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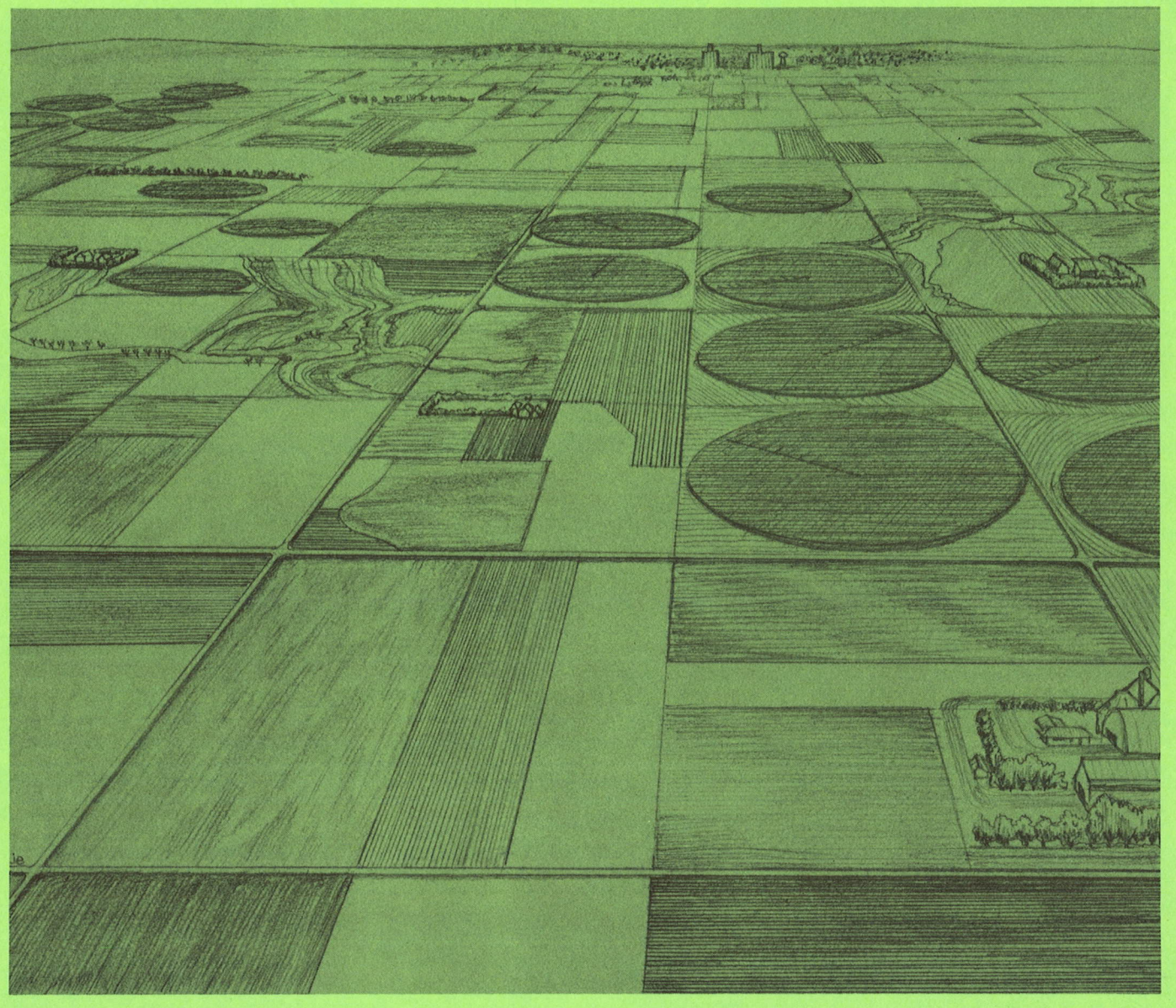
Department of Agricultural Economics
Report No. 118 July, 1981



The Agricultural Experiment Station
University of Nebraska-Lincoln
Institute of Agriculture & Natural Resources

NEBRASKA FARM REAL ESTATE

MARKET DEVELOPMENTS IN 1980-81

by

Bruce B. Johnson & Ronald J. Hanson*

June, 1981

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The authors wish to express their appreciation to the survey reporters for their participation in completing and returning the Nebraska farm real estate market survey questionnaire. Without their efforts and interest, the availability and publication of the data within this report would not be possible. Special thanks is also extended to the Federal Land Bank of Omaha for providing the farmland sales data for Nebraska published in this report.

