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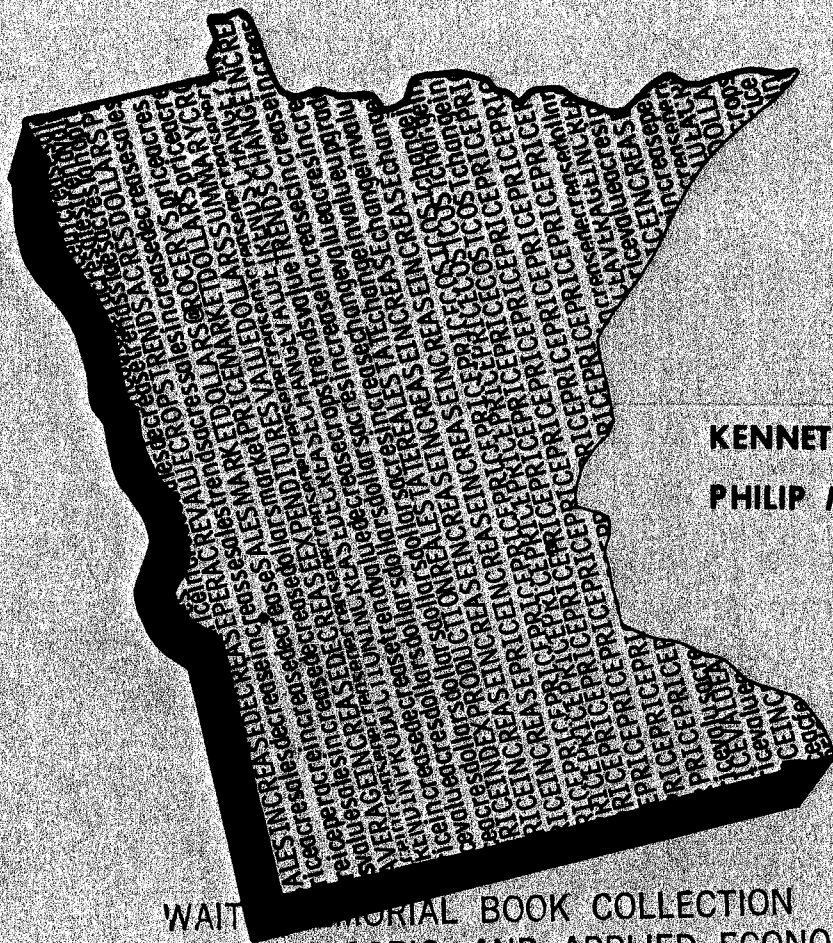
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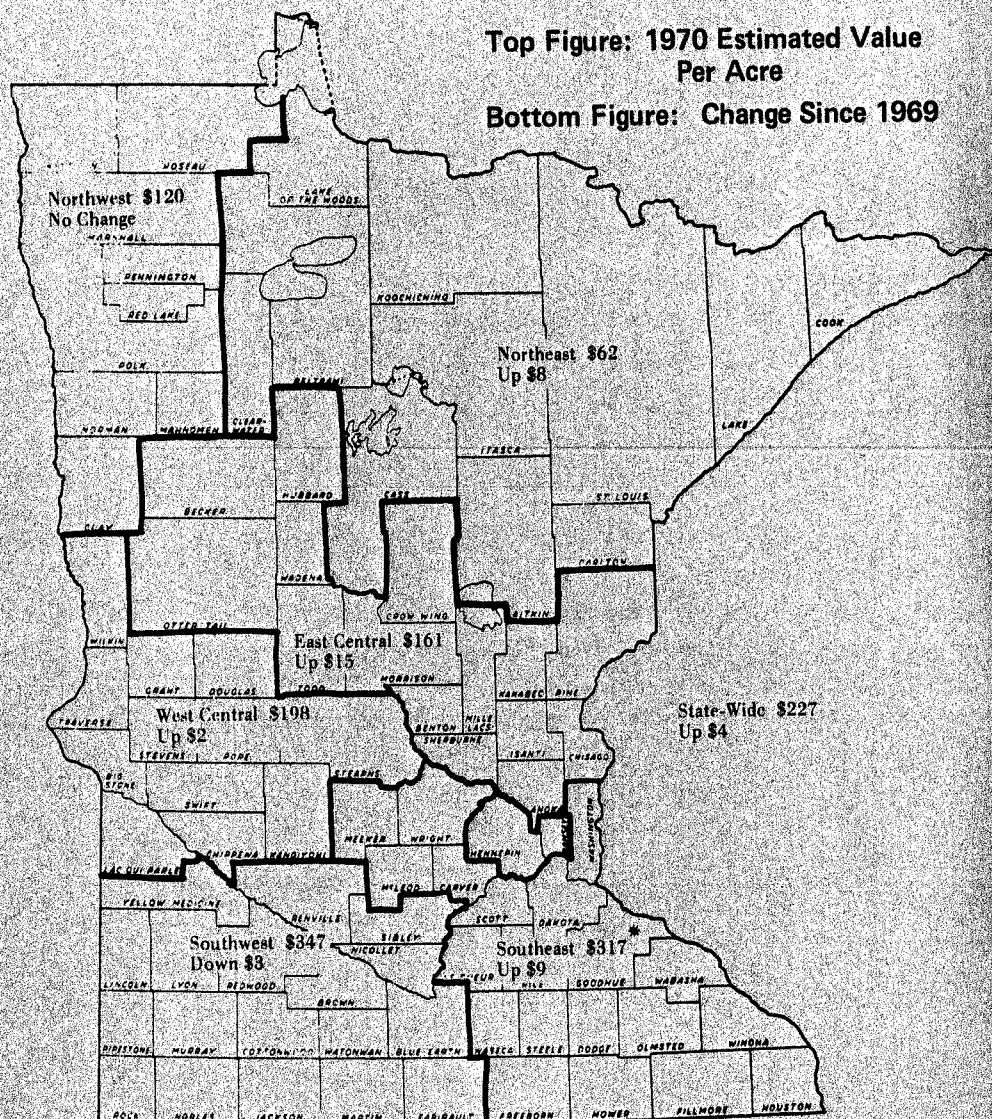
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**Fig. 1 MINNESOTA ESTIMATED AVERAGE FARMLAND VALUE PER ACRE BY DISTRICTS — 1970.**



\* Hennepin and Ramsey Counties Excluded.

378.776  
D34  
M56  
1970

# THE MINNESOTA RURAL REAL ESTATE MARKET IN 1970

by Kenneth Emde and Philip M. Raup

## CONTENTS

Summary .....	1
Procedure .....	2
Part I: The Minnesota Farm Land Market in 1970 .....	3
A. Land Market Trends .....	3
Reporters' Estimates .....	3
Actual Sales .....	4
Activity in the Land Market .....	5
B. Analysis of Reported Sales .....	7
Reason for Sale .....	7
Improved and Unimproved Land .....	7
Type of Buyer .....	9
Land and Building Quality .....	11
Method of Finance .....	12
Spatial Dimensions of the Land Market .....	16
Part II: The Farm Land Market in the Twin City Metropolitan Economic Region, 1970 .....	17
Trends in Estimated Values .....	18
Analysis of Reported Sales .....	19
Part III: The Farm Land Market in the Red River Valley .....	20
Part IV: The Farm Land Market in West Central Minnesota .....	24
Statistical Appendix .....	29



## SUMMARY

### The Minnesota Farm Land Market Report

Reporters' estimates indicate that farm land in Minnesota increased 2 percent in value from mid-1969 to mid-1970. This is substantially less than the 6 percent increase reported for 1968-1969. The East Central and Northeast districts reported the largest increases, at 10 and 14 percent, respectively. The Southeast district suffered a 1 percent decrease.

Rates of increase in farm land values are expected to level off. Activity in the land market slowed considerably in 1970, according to the number of sales reported, reporters' comments, and independent estimates by the U.S. Department of Agriculture.

Farm expansion buyers again dominated the market by paying the highest prices for land and by accounting for the largest percentage of sales.

Contracts for deed were used in financing 59 percent of the sales, an increase of 7 percentage points over last year. This method of finance continues to increase in importance in the state. Prices paid for land financed by contracts for deed averaged \$252 per acre, compared to \$233 for land financed with mortgages, and \$211 for cash sales.

