
1	347	499	307	366	254	514	378	327
2	302	499	228	239	197	335	267	191
3	247	255	205	250	170	90	98	221
4	512	668	601	553	447	459	610	583
5	295	343	219	313	196	209	298	227
6W	817	855	658	791	650	662	555	716
6E	994	1123	1031	1037	876	945	840	1036
7W	702	906	613	798	445	669	733	646
7E	519	553	526	477	322	469	362	378
8	1032	1128	858	1134	783	1195	1001	938
9	1635	2163	1523	1822	1408	1732	1456	1766
10	1179	1600	754	1131	825	982	905	1066
11	1522	1743	1292	1530	1058	1465	1070	1186
MN	803	1065	728	872	640	791	753	795

PART V: Deflated Farm Land Values and Other Land Market Trends, 1957-1977

Minnesota farm land values have generally risen over the past 20 years from an estimated $138 per acre in 1957 to $794 per acre in 1977. However, five-sixths of this $656 per acre increase occurred after 1972 (see Table 1). This strong upward trend in estimated farm land values is illustrated in Figure 8, along with actual sales prices over the same 1957-1977 period. Both curves in Figure 8 moved together fairly closely and increased (or decreased) modestly each year until 1970. After 1970, they diverged significantly at various times. There was less fluctuation in the rise in estimated land values, represented by the solid line, which increased at an average rate of 4.5 percent through 1972. Estimated land values then jumped a substantial 20 percent in 1973 and a remarkable 42 percent in 1974. On the other hand, actual sales price started moving upward at an increased rate in 1971, continued this pattern in 1972, and then did not increase at all in 1973. In 1974 the actual sales price leaped upward again, this time by 51 percent over the previous year.

Part of the explanation for this divergence of the two series after 1970 stems from the year to year shift in the location of sales activity between higher priced and lower priced land within a given area (see Table 5). During 1971 and 1972 the annual percentage rise in actual sales price was notably higher than the corresponding increase in estimated land values (7 vs. 2 percent, and 13 vs. 7 percent, respectively, see Tables 1 and 6). The differentials in these two years were due mainly to a disproportionate number of sales of higher-priced land in counties in and near the Twin Cities metropolitan area, and in the recreationally-oriented Northeast district. Thus, one could speak of strong urban forces in the Minnesota rural land market in 1971 and 1972.

After actual sales prices had climbed 21 percent in only two years, there was a reverse shift in rural land sales activity in 1973. In all six districts in 1973, there was an increase in sales of lower priced lands and a decrease in the frequency with which higher priced land changed hands. A reaction to the high land price levels of the previous two years resulted in a disproportionate number of lower-priced land sales throughout the whole state, but particularly in the more agriculturally influenced Southwest and Northwest districts.