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SUMMARY

Farmland values have steadily appreciated over the past four decades, but the largest advances have occurred since 1971. During the last ten years, Nebraska farmland values have increased nearly twice as fast as inflation.

However, the past year ending February 1, 1981, was an exception. Farmland in Nebraska appreciated about 10 percent, which was comparable to the overall rise in the General Price Level. So, in real terms (purchasing power), farmland values were essentially stable across the State during the last year.

Considerable variation in value trends across Nebraska was evident in the findings of the Department of Ag Economics fourth annual farm real estate market developments survey for 1980-81. The largest percentage gains were reported in the western portions of the State, while severe drought conditions contributed to the more moderate changes in the eastern areas.

These estimated average values reported obviously represent a wide range of land values, even within the same areas of the State. For virtually all types of farmland, it is not uncommon for high grade land to be valued more than 50 percent higher than low grade land. Consequently, these estimated values are very generalized, serving as benchmarks or indicators of changes rather than as proxies for values of specific farmland tracts in an area.

Market participation continues to be dominated by those buying land for expansion of present operations and/or investments to hedge against inflation. Thus, the buying side of the farmland market tends to remain sensitive to those economic conditions within the farm production sector. On the selling side, estate settlement and retirement sales constitute the bulk of market activity. Most farmland is locked into an existing operation with the owners having little or no intention of offering their land for sale. Thus, these characteristics tend to slow farmland value appreciation during periods of economic uncertainty and push values even higher during improved economic conditions.

NEBRASKA FARM REAL ESTATE MARKET DEVELOPMENTS IN 1980-81

Introduction

This report is the fourth in a continuing annual series concerning developments and trends in the farm real estate market. The compiled information has been drawn from several sources. A major source is the 1981 Nebraska Farm Real Estate Market Survey conducted by the Department of Agricultural Economics at the University of Nebraska-Lincoln. In addition, several data series published by the U.S. Department of Agriculture have been used. Agricultural census information compiled by the U.S. Department of Commerce and unpublished data from the Nebraska Crop and Livestock Reporting Service were also used in this report.

Included in this report are: 1) estimates of current market values for Nebraska farmland and associated value trends; 2) characteristics of farmland transfers; and 3) 1981 cash rental rates for Nebraska farmland. Also included are several historical data series located in the Appendix.

Trends in Farmland Values

For four decades, the value of farm real estate in Nebraska has steadily increased (Appendix Table 1). During that period, the average value of Nebraska farmland has climbed from less than $25 per acre to nearly $660 per acre today. The per farm value of real estate, which was under $10,000 in 1940, now averages nearly $500,000.

Nebraska's farming sector were down in 1980 as a result of drought-stressed yields, sharply higher input costs, and low prices for several products. Thus, active farmers, the major buyer group in Nebraska's farmland market, were generally cautious during the past year. In addition, record high interest rates probably tended to further reduce market enthusiasm for buying land.

The situation described above was not unique to Nebraska. More moderate advances in land values were generally recorded throughout the country with the 48-state average being a 9 percent gain. Throughout much of the Midwest, farmland value gains were below the national average. For Nebraska's neighboring states, the rates of increase for the 12-month period ending February 1, 1981, were as follows: South Dakota, 6.0 percent, Iowa, 7.1 percent; Missouri, 7.1 percent; Kansas 3.0 percent; Colorado, 8.6 percent; and Wyoming, 7.1 percent.

For obvious reasons, it is increasingly important that inflation be considered in economic trend analysis. Given a general rate of inflation in the economy, the face (or nominal) value of an asset such as farmland, must appreciate at a rate at least equivalent to that of inflation for the owner to maintain an equivalent purchasing power. If the nominal rate of appreciation falls below the inflation rate, then the real value of the asset has fallen.

Historically, the increase in farmland values have outpaced the general rate of inflation. This has afforded landowners not only an effective hedge against inflation but also a mechanism to enhance their asset (or wealth) position in real (purchasing power) terms. For example, those who have owned Nebraska farmland over the past 10 years have seen this asset grow in value roughly twice as fast as inflation. Real gains in purchasing power to land-

owners have averaged 7 percent per year. The value of a dollar compounded annually at 7 percent per year will double in 10 years. Hence, these farmland owners have seen the real value of their asset double in 10 years time.