### Metropolitan Economic Region

Farm land prices in the five suburban Metropolitan counties of the Twin Cities (excluding Hennepin and Ramsey) increased by 5 percent, compared to 2 percent for the state as a whole. This is a dramatic decrease, however, from the 17 percent increase reported for 1968-1969.

Agricultural investors — those who are neither expansion buyers nor operating farmers — purchased 38 percent of the tracts sold in the Metropolitan counties. Non-farm investors purchased 23 percent which is a decrease of 5 percentage points from last year. Non-farm investors paid the most per acre.

### Red River Valley

Estimated land values in the Red River Valley increased by 9 percent from 1969 to 1970, compared with a decrease of 34 percent in the Northwestern counties outside the Valley area.

Farm expansion buyers accounted for 89 percent of the sales, virtually the same as in 1969. They also paid the highest price for land.

### High Risk Area

A separate analysis of a "High Risk Area" of nine West Central counties was made in 1960 and repeated in 1970. The average sales price reported in 1970 was \$198 per acre, an increase of 40 percent over 1960. This is substantially lower than the 51 percent increase reported during the same period for the state as a whole but almost the same as the 42 percent increase reported for the Southwestern counties. It must be remembered, however, that prices paid in reported sales can vary significantly from year to year. Repetition of the comparison in 1971 will help establish a more accurate trend.

Expansion buyers purchased 70 percent of the farms reported sold in the high risk area. The same percentage was reported for the Southwest region. Contracts for deed were used to finance 55 percent of the sales, in contrast to 64 percent for the Southwestern counties chosen as a comparison area.

## PROCEDURE

This is the first of two reports on the Minnesota Rural Real Estate Market in 1970. A second report will concern residential property values in towns under 10,000 in population. Special analyses are included in this report of farm land values in the Twin Cities Metropolitan Economic Region, the Red River Valley, and in a nine-county area of West Central Minnesota in which crop yields have shown greater fluctuation than in the southern and eastern parts of the state.

Questionnaires were sent to approximately 1,350 individuals during the month of July. Potential respondents included real estate brokers, agricultural loan specialists, bankers, and other people knowledgeable of farm land values in Minnesota.

The questionnaire was divided into two parts. In the first part respondents were asked to estimate farm land values for average, high, medium and low quality land 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 by the number of acres of land in farms in their county; (2) adding these values county by county for each region; and (3) dividing this total for all counties in a region by the total acreage of land in farms in that region. In making comparisons with 1969, only estimates of respondents who had answered in both 1969 and 1970 were used. On the basis of this rather rigorous restriction, a total of 512 estimates was useable.

The second part of the questionnaire requested data on actual farm sales during the period from January 1 to July 1, 1970. Reports were obtained on a total of 1,357 sales. Questions pertaining to type of buyers and sellers, method of financing, and quality of land and buildings were also asked.

Four types of 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 as either farmers or landlords.
3. Agricultural investors: those who buy farm land to be rented out or managed for farming purposes.
4. Non-farm investors: those who buy farm land that will not be used for farming purposes.

The four groups are mutually exclusive.

The distinction between improved and unimproved land is determined by the presence of buildings. Land with buildings on it is classified as improved land. Land with no buildings is unimproved.

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 can be a problem. That is why reports from respondents who report for two consecutive years are used in constructing the estimates of value.

# PART I: THE MINNESOTA FARM LAND MARKET IN 1970

## A. Land Market Trends

### Reporters' Estimates

The state-wide estimated average value of farm land in 1970 was \$227 per acre, an increase of \$4 or 2 percent over 1969. As Table 1 shows, the increase was not evenly distributed over the state. In the Southwest, West Central and Northwest districts (the predominantly agricultural areas of the state), there was virtually no change over 1969. Almost all of the increase occurred in the Southeast and East Central districts or roughly in the area east of a line from St. Cloud to Albert Lea.

TABLE 1: Estimated Average Value Per Acre of Farm Land by District, Minnesota, 1960-1970.

Years	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
—dollars per acre—							
1960	188	248	133	94	99	64	155
1961	189	247	133	95	103	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

The increase reported in the Northeast district must be interpreted with caution due to the relatively small acreage of farm land in that district, and the erratic influence of non-farm demand for land for recreational and residential uses. Throughout the 1960's there has been essentially no change in the estimated value of farm land in the Northeast district, with the estimated per-acre value in 1970 slightly below that of 1960.

In sharp contrast, land values in the Southeast and East Central districts rose by 69 and 71 percent, respectively, from 1960 to 1970 (Table 2). Over the same period, the largest percentage increase in the western half of the state was 49 percent in the West Central district, followed by 40 percent in the Southwest and 21 percent in the Northwest. (A detailed analysis of trends in the Northwest district is contained in Part III of this report.)

TABLE 2: Percentage Changes in Estimated Value Per Acre, Minnesota, 1960-1970.

District	1970 Value Per Acre	Percent Change From		
		1960	1965	1969
	dollars		percent	
Southeast	317	69	45	3
Southwest	347	40	37	-1
West Central	198	49	36	1
East Central	161	71	44	10
Northwest	120	21	6	0
Northeast	62	-3	22	14
Minnesota	227	46	33	2

For the state as a whole, land values increased 46 percent from 1960 to 1970, but well over half of this increase occurred in three years, from 1966 to 1969. Only the East Central district retained this momentum from 1969 to 1970.

#### Actual Sales

The trend from 1969 to 1970 in prices per acre received in actual sales of farm land is in general the same as that obtained from reporters' estimates. For the state as a whole, estimated values and prices received in actual sales show a 2 percent increase, from 1969 to 1970. The two methods of deriving average prices per acre are compared in Table 3.

TABLE 3: Average Price Per Acre, Estimated and Actual Sales, by District, Minnesota, 1969-1970.

District	1969		1970		Percent Change Over 1969	
	Estimated Value	Sales Price	Estimated Value	Sales Price	Estimated	Actual
	—dollars per acre—				—percent—	
Southeast	308	341	317	346	3	1
Southwest	350	334	347	340	-1	2
West Central	196	194	198	206	1	6
East Central	146	130	161	141	10	8
Northwest	120	121	120	113	0	-6
Northeast	54	51	62	45	14	-12
Minnesota	223	238	227	243	2	2

The principal deviations are in the Northeast and Northwest districts. In the Northeast, reporters estimated a 14 percent increase in values, while reported sales



prices show a 12 percent decrease. This can be explained by the small number of sales, the great variability in land quality, and by the low price of land. A change of a few dollars per acre can result in large percentage changes when average values range from 40 to 60 dollars per acre. As is shown in the Statistical Appendix, the range of fluctuations in values around their means is greatest for the Northeast district, and this has been consistently the case for a number of years.

In the Northwest district, estimated values were unchanged, while sales prices dropped 6 percent. The reasons for these differences are explored in more detail in the separate analysis of land market trends in the Red River Valley, in Part III of this report.

The average prices received per acre in actual sales, by districts, are shown in Table 4, for the period 1960-1970.

TABLE 4: Average Reported Sales Price Per Acre of Farm Land, by District, Minnesota, 1960-1970.

Years	South-east	South-west	West Central	East Central	North-west	North-east	Minnesota
—dollars per acre—							
1960	189	240	136	69	101	50	161
1961	189	226	130	89	92	38	165
1962	196	229	140	76	74	30	161
1963	214	222	136	86	109	48	168
1964	213	234	150	86	104	52	178
1965	213	233	133	96	106	40	178
1966	253	260	164	113	103	31	203
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

#### Activity in the Land Market

A significant decline in land market activity took place in 1970, continuing a trend that started in 1969. Per thousand farms, voluntary sales accounted for 31.8 transfers in 1970, and total transfers (including forced sales, inheritance, gifts, etc.) were at the rate of 43.6 per thousand. In only four of the fifteen years from 1955 through 1969 were lower rates of agriculture turnover reported for Minnesota, as is shown in Table 5.