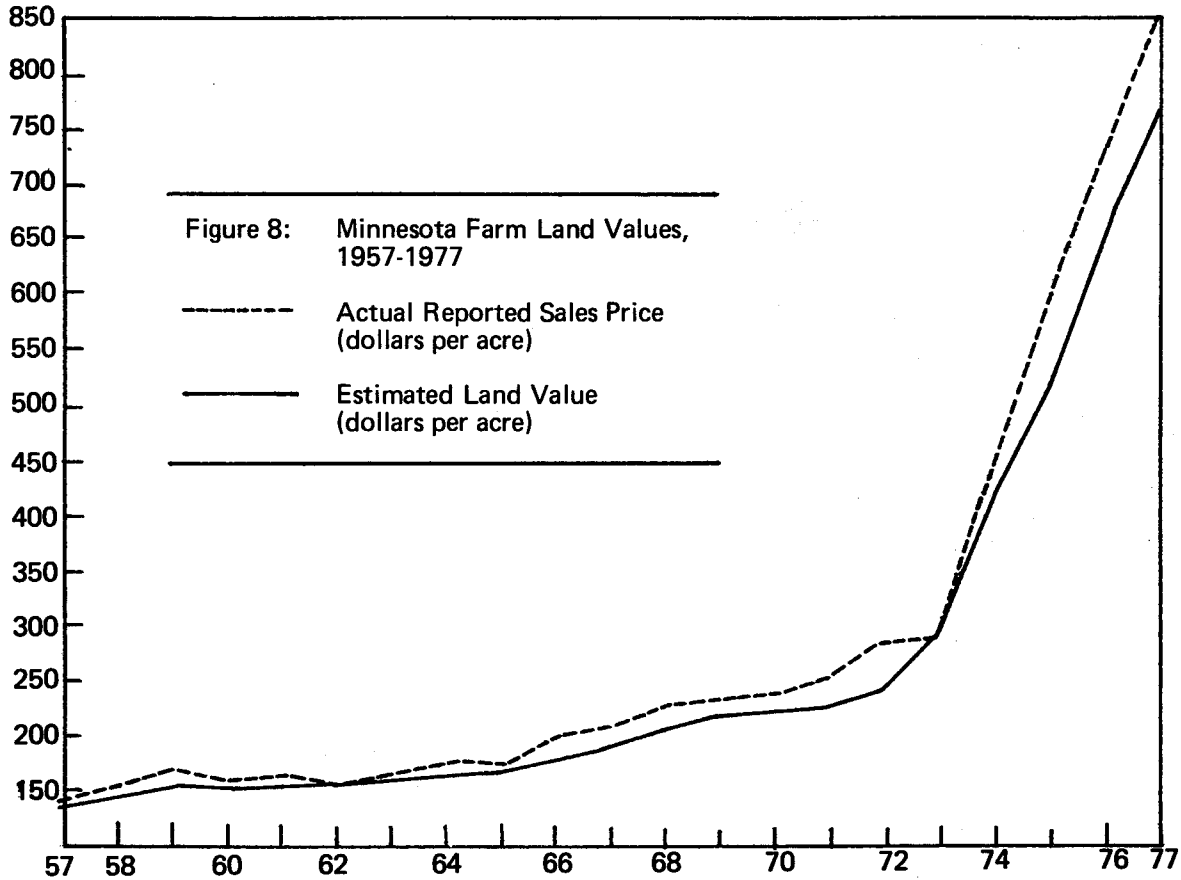
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Figure 8: Minnesota Farm Land Values, 1957-1977
Actual Reported Sales Price (dollars per acre)
Estimated Land Value (dollars per acre)

While actual sales prices levelled off in 1973, estimated land values began their steep ascent, increasing 20 percent during the same year. In the three western districts of the state where cash grain dominates land use-the Southwest, West Central, and Northwest—the increase in estimated land values was significantly higher than the rise in actual sales prices in 1973 (see Table 31). The geographic shift in sales activity toward lower priced land does not adequately explain these large discrepancies between estimated land value and sales price increases in 1973. The time lag between the negotiation of actual sales prices and the estimation of land values may also account for some of the difference. Information on actual sales in 1973 was collected for the period January 1—July 1, while estimates of land values were made by respondents for the month in which they returned the survey questionnaire-usually August or September, 1973. Consequently, estimates of land values were made after cash grain prices had jumped dramatically upward following the Russian wheat purchases. Presumably reporters capitalized these higher farm commodity prices into their estimates of land values. Actual sales prices, though, pertained to the earlier months of 1973 before crop prices rose substantially, and thus did not reflect the capitalization of these commodity prices increases into farm land prices.

In 1974, both estimated land values and actual sales prices rose substantially over the previous year (Fgirue 8). The major factor behind these increases was the capitalization of higher agricultural commodity prices into anticipated farm land prices. Many farmers also used their record incomes from 1973 and 1974 to buy additional land to expand the size of their holdings. Intense competition for more land among expansion-minded farmers continued into 1975 and 1976, putting additional upward pressure on farmland prices (see Tables 16 and 17). The general level of land values was distorted by the considerably higher prices paid by these expansion buyers, who were able to use their existing holdings acquired at a lower cost to finance additional land purchases. Consequently, in addition to the spatial shift in land market activity toward higher priced land in 1974 and 1975, there was also a shift in buyer activity towards farm expansion buyers, particularly in the three western cash grain districts. Thus, one could speak of strong agricultural forces dominating the Minnesota rural land market in 1974 and 1975, in contrast to the strong urban forces predominant in previous years.