Although this long run trend has been favorable, year-to-year fluctuations have been considerable. According to Appendix Table 2, annual changes in deflated farmland values for Nebraska since 1971 have ranged from -8.7 percent to over 19 percent.2/

For the year ending February 1, 1981, Nebraska farmland values in real terms remained essentially stable. While the nominal appreciation for farmland averaged 9.7 percent, the General Price Level advanced 9.4 percent from the first quarter of 1980 to the first quarter of 1981; thus essentially negating the nominal increase in value. In the case of irrigated land, the State average increase was only 7.7 percent or nearly 2 percent below the rate of inflation, implying a slight reduction in the real value of Nebraska's irrigated land.

One must recognize, however, that the State's farmland base is highly variable. This is quite obvious in Appendix Table 3 which presents county land value data from the 1978 Census of Agriculture. As a consequence, farmland value trends must be analyzed with a greater degree of refinement than that offered by this USDA series. The annual Nebraska Farm Real Estate Market Survey is one mechanism designed to provide this greater detail for farmland value levels and trends.

2/ The General Price Level using the GNP implicit price deflator is used in this analysis as a measure of inflation. For production assets such as farmland, this is believed to be a more appropriate measure of inflation than the Consumer Price Index (CPI) which is weighted heavily towards consumer items.

1981 Nebraska Farm Real Estate Market Survey

Each February 1st, the Department of Agricultural Economics-UNL conducts a statewide mail survey of farm real estate market conditions. Questionnaires are mailed to about 500 reporters comprised of rural appraisers, real estate brokers, professional farm managers, farm mortgage lenders, and others knowledgeable of the current land market in their area. The findings of the 1981 survey are reported in the following sections.

Reported 1981 Farmland Values for Nebraska

Survey reporters were asked to estimate farmland values in their respective counties as of February 1, 1981. Estimates were made for seven major classes of farmland. These estimates were then aggregated by crop reporting district. These districts are shown in Figure 1.

The survey findings reveal substantial variation in market conditions among many areas of the State (Table 2). During the year ending February 1, 1981, strongest market conditions were evident in western Nebraska. The largest percentage increases in farmland values were reported in the Panhandle (Northwest Crop Reporting District). Dryland cropland and tillable grazing land values in that area were reportedly more than 20 percent higher than a year earlier. Strong value advances in dryland cropland having no irrigation potential also occurred in the Southwest and South Districts. In large measure, these gains were probably attributed to a record 1980 wheat crop and improved price levels. Likewise, economic conditions for other crops in western Nebraska also showed improvement during the past year, thus leading to more "bullish" activity in the land market for that area.

In rather marked contrast was the eastern part of the State where modest value advances generally occurred. Rather severe drought conditions