This sluggishness in the market is confirmed by the data on actual sales supplied by respondents in this annual survey. Only 1,357 sales of farm land were reported during the first six months of 1970, in contrast to 1,738 sales reported for the comparable period in 1969 (Table 6). The decline was apparent in all districts of the state, and was especially strong

in the Northwest and Southeast districts. The average size of tract sold was relatively unchanged from 1969 to 1970 in the Southeast, Southwest and West Central districts, but declined sharply in the East Central and Northwest districts. The most frequent size of sales tract was the quarter section of 160 acres, except for the Northwest district.

TABLE 5: Estimated Number of Farm Title Transfers Per Thousand Farms, by Methods of Transfer, Year Ending March 1, Minnesota, 1953-1970.

Years	Voluntary Sales	Forced Sales (Foreclosures, Tax)	Inheritance, Gifts, and all Other Transfers	Total all Classes
1955	32.5	3.0	9.8	45.3
1956	31.1	6.4	12.9	50.4
1957	34.0	2.8	15.6	52.4
1958	35.6	3.5	14.7	53.8
1959	39.7	2.6	11.4	53.7
1960	34.5	2.7	9.9	47.1
1961	29.0	2.6	7.7	39.3
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

Source: "Farm Real Estate Market Developments" CD-75, Economic Research Service, USDA, September 1970.

TABLE 6: Number of Sales, Acreage of Land Sold and Average Acres Per Sale, by District, Minnesota, January-June, 1969-1970.

District	No. of Sales		Acres Sold		Acres/Sale	
	1969	1970	1969	1970	1969	1970
Southeast	501	342	72,391	47,792	144	140
Southwest	450	383	74,661	65,221	172	170
West Central	268	246	50,781	47,245	203	192
East Central	281	217	43,658	32,432	189	149
Northwest	177	114	45,886	29,835	324	262
Northeast	61	55	11,461	11,673	158	212
Minnesota	1,738	1,357	298,838	234,198	185	173

## B. Analysis of Reported Sales

### Reason for Sale

In all districts of the state, retirement is the most frequent reason given for the sale of farm land, accounting for 39 percent of all sales for the state as a whole (Table 7). In the more urbanized districts (Southeast and East Central) and in the forested Northeast, the next most frequent reason was a decision to quit farming. State-wide, death accounted for one-fifth of all reported sales, with a high of 29 percent in the Southwest and a low of 10 percent in the urbanizing East Central district. In the Southwest, where average farm land values are the highest in the state, death or retirement together accounted for 71 percent of all decisions to sell while "quitting farming" was reported in only 14 percent of the sales. Sellers who stayed in farming and purchased another farm accounted for only 6 percent of reported sales for the state as a whole. The "other" category, with 13 percent of the sales, included reasons of health, foreclosure, sales by speculators and sales to raise money.

TABLE 7: Reason for Selling Land, by District, Minnesota, 1970

Reason for Sale	—District—						Minn.
	South-east	South-west	West Central	East Central	North-west	North-east	
	— percent —						
Death	18	29	21	10	22	13	20
Retirement	37	42	40	39	32	38	39
Left Farming	25	14	19	31	21	32	22
Moved, Still Farming	7	4	5	7	8	11	6
Other	13	11	15	13	17	6	13

### Improved and Unimproved Land

State-wide, 77 percent of all sales were of land with buildings (improved land). As Table 8 shows, this proportion was remarkably constant

TABLE 8: Proportion of Improved and Unimproved Lands Sold, by District, Minnesota, 1970.

District	Improved Land	Unimproved Land
	—percent—	—percent—
Southeast	78	22
Southwest	79	21
West Central	74	26
East Central	85	15
Northwest	59	41
Northeast	75	25
Minnesota	77	23

in all districts except the Northwest and East Central. In the Northwest, 41 percent of all sales were of land without buildings (unimproved land). This large fraction of sales of unimproved land in the Northwest district has held true for a number of years. The fact that only 15 percent of the sales in the East Central district were of land without buildings suggests strongly that many of the buyers were seeking rural residences rather than farm land.

TABLE 9: Average Sales Price Per Acre of Improved and Unimproved Farm Land, by District, Minnesota, 1970.

District	Improved Land	Unimproved Land	Unimproved as a Percent of Improved
	—dollars per acre—		—percent—
Southeast	353	304	86
Southwest	342	330	96
West Central	209	194	93
East Central	142	130	92
Northwest	115	111	97
Northeast	51	23	45
Minnesota	254	200	79

The presence of buildings added very little to the sales price per acre for farm land in all districts except the Northeast (Table 9). As in previous years, unimproved land in the Southwest and Northwest districts sold on average for virtually the same price as land with buildings. Although these relationships between prices received for improved and unimproved land have fluctuated from year to year, Table 10 demonstrates clearly that buildings rarely accounted for more than 20 percent of the sale price of improved land, throughout the last decade.

TABLE 10: Price Differential Between Improved and Unimproved Lands Sold, Minnesota, 1960-1970.

Year	Improved Land	Unimproved Land	Difference	Unimproved as a Percent of Improved
	—dollars per acre—			—percent—
1960	167	123	44	74
1961	169	138	31	82
1962	166	128	38	77
1963	172	144	28	84
1964	181	160	21	88
1965	183	165	18	90
1966	211	158	53	75
1967	222	177	45	80
1968	248	166	82	67
1969	245	206	39	84
1970	254	200	54	79

## Type of Buyer

The proportion of sales to investor buyers dropped sharply, from 21 percent in 1969 to 14 percent in 1970 (Table 11). This is explained almost entirely by an increase in the proportion of sales to operating farmers, in all districts except the Northeast. The contrast between the eastern and western halves of the state is marked. In all three western districts, buyers who are operating farmers accounted for 85 to 89 percent of all sales in 1970. In the three eastern districts, the proportions ranged from 69 percent down to 38 percent. Sales for non-farm purposes were also significant only in these three eastern districts of the state.

TABLE 11: Percent of Tracts Purchased for Farming and Non-Farm Purposes, by District, Minnesota, 1969 and 1970.

District	Farming Purposes				Non-Farm Purposes	
	Operating Farmer		Investor			
	1969	1970	1969	1970	1969	1970
	—percent—					
Southeast	56	69	32	21	13	10
Southwest	81	89	15	8	3	3
West Central	78	87	18	8	4	5
East Central	63	67	17	16	21	17
Northwest	83	85	12	11	4	4
Northeast	48	38	21	38	31	24
Minnesota	69	78	21	14	10	8

In Table 12, the types of buyers are grouped in three classes: operating farmers (who were not adding the land purchased to land they already owned), farm expansion buyers (who were adding the land purchased to land already owned and who may be either operating farmers or investor buyers), and investor buyers who were not adding the land purchased to land already owned. Over the past four years, 1967-1970,

TABLE 12: Percent of Tracts Purchased by Type of Buyer, by District, Minnesota, 1967-1970.

District	Operating Farmer Buyer (Sole Tract)				Farm Expansion Buyer (Operator or Investor)				Investor Buyer (Sole Tract)			
	1967	1968	1969	1970	1967	1968	1969	1970	1967	1968	1969	1970
	—percent—											
Southeast	35	31	33	33	52	53	37	44	13	16	30	23
Southwest	26	29	21	19	63	68	67	72	11	3	12	9
West Central	26	22	27	25	65	71	59	66	9	7	14	9
East Central	45	40	50	57	40	43	32	23	15	17	17	19
Northwest	20	20	21	20	71	70	69	69	9	10	10	11
Northeast	64	60	35	33	33	33	35	17	3	7	30	50
Minnesota	32	30	30	30	57	61	52	55	11	9	18	15

the proportion of all sales to operating farmers who were not buying to expand an existing farm has remained surprisingly constant, at about 30 percent. Among districts, the proportion of sales to this class of buyer increased only in the East Central district, 1967 to 1970.

Sales in 1970 to expansion buyers who already owned some farm land were especially prominent in the Southwest, West Central and Northwest districts, comprising the most rural parts of the state. Investor buyers were an important part of the market in the more urbanized Southeast and East Central districts and in the Northeast. These regional differences suggest that investor buyers of farm land are more interested in land value appreciation due to urbanizing influences than in farm operation for profit.