In 1976 and 1977 a readjustment process has been occurring in the relative strength of urban and agricultural forces in the rural land market, both among and within the various regions of the state (refer to the discussion accompanying Tables 2 and 31). This shift can be illustrated by converting the increases in farm land values over the last two decades to an in-

dex and comparing this index to other price indexes over the same period.

Using 1967 as the base year, indexes for both estimated land values and actual sales prices are presented in Figure 9. Both measures of the worth of farm land in Minnesota moved upward rather closely over the 20 year period. The index of actual sales prices exhibits more fluctuation from year to year, reflecting the previously noted spatial shifts in land market activity (from a disproportionate number of sales in high-priced areas in one year to relatively more sales in low-priced areas in another). To avoid these year-to-year fluctuations in the composition of market activity, only the index of estimated land values is used for comparison with other price indexes.

Many different price indexes are available for comparison with the index of estimated land values. For example, the consumer price index rose from 84.3 in 1957 to 181.5 in 1977 while the index of estimated land values increased from 71 to 409 during the same period (1967=100). As this comparison illustrates, farm land prices have been rising more rapidly than the general price level, especially after 1972 (Figure 9). Two other price indexes that are more directly related to land prices are the consumer price index for food items, and the index of prices received by farmers. These two indexes are displayed in Figure 10.*

The index of prices received by farmers remained relatively stable from 1957 to 1971, increasing from 94 to only 113. After 1971, prices received by farmers rose substantially for three years, going from 113 to their all-time record high of 192 in 1974 (Figure 10). Since 1974 the index of prices received by farmers dropped while prices paid by farmers have continued to rise. Retail food prices, which have increased steadily every year since 1959, kept going up after 1974 despite falling farm commodity prices (Figure 10). During the 1957-1977 period retail food prices closely followed the general consumer price index until 1972. Over the next three years retail food prices climbed at a higher rate than the general price level (when farm commodity prices were rising) and then slowed in 1976 and 1977 to once again follow the general consumer price index (even though farm prices were dropping).

To compare the rise in land values over the last 20 years to prices received by farmers and with retail food prices, two new price ratios were calcaulted. In these ratios, the index of estimated land values was divided first by the index of prices received by farmers and second by the consumer price index for food items. Both of these resulting price ratios represent deflated indexes of estimated land values in Minnesota.

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*Figures 10—14 were derived from statistics presented in the Economic Report of the President, January 1978, United States Government Printing Office, Washington, D.C.

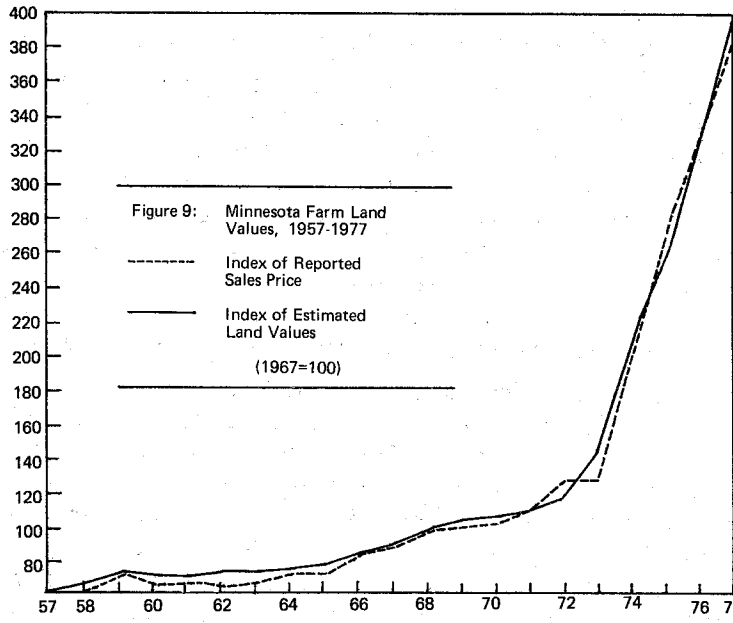
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Figure 9: Minnesota Farm Land Values, 1957-1977
Index of Reported Sales Price
Index of Estimated Land Values
(1967=100)