NEBRASKA CROP REPORTING DISTRICTS

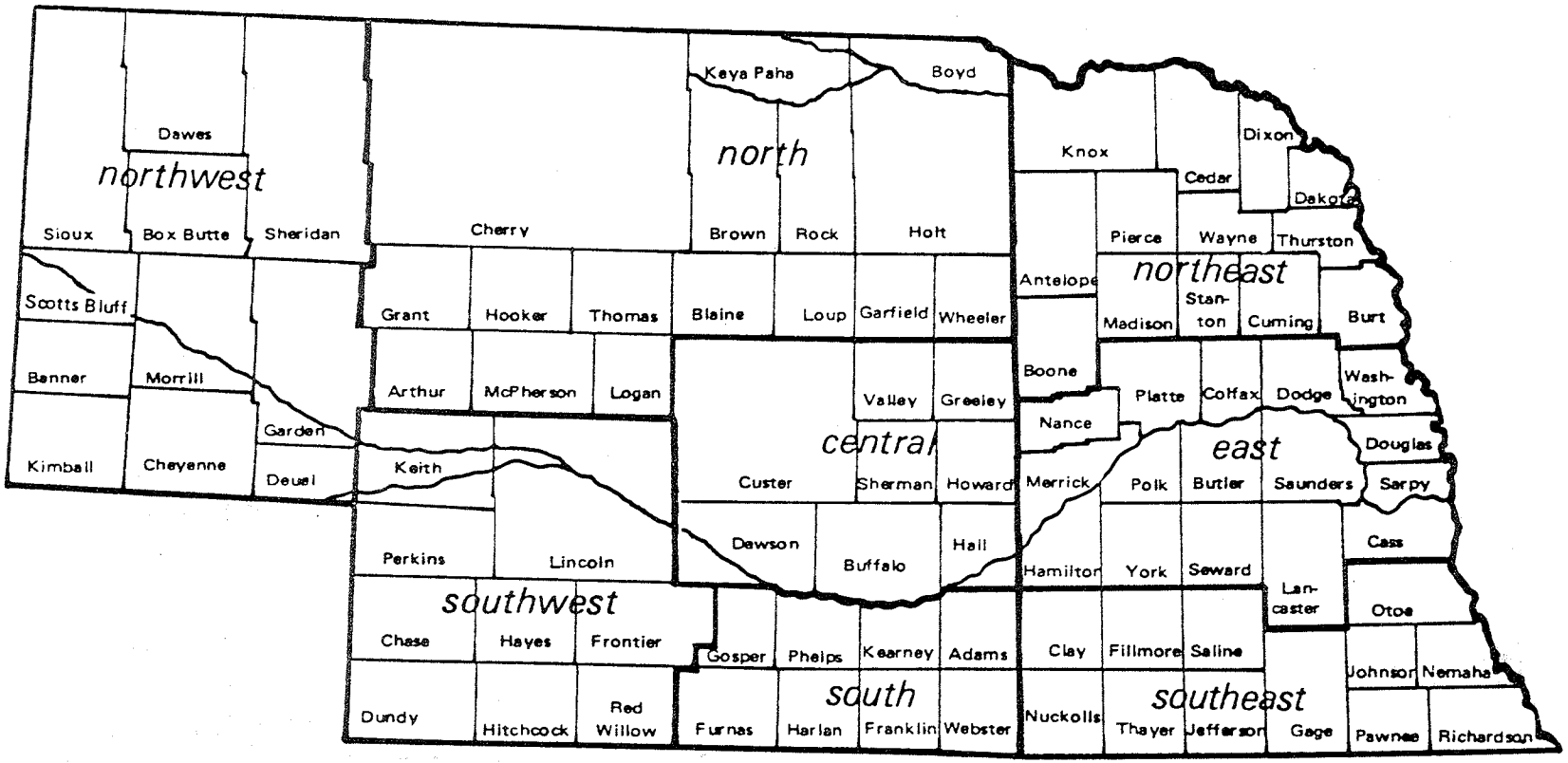

Figure 1

Table 2. Average Reported Value of Nebraska Farmland For Different Types of Land by Crop Reporting District, Feb. 1, 1980 and Feb. 1, 1981.[a/]

Type of Land & Year	Crop Reporting District							
	North-west	North	North-east	Central	East	South-west	South	South-east
	Dollars Per Acre							
Dryland Cropland (No irrigation potential)								
Rpted in 1981...	419	346	1,009	519	1,409	546	754	1,060
Rpted in 1980...	347	340	920	471	1,296	454	626	971
% Change	20.8	1.8	9.7	10.2	8.7	20.3	20.5	9.2
Dryland Cropland (Irrigation potential)								
Rpted in 1981...	680	533	1,225	880	1,785	733	1,432	1,402
Rpted in 1980...	533	563	1,132	767	1,733	628	1,282	1,352
% Change	27.6	-5.3	8.2	14.7	3.0	16.7	11.7	3.7
Grazing Land (Tillable)								
Rpted in 1981...	251	257	622	435	881	332	697	636
Rpted in 1980...	200	261	583	395	760	307	621	643
% Change	25.5	-1.5	6.7	10.1	15.9	8.1	12.2	-1.1
Grazing Land (Nontillable)								
Rpted in 1981...	164	182	418	339	620	217	398	474
Rpted in 1980...	143	169	394	304	549	190	346	473
% Change	14.7	7.7	6.1	11.5	12.9	14.2	15.0	0.2
Hayland								
Rpted in 1981...	323	331	558	482	738	368	417	532
Rpted in 1980...	301	338	506	441	699	349	402	554
% Change	7.3	-2.1	10.3	9.3	5.6	5.4	3.7	-4.0
Gravity Irrigated Cropland								
Rpted in 1981...	1,555	1,054	1,781	2,088	2,403	1,493	2,230	2,026
Rpted in 1980...	1,369	1,020	1,547	1,976	2,317	1,329	2,046	1,968
% Change	13.6	+3.3	15.1	5.7	3.7	12.3	9.0	3.0
Center Pivot Irrigated Cropland[b/]								
Rpted in 1981...	973	816	1,456	1,312	2,110	1,105	1,732	1,900
Rpted in 1980...	894	886	1,372	1,223	2,043	971	1,535	1,795
% Change	8.8	-7.9	6.1	7.3	3.3	13.8	12.8	5.9