The prices paid per acre by these three classes of buyers are shown in Table 13. Expansion buyers paid the highest prices, state-wide, but

TABLE 13: Average Sales Price Per Acre by Type of Buyer, by District, Minnesota, 1966, 1969, and 1970.

District	Operating Farmer			Expansion Buyer			Investor Buyer		
	1966	1969	1970	1966	1969	1970	1966	1969	1970
	—dollars per acre—								
Southeast	236	292	327	241	324	311	299	379	406
Southwest	252	317	299	267	335	348	242	313	359
West Central	161	191	202	168	198	209	161	185	172
East Central	109	114	141	115	130	113	119	135	159
Northwest	94	115	85	110	132	175	80	72	57
Northeast	24	50	68	42	37	43	48	59	31
Minnesota	187	212	215	211	239	267	212	260	220

there were important variations by districts. The largest differentials in 1970 were between the prices paid by expansion buyers and investor buyers in the East Central and Southeast districts, where urban influences are strongest. In both of these districts, investor buyers paid 30 to 40 percent more per acre in 1970 than did farm expansion buyers. These data, together with those in Tables 11 and 12, underline the fact that the pressure for farm expansion is felt most keenly in the more rural areas of the state. In the more urbanized districts, the investor and operating farmer buyers are the more vigorous bidders for farm land.

If we refer back to Tables 1, 2 and 4, we will recall that (excluding the Northeast) the smallest proportionate increases in farm land prices, 1960-1970, were in the Southwest, West Central, and Northwest districts. While the data will not permit firm conclusions, Tables 1, 2, 4, 11, 12 and 13 suggest strongly that in the more rural parts of the state the pressure for farm size expansion is still prominent, and dominates the land market in those areas. In the more urbanized areas, farm land buyers are motivated less by the pressure for farm size expansion and more by the prospect of land value appreciation. Between these two forces affecting



the demand for Minnesota farm land, the lure of capital gains has been stronger than the pressure for farm size expansion over the past decade.

### Land and Building Quality

Good quality land in 1970 sold for almost 50 percent more than land of average quality, and well over twice the price of poor quality land (Table 14). Between 1960 and 1970 the largest increases in reported prices were for good quality land (62 percent) followed closely by a 59 percent increase in the price of poor quality land. Land of average quality increased only 51 percent over the decade.

TABLE 14: Price Per Acre for Land of Various Quality, Minnesota, 1960-1970.

Years	Good	Land Quality Average	Poor
	—dollars per acre—		
1960	204	145	94
1970	330	221	153
Percent Increase			
1960 to 1970	62%	51%	59%

For good quality land, the highest prices were paid by investor buyers, but only 24 percent of their purchases were of this quality (Table 15). In contrast 29 percent of their purchases were of poor quality land. Operating farmers and expansion buyers confined their purchases to land of average to good quality. Among the three classes of buyers, operating farmers paid the lowest prices for all three qualities of land.

TABLE 15: Price Per Acre and Percent of Purchases by Type of Buyer for Land of Various Quality, Minnesota, 1970

Type of Buyer	Good		Land Quality Average		Poor	
	dollars	percent	dollars	percent	dollars	percent
Operating Farmer	294	39	197	49	116	13
Expansion Buyer	339	42	236	46	169	11
Investor * (agriculture)	378	24	203	47	157	29
All	330	37	221	47	153	16

\*Excluding investor buyers for non-farm purposes.

Differences among types of buyers are especially marked when building quality is considered. Only 4 percent of the purchases by operating farmers were of land without buildings, while 32 percent of the purchases by expansion buyers were of this type of land (Table 16).

Investor buyers paid the highest prices for land with good buildings but only 15 percent of their purchases were in this class. They also paid the lowest prices for land with poor buildings and for land without buildings. Expansion buyers paid more for land with no buildings (\$241 per acre) than for land with poor buildings (\$233 per acre). They also paid approximately twice as much per acre for unimproved land as did operating farmers or investor buyers.

TABLE 16: Price Per Acre and Percent of Purchases by Type of Buyer for Land with Various Qualities of Buildings, Minnesota, 1970.

Type of Buyer	Good		Building Quality				None	
	\$	%	Average		Poor		\$	%
Operating Farmer	273	35	217	41	165	20	122	4
Expansion Buyer	356	15	279	27	233	26	241	32
Investor * (agriculture)	428	15	290	35	143	25	115	25
All	326	19	259	30	201	23	201	28

\*Excluding investor buyers for non-farm purposes.

State-wide and for all classes of buyers combined, the price paid for land with poor buildings was identical with the price paid for land with no buildings, at \$201 per acre. Land with average buildings sold for 29 percent more than land with poor buildings or no buildings (\$259/\$201). For land with good buildings, buyers paid \$326 per acre, or 26 percent more than land with average buildings and 62 percent more than for land without buildings, or with poor buildings. In interpreting these data it must be remembered that land quality and building quality are frequently interrelated. The increased prices per acre associated with better quality buildings cannot be attributed to building quality alone.

#### Method of Finance

Since the mid-1950's there has been a steady decline in the frequency of cash sales, and a marked decline in the use of mortgages. In contrast, there has been a remarkable increase in the use of contracts for deed (or land contracts) to finance farm land transfers in Minnesota, as shown in Table 17. Only 16 percent of the sales in 1970 were for cash, 25 percent were mortgage-financed and 59 percent were financed by contract for deed. These are the lowest proportions for mortgages and the highest for contracts for deed (or land contracts) ever reported in this annual survey. In 1956, for example, 26 percent of all sales were for cash, 38 percent were financed by mortgages and 30 percent by contracts for deed. This shift has been especially great in the areas of the state where farming predominates. As Table 18 shows, the Southwest

and West Central districts were the two lowest districts of the state in the use of contracts for deed in 1956 but among the three highest in 1970.

TABLE 17: Proportion of Farm Sales by Method of Financing, by District, Minnesota, 1965-1970.

Method of Financing	South- east	South- west	—District—		North- west	North- east	Minn.
			West Central	East Central			
—percent—							
<u>Cash</u>							
1965	17	15	22	21	29	29	19
1966	17	14	14	22	23	37	17
1967	14	15	15	24	16	14	16
1968	17	14	15	24	24	39	19
1969	14	13	16	24	17	22	16
1970	15	13	14	19	20	31	16
<u>Mortgage</u>							
1965	33	39	41	30	27	3	35
1966	35	44	44	39	51	19	41
1967	28	35	35	30	47	51	34
1968	33	32	33	23	34	29	34
1969	32	25	29	34	40	46	32
1970	19	23	28	28	40	26	25
<u>Contract for Deed</u>							
1965	50	45	37	49	44	68	46
1966	48	43	42	39	25	44	42
1967	58	50	50	46	37	35	50
1968	49	53	53	52	42	32	47
1969	54	62	55	42	43	32	52
1970	66	64	58	53	40	43	59

TABLE 18: Trends in the Use of Contracts for Deed, Minnesota, 1956-1970

Year	Percent of Sales, Financed by Contracts for Deed, by District						Minn.
	SE	SW	WC	EC	NW	NE	
1956	39	20	24	41	27	42	30
1960	55	39	38	50	29	52	44
1965	50	45	37	49	44	68	46
1970	66	64	58	53	40	43	59

The shift away from mortgage financing has been especially strong in the Southwest district, where 47 percent of all sales in 1956 were mortgage-financed but only 23 percent in 1970.

State-wide, the average price per acre paid in cash sales was \$211, followed by \$233 per acre for mortgage-financed sales, and \$252 per

acre for those financed with contracts for deed. These averages seem to suggest that the easier financing arrangements and lower down payments made possible by contracts for deed have been reflected in higher prices for land financed in this way. The data in Table 19 will not support this conclusion.

TABLE 19: Average Sales Price Per Acre of Farm Land by Method of Financing, by District, Minnesota, 1965-1970.