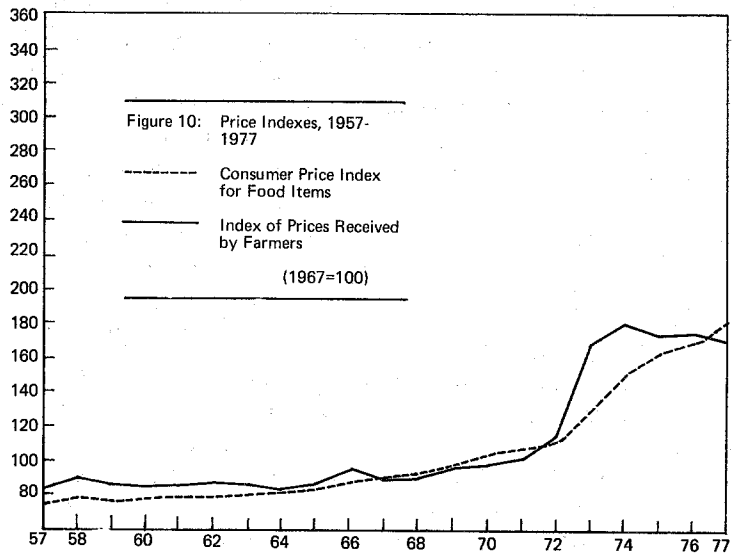
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Figure 10: Price Indexes, 1957-1977
Consumer Price Index for Food Items
Index of Prices Received by Farmers
(1967=100)

Land values deflated by prices received by farmers for the 1957-1977 period are presented in Figure 11. Generally this deflated index of land values closely parelleled the (unadjusted) index of land values until 1968. After 1968, the unadjusted index of land values continued upward while the deflated index leveled off and began declining significantly after 1971 due to rapidly rising farm commodity prices, 1972-1974 (Figure 10). In 1974 Minnesota farmland values adjusted to these record high farm commodity prices by increasing an unprecedented 42 percent over the previous year (see Table 2). By 1975, the deflated land values index had climbed considerably above all former high points as prices received by farmers fell while farmland prices kept soaring. In 1976 and 1977 the deflated index of land values continued this steep ascent indicating that farmland prices had lost much of their relationship to farm commodity prices during this period. Farmland prices are apparently in the process of re-adjustment once again, as indicated by the evidence of slowdowns and selective price declines in the Minnesota land market, discussed in earlier sections of this report (see Parts II and III).

When land values are deflated by the consumer price index for food items, a similar upward trend is apparent until 1970. Land values deflated by retail food prices declined, 1969-1970, levelled off for two years, and then moved upward again in 1973 (Figure 12). Over the next four years deflated land values increased sharply in each year. The fact that land prices have risen faster than retail prices over most of the past 20 years, and particularly in the last four years, underlines the widespread conviction that investment in land is a good hedge against inflation.

This conviction gains added significance from the fact that throughout the past two decades farm incomes have generally been well below those received in other sectors of the economy. While annual net returns to farmland (rent) dropped from 8.0 percent of current market value in the 1945-49 period to 4.2 percent in 1965-69, farmland values in Minnesota rose steadily over this same period at an average annual rate of 6.0 percent (calculated from figures presented in Table 42). Apparently many buyers of farm real estate gave more weight to anticipated capital gains over time than to annual rental income.*

*Factors other than investment considerations also contributed to rising land prices in the 1950's and 1960's. These include purchases for non-farm use (suburban development, recreation, rural residence), capitalization of farm program benefits into higher land values, and the improved availability of credit for both farm and non-farm land purchase during this period.