[a/] Source: 1980 and 1981 Nebraska Farm Real Estate Market Survey.

[b/] Value of pivot not included in per acre value.

prevailed there in 1980 and likely weakened market enthusiasm for a time. Even when crop commodity prices rebounded in mid-year, caution continued to exist. As a result, most eastern Nebraska farmland appreciated at rates below the general level of inflation, and owners of farm real estate in these areas experienced some loss in the purchasing power of their land assets during the year ending February 1, 1981.

In the North Crop Reporting District, which is basically the Sandhills, little or no appreciation occurred. In fact, certain types of land reportedly declined in dollar and/or nominal value during 1980. Again, drought conditions and the resulting declines in cropland and rangeland production seemed to be a major dampening effect.

These current changes in values and the apparent sensitivity of these values to farm income conditions supports the argument that the farm real estate market tends to move somewhat erratically in the short run. Real and even nominal decreases in farmland values for a local area can and do occur in any given year as the short run economic outlook changes. However, longer run expectations generally predominate in the farmland market. As a consequence, the 1980 performance in some areas in terms of little or no appreciation, may be merely a momentary slowup and adjustment in expectations in an otherwise upward climbing trend in farmland values. This can be seen in Appendix Table 4 and Table 3 which offer an expanded time perspective (three years). Appendix Table 4 presents the entire series of reported land values (1978-81) from the Nebraska Farm Real Estate Market Survey. Table 3 presents the total percentage change and the annual average for the past three years. Over this three-year period, appreciation has occurred in all regions of Nebraska for all types of farmland. In most

Table 3. Changes in Farmland Values, 1978-81: Total Percentage Change and Average Annual Change, For Different Types of Land by Crop Reporting District.[a/][b/]

Item	Crop Reporting District							
	North-west	North	North-east	Central	East	South-west	South	South-east
	Percent							
Dryland Cropland (No Irrigation Potential)								
1978-81								
Total % Change	45.0	36.8	55.7	62.7	72.5	51.7	61.1	60.6
Annual Ave.	13.2	11.0	15.9	17.6	19.9	14.9	17.2	17.1
Dryland Cropland (Irrigation Potential)								
1978-81								
Total % Change	66.3	37.7	65.3	49.2	58.2	55.6	64.0	47.1
Annual Ave.	18.5	11.2	18.2	14.3	16.5	15.9	17.9	13.7
Grazing Land (Tillable)								
1978-81								
Total % Change	41.8	34.6	43.7	45.5	60.5	54.4	49.9	46.9
Annual Ave.	12.3	10.4	12.8	13.3	17.1	15.6	14.4	13.7
Grazing Land (Nontillable)								
1978-81								
Total % Change	42.6	44.4	35.7	56.9	61.5	82.4	48.5	50.5
Annual Ave.	12.5	13.0	10.7	16.2	17.3	22.1	14.1	14.6
Hayland								
1978-81								
Total % Change	39.2	24.4	50.8	29.6	54.7	59.3	39.9	43.4
Annual Ave.	11.6	7.5	14.7	9.0	15.7	16.8	11.8	12.8
Gravity Irrigated Cropland								
1978-81								
Total % Change	24.8	32.4	72.9	35.2	48.0	31.7	57.9	44.3
Annual Ave.	7.7	9.8	20.0	10.6	13.9	9.6	16.4	13.0
Center Pivot Irrigated Cropland								
1978-81								
Total % Change	26.2	20.4	52.3	49.6	42.2	35.9	69.3	47.7
Annual Ave.	8.1	6.4	15.0	14.4	12.4	10.7	19.2	13.9

[a/] Source: Annual Nebraska Farm Real Estate Market Surveys, 1978-81.