Method of Financing	South- east	South- west	—District—				Minn.
			West Central	East Central	North- west	North- east	
—dollars per acre—							
<u>Cash</u>							
1965	209	224	130	74	60	25	157
1966	242	230	155	77	96	18	160
1967	262	302	170	91	97	34	194
1968	332	316	224	141	83	29	228
1969	397	302	190	110	98	42	223
1970	324	294	224	121	107	45	211
<u>Mortgage</u>							
1965	203	227	114	112	138	97	182
1966	250	254	170	134	105	63	207
1967	228	293	167	97	129	46	200
1968	309	316	183	132	140	55	203
1969	316	313	188	144	135	62	221
1970	374	332	187	168	142	53	233
<u>Contract for Deed</u>							
1965	220	241	150	112	135	44	192
1966	257	270	164	107	104	49	220
1967	294	318	187	91	116	60	230
1968	340	337	204	134	97	61	253
1969	344	350	196	120	117	41	250
1970	344	348	213	135	101	42	252

In four of the six districts of the state the highest per-acre prices were paid for land financed with mortgages. Only in the Southwest and West Central districts were prices per acre highest for land financed with contracts for deed, and in the Southwest the difference was less than 5 percent (\$348/\$332). The fact that the state-wide average price per acre is highest for sales financed by contract for deed results from the heavy use of this method of financing in the Southeast and Southwest districts (66 and 64 percent of all sales in 1970, as shown in Table 17), combined with the fact that land prices in these two districts are the highest in the state. This gives them a very heavy weight in calculating a state-wide average price per acre for land financed with contracts for deed.

The tracts purchased with contracts for deed were larger than tracts

purchased for cash or with mortgage financing, in all districts of the state and notably so in the Northwest (Table 20).

TABLE 20: Average Size of Tract by Various Financing Methods, by District, Minnesota, 1970.

District	Methods of Finance		
	Cash	Mortgage	Contract for Deed
		—a c r e s—	
Southeast	107	122	151
Southwest	154	153	182
West Central	129	196	207
East Central	126	138	165
Northwest	180	197	366
Northeast	127	185	287
Minnesota	134	160	189

As we have seen, we cannot conclude from this study that the easier financial terms made possibly by land contracts have been capitalized into higher land prices. What seems to have happened instead is that the easier terms and lower down payments have been used by buyers to purchase more land than could be financed by cash or mortgages. The size of tract purchased is apparently the variable most affected by contract for deed financing, rather than the price per acre.

When quality of land and method of financing are considered, the highest per-acre prices for lands of average and good quality were reported for those sales financed by contract for deed. For poor quality land, the highest prices were for mortgage-financed sales. These relationships were the same in both 1969 and 1970, as shown in Table 21.

TABLE 21: Price Paid Per Acre and Percent of Sales, by Method of Financing and Quality of Land, Minnesota, 1969 and 1970.

Land Quality Class	Cash		Method of Financing				All Sales	
			Mortgage		Contract for Deed			
	1969	1970	1969	1970	1969	1970	1969	1970
<u>Good</u>								
\$ per acre	309	288	248	299	305	350	287	330
% of sales	35	33	37	41	37	37	37	37
<u>Average</u>								
\$ per acre	183	196	212	198	238	227	223	219
% of sales	44	45	52	45	50	48	49	47
<u>Poor</u>								
\$ per acre	148	126	163	183	162	150	160	149
% of sales	21	22	11	14	13	15	14	16
<u>All Grades</u>								
\$ per acre	223	211	221	233	250	252	238	243
% of sales	100	100	100	100	100	100	100	100

## Spatial Dimensions of the Land Market

The Minnesota farm land market is a distinctly local market. For the state as a whole, 51 percent of all sales were to buyers who lived less than five miles away from the tracts they purchased. Two-thirds lived less than ten miles away (Table 22).

TABLE 22: Classification of Farm Land Sales by Distance of Buyer's Residence From Tract, by District, Minnesota, 1970.

District	Distance of Buyer's Residence from Tract Purchased, in Miles						Median Distance
	Less Than 2	2-4	5-9	10-49	50-299	300 and Over	
			— percent —				miles
Southeast	23	19	16	32	7	3	5
Southwest	35	35	17	8	3	2	2
West Central	39	27	14	11	7	2	2
East Central	13	11	8	22	36	10	40
Northwest	39	21	17	11	2	10	3
Northeast	8	6	15	11	20	40	150
Minnesota	28	23	15	17	11	6	4

Sales to neighbors dominate the market in the Southwest and West Central districts where buyers living less than five miles away accounted for 70 and 66 percent of all sales. In the East Central district, in contrast, 46 percent of all buyers lived more than 50 miles from the tracts purchased; in the Northeast the comparable figure was 60 percent.

Only 13 percent of the buyers in the Southwest district lived ten miles or more from the tracts they bought. This indicates clearly the minor role played by investor buyers in this area, which contains some of the best farm land in the state.



## PART II. THE FARM LAND MARKET IN THE TWIN CITY METROPOLITAN ECONOMIC REGION

The Twin Cities Metropolitan Economic Region comprises the two counties containing Minneapolis and St. Paul (Hennepin and Ramsey) plus five surrounding counties: Anoka, Carver, Dakota, Scott and Washington. Although some land is still farmed in Hennepin and Ramsey Counties, farm land in a rural sense has virtually disappeared in these two counties. This section of the report analyzes land market changes in the other five counties of the seven-county metropolitan region.

Population increases in this five-county area have been substantial over the past decade, but not uniform among the counties. As Table 23 shows, population in the five-county region increased by 178,200 or 68.6 percent from 1960 to 1970.

TABLE 23: Population in Five Counties in Twin City Metropolitan Area, 1960-1970.

	Total Population in Thousands			Annual Rates of Growth of Population Components in percent	
	1960 <sup>1/</sup>	1965 <sup>2/</sup>	1970 <sup>3/</sup>	1960-65	1965-70
Anoka	85.9	124.9	154.6	8.1	4.3
Carver	21.3	24.5	28.3	2.8	2.9
Dakota	78.3	104.0	139.8	6.0	6.1
Scott	21.9	28.4	32.4	5.5	2.6
Washington	52.4	67.0	82.9	5.2	4.3
Total, five counties	259.8	348.8	438.0	6.1	4.7

Source: 1. U.S. Census of Population, 1960

2. April 1 Estimates of the Twin City Metropolitan Council

3. U.S. Census of Population, 1970

Two counties, Anoka and Dakota, accounted for 130,200 or 73 percent of this increase over the decade. From 1960 to 1965 Anoka county led with an annual rate of population change of 8.1 percent. This was cut to 4.3 percent for the 1965-70 period, leaving Dakota county as the only one of the metropolitan counties with a sustained annual rate of population growth throughout the decade.

These increases have introduced large demands on rural land for non-farm uses. The percentage of land in farms has steadily declined but remains the dominant land use in four of the five counties. Only Anoka county has less than 50 percent of its land area in farms (Table 24).

TABLE 24: Proportion of Farmland in the Five County Metropolitan Region, 1961, 1964, 1969.

County	Total Land Area	Percent of Land Area in Farms		
		1961	1964	1969
	-000 acres-		—percent—	
Anoka	272	44.6	39.5	30.0
Carver	229.1	86.6	84.8	83.6
Dakota	365.4	75.2	73.9	67.4
Scott	225.3	83.7	82.0	78.2
Washington	249.6	63.9	59.8	53.2

Source: Minnesota Agricultural Statistics, Crop and Livestock Reporting Service, Minnesota Department of Agriculture, 1962, 1965, 1970.

### Trends in Estimated Values

Although reporters' estimates of farm land values in the five counties show a rising trend, the rate of increase slowed noticeably the last two years. From 1959 to 1970 estimated land values increased from \$186 to \$432 per acre, or 132 percent (Table 25). Over this 12 year period, by far the largest percentage increase was in Anoka county, but that increase all came in the earlier years. No increase was reported for Anoka county in 1969-1970.

TABLE 25: Reporters Estimate of the Average Value Per Acre of Farm Land in Five Counties in the Metropolitan Area, Minnesota, 1959, 1968-1970.

County	Estimated Value Per Acre				Percentage Change		
	1959	1968	1969	1970	1959-70	1968-70	1969-70
		—dollars—				—percent—	
Carver	286	353	425	442	55	25	4
Dakota	*	340	388	398	----	17	3
Scott	214	367	411	456	113	24	11
Washington	179	350	438	495	177	41	13
Anoka	114	*	400	400	251	----	0
Average	186	351	411	432	132	23	5

\*Insufficient data.