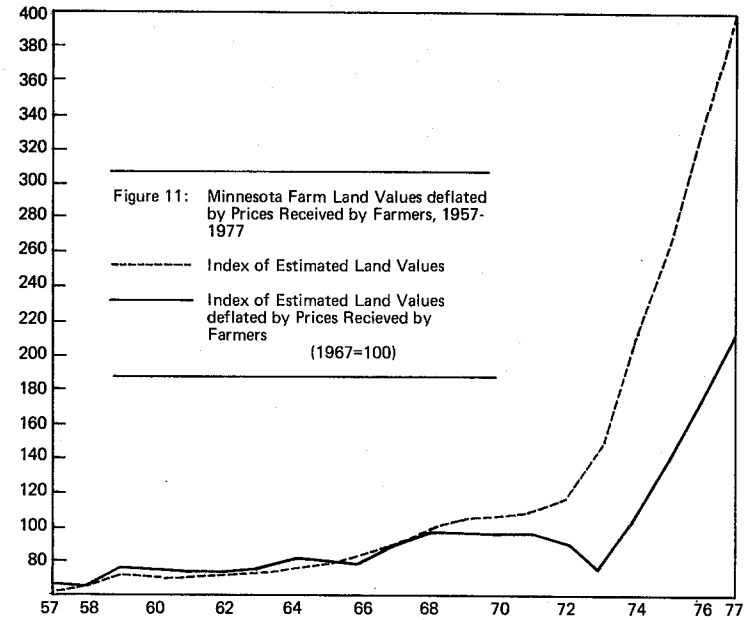
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Figure 11: Minnesota Farm Land Values deflated by Prices Received by Farmers, 1957-1977
Index of Estimated Land Values
Index of Estimated Land Values deflated by Prices Recieved by Farmers
(1967=100)

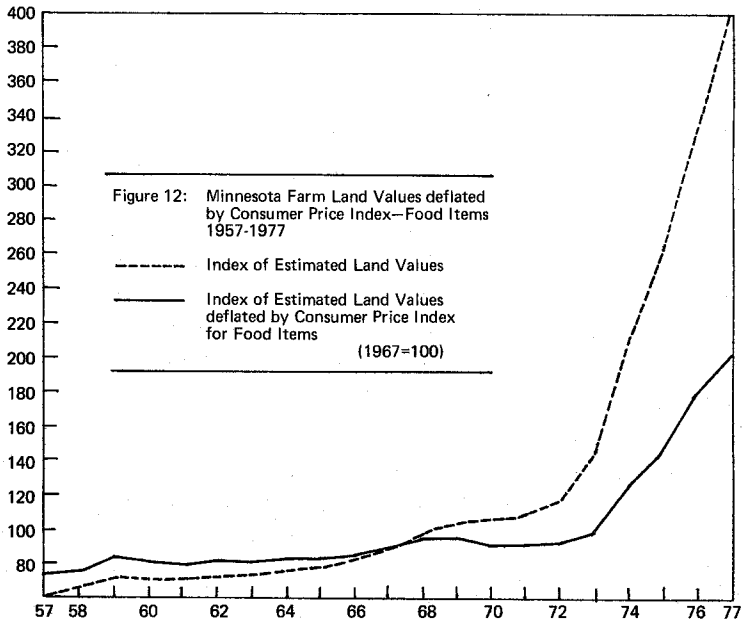
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Figure 12: Minnesota Farm Land Values deflated by Consumer Price Index—Food Items 1957-1977
Index of Estimated Land Values
Index of Estimated Land Values deflated by Consumer Price Index for Food Items
(1967=100)

Land purchase as an investment was in many respects comparable to investing in long-term U.S. Government bonds during most of the 1950's and 1960's until 1968. Both were regarded as very safe investments, and bond yields increased at about the same rate as land values during these years. This strikingly close parallel is illustrated in Figure 13 which displays the index of estimated land values in Minnesota and an index of U.S. Government bond yields calculated for the same 1957-1977 period. After 1968, the yields on government bonds and the rates of land value increases diverged considerably from their earlier pattern. Bond yields jumped upward in 1969 and 1970 only to fall over the next two years and then repeat this same cycle over the 1973-1976 period (Figure 13). Land value increases moderated after 1968 but then turned upward in 1973 and climbed at an even steeper pace during 1974-1977.

The trend in land value increases over the last 20 years can be compared with the yield on long-term government bonds by deflating the index of land values with the index of bond yields. The result is diagrammed in Figure 14 which emphasizes that land prices did not rise relative to bond yields until after 1971. This deflated index of land values shows that land prices actually declined relative to bond yields in several periods, first in 1959, then during both 1969 and 1970, and once again in 1977. The abrupt down-turn for 1977 is in sharp contrast to the precipitous climb during the preceding three years (Figure 14).

The 1977 decline in the deflated land value index reflects a readjustment process occurring in the land market relative to a related investment market (long-term government bonds). Recall that investor buyers paid less for farmland in 1977 than they did a year previous (see Table 17). This may indicate that the yield on alternative investments represented by government bonds had become more attractive to some investors than the long-term prospects of investing in farmland. Investors apparently felt that the current level of land prices was out of balance relative to the land's underlying productivity and farm commodity prices (present and future). In conclusion, this readjustment together with the evidence discussed earlier regarding selective land price declines in parts of western Minnesota in 1977 suggest that future downward price movements may be expected in other areas of the state's rural land market.

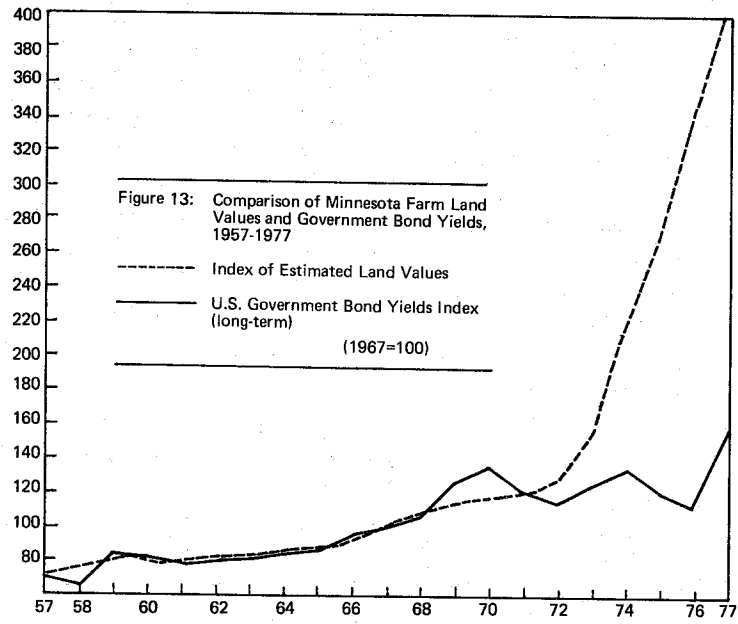
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Figure 13: Comparison of Minnesota Farm Land Values and Government Bond Yields, 1957-1977
Index of Estimated Land Values
U.S. Government Bond Yields Index (long-term)
(1967=100)