In the two years, 1968-70, estimated land values increased 23 percent in the five counties, but this comprises 18 percent from 1968 to 1969, and only 5 percent from 1969 to 1970. This increase of 5 percent in 1970 is above the 2 percent reported for the state as a whole, but not by very much. And two counties, Scott and Washington, account for all of the difference. The increase in the three counties of Carver, Dakota, and Anoka combined, is no different from the 2 percent reported for the rest of the state for 1970. Proximity to a large metropolitan area has undoubtedly exerted upward pressures on farm land values but is no guarantee that values will rise continuously and uniformly.

## Analysis of Reported Sales

In sharp contrast to the rest of the state, farm expansion buyers in 1970 played a minor role in the five counties of the metropolitan area, accounting for only 13 percent of the sales (Table 26). Not surprisingly, investor buyers and buyers of farmland for non-farm purposes together accounted for 61 percent of the sales in 1970. They also paid by far the highest prices per acre. These two classes of buyers were responsible for almost all of the increase in price per acre reported in the five-county area.

TABLE 26: Sales Price and Percent of Sales by Type of Buyer, Five-County Metropolitan Area, Minnesota, 1969-1970.

Type of Buyer	Price Per Acre		% Change of Price 1969-70	Percent of Sales	
	1969	1970		1969	1970
	—dollars—		—percent—		
Operating Farmer	496	521	5	10	26
Expansion Buyer	401	432	8	18	13
Investor (Agricultural)	416	617	48	44	38
Non Farm User	667	799	20	28	23

The metropolitan area is also unlike the rest of the state in terms of the spatial characteristics of the farm land market. As Table 27 shows, almost two-thirds of the buyers (64 percent) lived ten miles or more from the tracts they purchased. For the state as a whole, 51 percent of the

TABLE 27: Classification of Farm Land Sales by Distance of Buyer's Residence from Tract, Five-County Metropolitan Area and Minnesota, 1970.

Miles	Metro Area	Minnesota
	—percent—	
Less than 2	11	28
2-4	11	23
5-9	14	15
10-49	55	17
50-299	7	11
300 and over	2	6
Median Distance	20	4

buyers lived less than 5 miles from the land they bought. It will be remembered that in the three districts making up the western half of the state, two-thirds of all buyers lived less than 5 miles from the land purchased (Table 22, above).

The majority of buyers in the five metropolitan counties were thus investors or non-farm users, and came from outside the communities in which the land they bought was situated. They paid from \$100 to \$300 more per acre than did operating farmers or farm expansion buyers, and accounted for almost all of the increase in land prices reported for this area from 1969 to 1970.

### PART III THE FARM LAND MARKET IN THE RED RIVER VALLEY

The Red River Valley is a flat plain extending some 285 miles north from Breckenridge to Lake Winnipeg. It includes the western portions of seven Minnesota counties that border North Dakota, five of which are included in the Northwest district as defined in this land market report. The quality and price of land lying in the Red River Valley is sharply different from that of land lying outside the Valley but in the same counties. For this reason, it is always difficult to interpret the data in this report that are reported for the Northwest district.

This section reports the results of a special study of the land market in the Red River Valley, with boundaries determined by soil classifications, as shown in Figure 2. It will be noted that the southern portion of the Valley includes parts of two counties (Wilkin and Traverse) that are included in the West Central district. The counties and parts of counties that lie in the Northwest district but outside the Red River Valley are used as a comparison area.

Land values increased 9 percent, 1969 to 1970, as shown in Table 28. From 1960 to 1970, land values in the Valley increased 39 percent in contrast to a 51 percent increase for the state as a whole, as reported earlier in Table 4 of Part I.

TABLE 28: Number of Sales, Size of Tract, and Sales Price Per Acre of Farmland in the Red River Valley, 1960-1970.

Item	1960	1968	1969	1970
Number of Sales, Jan.—June	53	60	81	70
Average Size of Tract (Acres)	248	257	268	238
Sales Price Per Acre (dollars)	140	165	178	194
Increase Over Preceding Period				
(dollars)	----	25	13	16
(percent)	----	18	8	9

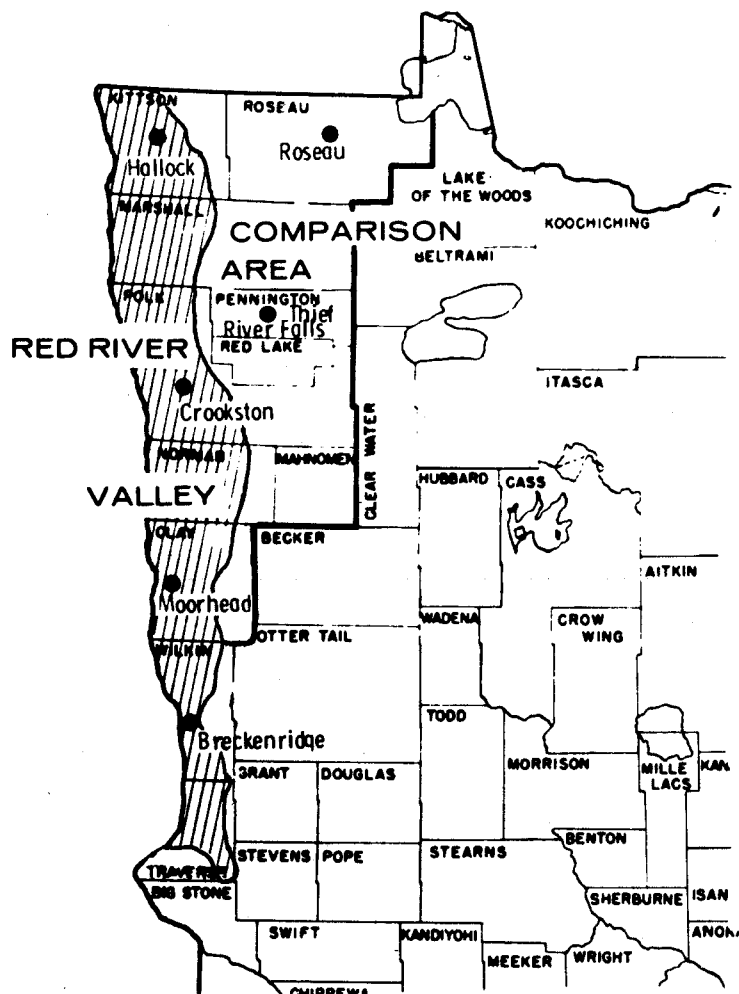
To illustrate the confusion that arises in interpreting land value trends for the Northwest district, Table 3 in Part I above indicated no change in estimated values and a 6 percent decline in prices obtained in actual sales, 1969 to 1970. This discrepancy can be accounted for by analyzing Table 29.

TABLE 29: Comparison of Farm Sales, Red River Valley and Non-Valley Area, Northwest District, Minnesota, 1968-1970.

Item	Red River Valley			% Change 1969-70 percent	Comparison Area			% Change 1969-70 percent
	1968	1969	1970		1968	1969	1970	
Number of Sales	60	81	70	-14	116	134	52	-61
Sales Price Per Acre (dollars)	165	178	194	9	61	104	69	-34

While land prices received in reported sales continued to increase in the Valley in 1970, they declined 34 percent in the comparison area (Non-Valley portion of the Northwest district). The greater decline in land market activity in the comparison area is also indicated by the 61 percent decrease in reported sales, in contrast to a 14 percent decline in the Valley.

**Fig. 2 THE RED RIVER VALLEY  
AND COMPARISON AREA**



This sharp decline from 1969 to 1970 in prices received in actual sales in the comparison area illustrates the danger of relying on sales prices in measuring year-to-year change. The decline from \$104 per acre in 1969 to \$69 per acre in 1970 is due primarily to a few sales of tracts over 1,000 acres at prices in the \$40 to \$60 range. This is reflected in the average acreage per sale of unimproved land in the comparison area, which increased from 158 acres in 1969 to 605 acres in 1970, due to a small number of sales of large tracts (Table 30).