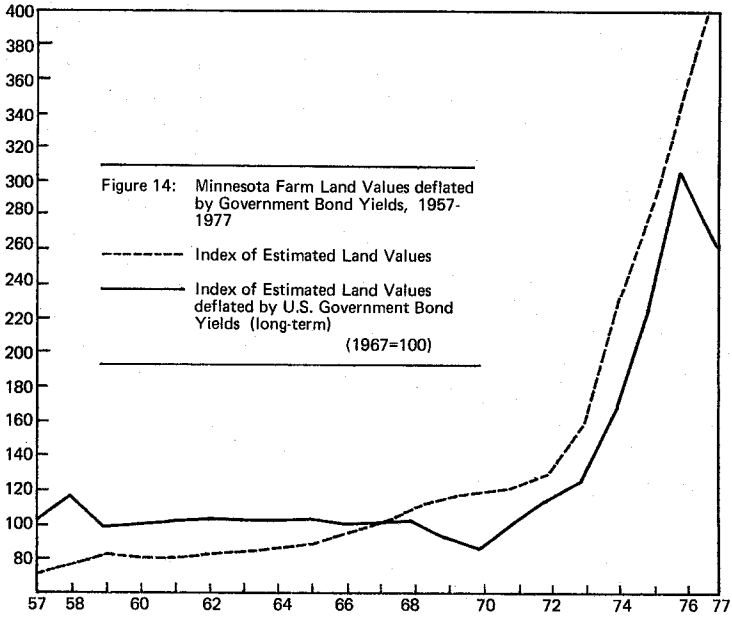
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Figure 14: Minnesota Farm Land Values deflated by Government Bond Yields, 1957-1977
Index of Estimated Land Values
Index of Estimated Land Values deflated by U.S. Government Bond Yields (long-term)
(1967=100)

STATISTICAL APPENDIX

One disadvantage in the use of average prices based upon actual sales is that the averages do not indicate the degree of variation in the data. Quality of land varies greatly in any one county or district, for example, but it is not possible to derive an accurate measure of land quality from this survey. Over time, the quality of land involved in the sales in any one year may also vary.

One measure of this variability in prices is indicated in Table 44. The standard deviation represents the dollar range from the average within which approximately two thirds of the reported sales fall. Assume, for example, a district average of $600 per acre with a standard deviation of $200. This means that approximately two thirds of the sales in that district fell between $400 and $800 per acre. The coefficient of variation is the standard deviation divided by the average sales price, and multiplied by 100 to convert it to a percentage form. In the above example, the coefficient of variation is 33.3 percent. Wider variations in sales price above and below the average create larger coefficients of variation.

In the Northwest district a relatively high coefficient of variation (68.2 percent) results from a wide variation in sales price, particularly between the Red River Valley and neighboring non-Valley areas. The range is from less than $100 per acre in some non-Valley areas to over $1500 per acre in the Valley itself.

Table 42: Average Estimated Value Per Acre of Farm Real Estate in Minnesota by Districts, 1910-1911 through 1944-45, by Two-Year Periods, and Annually, 1946 through 1977.

Years	South-east	South-west	West Central	East Central	North-west	North-east	Minn.
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
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

Table 43: Annual Percentage Change in Estimated Farm Land Values Per Acre, Minnesota 1946-1977.

	%		%
1945-46	16.1	1961-62	1.9
1946-47	10.8	1962-63	1.3
1947-48	9.7	1963-64	3.1
1948-49	5.1	1964-65	3.0
1949-50	2.4	1965-66	7.0
1950-51	16.5	1966-67	6.0
1951-52	8.1	1967-68	8.8
1952-53	-1.9	1968-69	5.7
1953-54	7.6	1969-70	1.8
1954-55	7.1	1970-71	2.2
1955-56	4.1	1971-72	6.9
1956-57	9.5	1972-73	20.2
1957-58	6.5	1973-74	41.9
1958-59	6.8	1974-75	24.1
1959-60	-1.3	1975-76	27.0
1960-61	0.6	1976-77	18.6

Table 44: Average Price Per Acre of Reported Farm Sales, Standard Deviation and Coefficient of Variation, by District, Minnesota, 1961-1977*.

Years	South-east	South-west	West Central	East Central	North-west	North-east	Minn.
			Average Price Per Acre (Dollars)				
1961	189.1	255.8	130.3	89.0	92.0	37.9	165.2
1962	195.7	228.5	140.5	76.3	73.9	30.3	161.1
1963	214.1	221.9	136.2	86.2	108.8	47.6	168.1
1964	213.3	234.3	150.3	86.3	103.6	51.6	178.1
1965	202.0	232.7	133.2	95.8	106.2	39.7	178.0
1966	253.4	260.4	164.3	113.0	103.4	30.6	203.4
1967	272.4	306.1	178.6	92.9	116.6	51.2	214.8
1968	316.0	329.0	186.0	104.0	90.0	47.0	232.0
1969	340.7	334.1	193.6	129.7	120.8	50.7	238.3
1970	346.0	340.0	206.0	141.0	113.0	45.0	243.0
1971	343.6	343.0	204.5	150.3	100.1	43.7	259.0
1972	389.4	365.7	221.7	145.1	107.2	76.4	293.3
1973	443.5	410.1	223.0	178.1	119.7	121.7	298.4
1974	598.4	630.1	339.8	242.7	204.0	144.4	450.1
1975	791.8	843.9	492.9	298.5	352.8	159.3	607.0
1976	937.2	1115.7	663.7	321.3	377.0	209.7	735.2
1977	1216.0	1340.4	708.6	445.7	431.7	197.9	858.8
			Standard Deviation (Dollars)				
1961	83.5	71.9	40.0	47.8	54.1	20.1	86.8
1962	80.7	68.6	45.1	39.1	57.2	29.7	88.5
1963	79.4	77.1	50.8	43.7	69.4	26.1	88.6
1964	91.6	77.3	70.1	52.4	89.9	39.0	97.2
1965	96.3	87.0	82.1	63.5	91.1	31.7	98.1
1966	142.7	95.3	56.7	66.5	65.7	32.2	199.4
1967	115.3	106.2	62.8	67.6	85.4	29.8	127.6
1968	179.0	124.2	77.5	108.5	70.5	41.6	160.7
1969	228.6	123.4	64.5	104.2	83.9	45.0	174.0
1970	189.7	129.6	75.4	105.6	89.5	29.3	162.5
1971	154.3	128.1	66.6	100.7	66.9	28.9	157.4
1972	154.9	136.4	79.0	96.7	70.0	38.8	164.4
1973	183.3	164.1	94.0	97.2	76.8	86.6	188.9
1974	265.2	290.0	147.2	153.0	127.5	60.6	287.7
1975	291.3	373.8	225.0	142.5	220.8	72.2	360.4
1976	359.0	501.4	243.0	176.2	273.2	100.6	457.8
1977	476.9	606.8	305.2	244.1	294.3	99.4	599.0
			Coefficient of Variation (Percent)				
1961	44.2	31.8	30.7	53.7	58.7	53.1	52.6
1962	41.2	30.0	32.2	51.2	77.3	98.0	54.9
1963	37.1	34.8	37.3	40.7	63.8	54.8	52.7
1964	42.9	33.0	46.6	60.8	86.7	75.5	54.6
1965	47.6	37.4	61.6	66.2	85.8	79.8	55.1
1966	56.4	36.7	32.6	58.9	63.8	105.4	58.7
1967	42.3	34.7	35.2	72.8	73.2	58.2	59.4
1968	56.6	37.3	41.6	103.8	78.3	88.5	69.2
1969	67.1	36.9	33.3	80.4	69.5	88.9	73.0
1970	54.8	38.1	36.6	74.9	79.2	65.1	66.9
1971	44.9	37.4	32.6	67.0	66.8	66.1	60.8
1972	39.8	37.3	35.6	66.6	65.3	50.8	56.1
1973	41.3	40.0	42.2	54.6	64.2	71.2	63.3
1974	44.3	46.0	43.3	63.0	62.5	42.0	63.9
1975	36.8	44.3	45.7	47.7	62.6	45.3	59.4
1976	38.3	44.9	36.6	54.8	72.5	48.0	62.3
1977	39.2	45.3	43.1	54.8	68.2	50.2	69.7

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