Unimproved land in the Valley in 1970 sold for more than improved land, a relationship that has been noted in some earlier years (though not

in 1968 or 1969). In recent years, the sales in the Valley were more or less evenly divided between improved and unimproved land (Table 30). This is in sharp contrast to the comparison area, where sales of improved land were more than twice as frequent as sales of unimproved land, 1968 through 1970.

TABLE 30: Sales of Improved and Unimproved Land, Northwest District, Minnesota, 1968-1970.

	Number of Sales	Average Acreage Per Sale	Sales Price (dollars)
Red River Valley			
Improved			
1968	23	342	179
1969	37	342	184
1970	32	307	184
Unimproved			
1968	37	202	155
1969	34	187	166
1970	38	181	208
Comparison Area			
Improved			
1968	75	406	67
1969	92	276	99
1970	38	242	80
Unimproved			
1968	41	240	41
1969	25	158	70
1970	14	605	58

In both the Valley and the comparison area, expansion buyers dominated the land market, both in proportion of sales and in price per acre (Table 31).

TABLE 31: Percent of Sales and Price Per Acre by Type of Buyer, Red River Valley and Non-Valley Area, Northwest District, Minnesota, 1969-1970.

Type of Buyer	Red River Valley				Comparison Area			
	1969		1970		1969		1970	
	%	\$	%	\$	%	\$	%	\$
Operating Farmer	8	*	8	127	25	*	33	80
Expansion Buyer	88	*	89	210	65	*	49	106
Investor** (agricultural)	4	*	3	190	11	*	18	50

\* Data not available.

\*\* Excluding investor buyers for non-farm purposes.

In the Valley, expansion buyers accounted for just under 90 percent of all sales in the past two years, while in the comparison area the proportion varied from 49 to 65 percent. The percentages of both operating farmers and investor buyers were approximately three times as high in the comparison area as in the Valley in 1969, and four times as high in 1970.



Variations in prices paid for lands of different quality are great in both the Valley and the comparison area. Good quality land in the Valley sold for almost one-third more in 1970 than in 1969 (\$255/\$188) while in the comparison area there was a 16 percent decline (\$126/\$150) in the value of good quality land (Table 32). Because of the great range in

TABLE 32: Sales Price Per Acre and Percent of Sales by Quality of Land, Red River Valley and Non-Valley Area, Northwest District, Minnesota, 1969-1970.

Land Quality	Red River Valley				Comparison Area			
	1969		1970		1969		1970	
	%	\$	%	\$	%	\$	%	\$
Good	47	188	55	255	36	150	21	126
Average	48	162	35	176	52	78	51	83
Poor	5	161	10	80	12	52	28	53

land quality in both the Valley and the comparison area, the relatively large size of farms, and the small number of sales in any one year, it is hazardous to draw conclusions from data on reported sales. One or two sales of large acreages, as occurred in 1970, can cause sharp fluctuations in year-to-year average prices. Tables 31 and 32 illustrate the limitations of an analysis based on prices received in actual sales, and must be interpreted with that handicap in mind.

Mortgage financing of land sales is more prominent in both the Valley and the comparison area than in the rest of the state (Table 33). As reported in Table 17 in Part I above, mortgages were used to finance only 25 percent of all sales in 1970 state wide, while the percentage has varied from 40 to 50 in the Valley in the past three years.

TABLE 33: Method of Finance, Northwest District, Minnesota, 1968-1970.

Method of Financing	Red River Valley			Comparison Area		
	1968	1969	1970	1968	1969	1970
	—percent—					
Cash	8	14	16	37	16	23
Mortgage	50	40	40	20	39	37
Contract for Deed	30	46	41	41	44	40
Other	12	----	3	2	----	0

# PART IV THE FARM LAND MARKET IN WEST CENTRAL MINNESOTA

The interactions of man, land and climate in West Central Minnesota have made this area a transition zone in both its East-West and North-South dimensions. In a nine-county area that is semi-circular and centered roughly on Lac qui Parle county the probabilities of drought, dust storms, and weather hazards are measurably higher than for the rest of the state. This has led to greater variability in crop yields and to seasonal drought when the rest of the state is comparatively well-watered, as occurred in the Spring of 1971.<sup>1/</sup> The area thus affected, shown in Figure 3, includes counties situated in the West Central and Southwest districts as defined in this report. The remaining counties in these two districts (outlined by the heavy line in Figure 3) are used as a comparison area. A special study of the land market in that part of the state was included in the annual report for 1960.<sup>2/</sup> This section of the report for 1970 repeats that study in order to permit comparisons over a ten-year period. Both the 1960 and 1970 studies are based on an analysis of data from actual sales.

Although the average price of \$198 per acre in 1970 was much lower than the \$321 reported for the comparison area, the rates of change over the past decade were almost the same for both areas (Table 34). Sales prices increased 40 percent in the high risk area, 1960 to 1970, and 42 percent in the comparison area. The variability of sales prices per

TABLE 34: Analysis of Reported Sales, High Risk Area and Comparison Area, Minnesota, 1960 and 1970.

Item	High Risk Area		Comparison Area	
	1960	1970	1960	1970
Number of Sales	157	173	373	477
Average Size of Tract(acres)	188	175	167	176
Average Sales Price Per Acre (dollars)	141	198	226	321
Standard Deviation(\$)	51	71	83	129
Coefficient of Variation (percent)	36	36	37	40

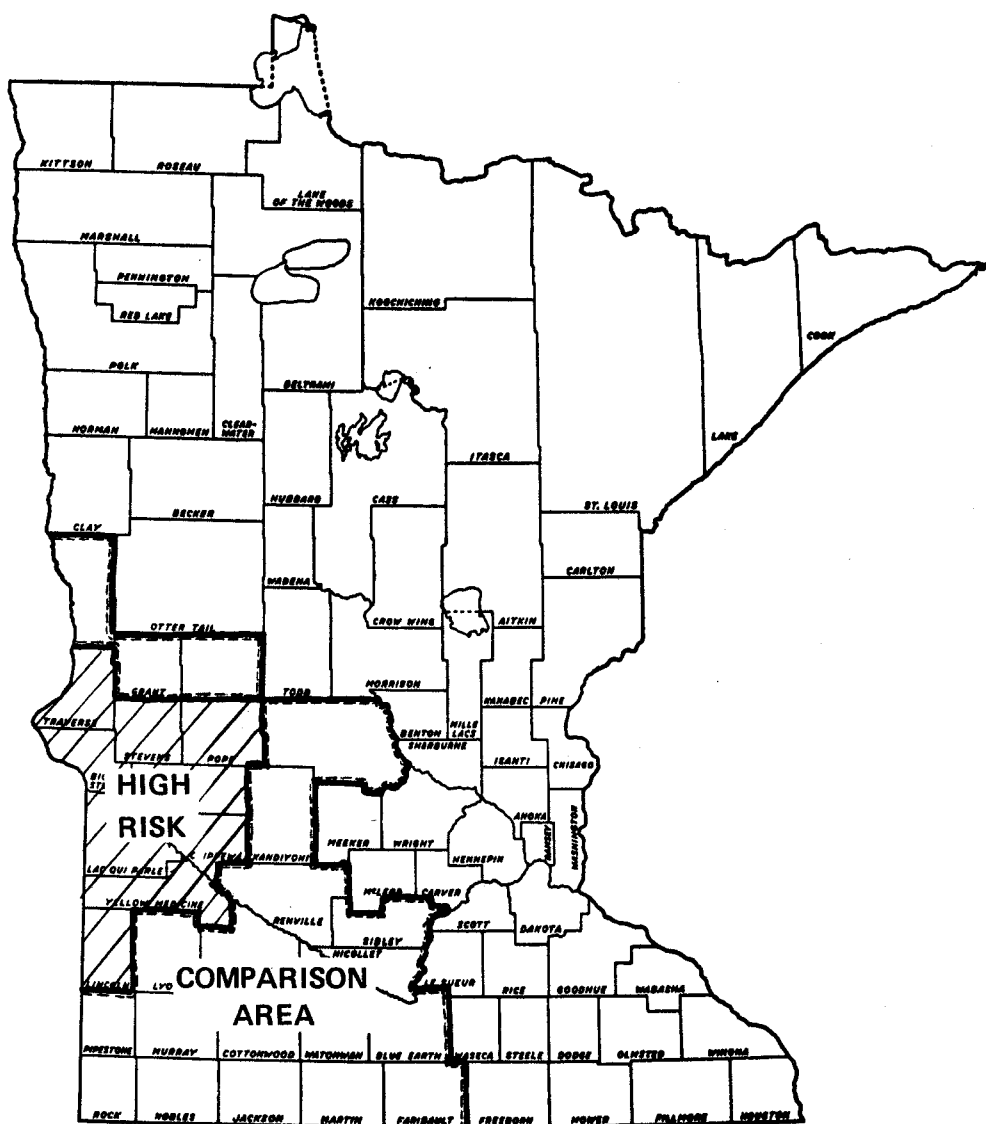
acre was also roughly the same in both areas, and for both 1960 and 1970, as shown by the coefficients of variation in Table 34. (For an explanation of the meaning of standard deviation and coefficient of variation, see the Statistical Appendix.)

Just under 80 percent of all sales in both area in 1970 were of land with buildings (improved land), as shown in Table 35. In both the high

<sup>1/</sup> "Dry spring, high winds cause blowing topsoil in state areas," Minneapolis Star, April 16, 1970, p. 19-A.

<sup>2/</sup> J.E. Johnson and P.M. Raup, "The Minnesota Farm Real Estate Market in 1960," December 1960. Report No. 518. Department of Agricultural Economics, University of Minnesota.

Fig. 3 THE HIGH RISK  
AND COMPARISON AREA



risk and comparison areas, the biggest relative increases in land prices 1960 to 1970 were for unimproved land. Over the decade, improved land in the high risk area increased 36 percent in price per acre (\$203/\$149) and 42 percent in the comparison area (\$323/\$228). The comparable percentages for unimproved land were 53 percent in the high risk area (\$179/117) and 52 percent in the comparison area (\$308/\$203). In 1970, unimproved land sold for 88 percent of the price of improved land in the high risk area, and 95 percent in the comparison area.

TABLE 35: Average Sales Price Paid Per Acre and Percent of Sales in Each Area Classified Improved Land and Unimproved Land, High Risk Area and Comparison Area, Minnesota, 1960 and 1970.

Class	High Risk Area				Comparison Area			
	1960		1970		1960		1970	
	%	\$	%	\$	%	\$	%	\$
Improved Land	65	149	79	203	84	228	78	323
Unimproved Land	35	117	21	179	16	203	22	308

The proportions of sales to operating farmers, expansion buyers and investors in 1970 were almost identical for both the high risk and comparison areas (Table 36). Expansion buyers bought 70 percent of all

TABLE 36: Classification of Sales in Each Area According to Type of Buyer, High Risk Area and Comparison Area, Minnesota, 1960 and 1970.

Type of Buyer	High Risk Area				Comparison Area			
	1960		1970		1960		1970	
	%	\$	%	\$	%	\$	%	\$
Operating Farmer	28	*	20	183	48	*	22	291
Expansion Buyer	59	*	70	208	42	*	70	326
Investor** (agricultural)	13	*	10	151	10	*	8	349

\* Data not available.

\*\* Excluding investor buyers for non-farm purposes.

tracts sold in both areas in 1970. They also paid the highest per-acre prices in the high risk area, but were edged out by investor buyers in the comparison area.

Land price differentials due to land quality were substantial in both areas, but greatest in the high risk area (Table 37).

Good land sold in 1970 for twice the price of poor land in the high risk area (\$250/\$128) while this difference was 70 percent (\$373/\$219) in the comparison area. The proportions of land in the three quality classes were approximately the same in both areas.

Whether or not the land contained poor buildings or no buildings made virtually no difference in prices paid per acre in both areas. Land without buildings actually sold for the same price as land with average quality buildings, and for more than land with a set of poor buildings, in the comparison area (Table 38).

TABLE 37: Percent of Sales in Each Area According to Reporters' Estimated Quality of Land, High Risk Area and Comparison Area, Minnesota, 1960 and 1970.

Quality of Land	High Risk Area				Comparison Area			
	1960		1970		1960		1970	
	%	\$	%	\$	%	\$	%	\$
Good	39	*	40	250	49	*	46	373
Average	48	*	41	185	39	*	42	296
Poor	13	*	18	128	12	*	12	219

\* Data not available.

TABLE 38: Proportion of Sales and Price Per Acre According to Reporters' Estimated Quality of Buildings, High Risk Area and Comparison Area, Minnesota, 1960 and 1970.

Quality of Buildings	High Risk Area				Comparison Area			
	1960		1970		1960		1970	
	%	\$	%	\$	%	\$	%	\$
Good	16	*	12	235	23	*	21	377
Average	28	*	20	205	40	*	33	308
Poor	21	*	18	182	20	*	24	295
None	35	*	50	179	17	*	22	308

\* Data not available.

In interpreting Table 38 it is important to remember the warning given above, in the discussion of Table 16: Land with good buildings consistently sells for a higher price than land with average or poor quality buildings. This does not mean that the higher quality buildings are responsible for the higher price, because land quality and building quality are often closely related.

In both the high risk area and the comparison area, the highest prices per acre were paid for land financed with contracts for deed (Table 39).

TABLE 39: Price Paid Per Acre and Percent of Sales by Method of Financing, High Risk Area and Comparison Area, Minnesota, 1970.

Method of Financing	High Risk Area		Comparison Area	
	%	\$	%	\$
Cash	16	189	12	309
Mortgage	29	186	24	306
Contract for Deed	55	207	64	325
All	100	198	100	321

Among methods of financing, the price differentials were quite small in both areas. The lowest prices were paid for lands financed with mortgages, but these prices were 90 percent of the contract for deed prices in the high risk area and 94 percent in the comparison area.

Although the level of land prices per acre in the high-risk area was only 62 percent of the average for the comparison area in 1970 (\$198/\$321), the characteristics of the land market are quite comparable in both areas. This was true of the magnitude and variability in rate of change in land prices, 1960 to 1970; relative prices paid for improved and unimproved land; type of buyer; price variations due to quality of land and buildings, and method of financing. The differences with regard to these variables between the high risk area and the comparison area were smaller in 1970 than in 1960.



## STATISTICAL APPENDIX

One disadvantage of determining average values according to actual sales is that it fails to indicate the degree of variation in the data. Quality of land, for example, affects the value of land. It is not possible, however, to accurately measure land quality from this survey. Since land quality varies from year to year in the sample of sales reported, variation of averages occurs.

This variability of prices is indicated in Table 41. The standard deviation represents the dollar range from the average within which two-thirds of the reported sales fall. Suppose, for example, a district averaged \$100 per acre with a standard deviation of \$50. This means that two-thirds of the sales in that district would fall between \$50 and \$150 per acre. The coefficient of variation would be the standard deviation divided by the average sales price. In the above example, the coefficient of variation would be 50 percent. Higher variations of sales price would create larger coefficients of variation.

Variability of prices has increase in the Northwest district. The inconsistency that occurred between the estimate and actual sales method could be partially accounted for by price variances.

High price variances also occurred in the East Central district where there is considerable urban influence. The lowest coefficient occurred in the Southwest and West Central districts.

TABLE 40: Average Estimated Price Per Acre of Farm Real Estate in Minnesota by Districts, 1910-1911 Through 1944-1945, by Two-Year Periods, and Annually, 1946 Through 1970.

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

TABLE 41: Average Price Per Acre of Reported Farm Sales, Standard Deviation and Coefficient of Variation, by District, Minnesota, 1960-70.\*

	Year	South-east	South-west	West Central	East Central	North-west	North-east	Minn.
Average Price Per Acre (dollars)	1960	189.1	240.4	136.4	69.3	100.8	49.5	160.9
	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	340	206	141	113	45	243
Standard Deviation (dollars)	1960	90.4	77.0	47.7	48.6	76.6	42.1	95.8
	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	119.4
	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
Coefficients of Variations (percent)	1960	47.8	32.0	35.0	70.2	76.0	85.1	59.5
	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	80.3	69.5	88.9	73.0
	1970	54.8	38.1	36.6	74.9	79.2	65.1	66.9

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