[b/] Annual average change compounded annually.

cases, these value increases have exceeded the amount of inflation (30 percent) during this 3-year period.[3/] The only exceptions were center pivot irrigated land in the Northwest and North Districts, gravity irrigated land in the Northwest, and hayland in the North and Central Districts.

The average market values previously discussed usually represent a wide range of land values, even within a crop reporting district (Table 4). For example, the per acre dollar differential between high grade and low grade gravity irrigated land in Central Nebraska approaches $1,000 per acre. For virtually all types of farmland, it is not uncommon for the high grade land to be valued more than 50 percent higher than the low grade land. This implies that the estimated average values are, by nature, very generalized, serving as benchmarks and indicators of change rather than as proxies for the value of specific tracts.

Farm Real Estate Market Activity

Based upon estimates compiled by USDA, the annual turnover rate in ownership of Nebraska farmland dropped about five percent during the year ending February 1, 1981 (Table 5). The total transfer rate per 1,000 farms was 36.3 transfers as compared with 38.3 during the previous 12-month period. The distribution of title transfers by type of transaction was basically unchanged. Voluntary sales accounted for nearly three-fifths of all transfers.

These figures would suggest that approximately 2,300 farm title transfers took place in Nebraska during the year ending February 1, 1981. Since these transfers typically are not whole farm units but rather parcels, the 36

3/ Inflation as measured by the change in the General Price Level, 1st quarter 1978 to 1st quarter 1981. Refer to Appendix Table 2 for more detail.

Table 4. Average Reported Value Per Acre of Nebraska Farmland For Different Types of Land and Grade by Crop Reporting District, Feb. 1, 1981.[a/]

Type of Land & Quality[b/ c/]	Crop Reporting District							
	North-west	North	North-east	Central	East	South-west	South	South-east
	Dollars Per Acre							
Dryland Cropland (No Irrigation Potential)								
Average.....	419	346	1,009	519	1,409	546	754	1,060
High Grade..	520	380	1,380	685	1,550	625	890	1,290
Low Grade...	340	270	820	415	1,025	405	580	820
Dryland Cropland (Irrigation Potential)								
Average.....	680	533	1,225	880	1,785	733	1,432	1,402
High Grade..	745	610	1,480	1,260	1,995	800	1,565	1,575
Low Grade...	510	420	980	700	1,325	565	925	1,105
Grazing Land (Tillable)								
Average.....	251	257	622	435	881	332	697	636
High Grade..	285	325	750	530	1,035	400	865	700
Low Grade...	190	225	550	375	730	260	470	515
Grazing Land (Nontillable)								
Average.....	164	182	418	339	620	217	398	474
High Grade..	195	230	535	375	760	245	480	525
Low Grade...	135	135	340	265	500	180	330	350
Hayland								
Average.....	323	331	558	482	738	368	417	532
High Grade..	370	395	795	560	905	490	535	620
Low Grade...	260	270	420	355	640	305	365	475
Gravity Irrigated Cropland								
Average.....	1,555	1,054	1,781	2,088	2,403	1,493	2,230	2,026
High Grade..	1,930	1,385	2,090	2,450	2,705	1,665	2,465	2,275
Low Grade...	1,100	935	1,445	1,480	1,820	1,165	1,655	1,630
Center Pivot Irrigated Cropland[d/]								
Average.....	973	816	1,456	1,312	2,110	1,105	1,732	1,900
High Grade..	1,000	910	1,745	1,555	2,295	1,215	1,815	2,075
Low Grade...	710	610	1,130	930	1,595	850	1,270	1,545

[a/] Source: 1981 Nebraska Farm Real Estate Market Survey.

[b/] The terms, High Grade and Low Grade Lands, were interpreted by the individual reporter to represent an approximation of range in average values for each particular type of land in his area. No specific designation as to particular soil type or other quality classification was made.

[c/] High Grade and Low Grade estimates are rounded to the nearest $5.

[d/] Pivot not included in per acre value.

Table 5. Estimated Number of Farm Title Transfers Per Thousand Farms in Nebraska, by Type of Sale, Year Ending March 1, 1960-1981.[a/][b/]

Year	Voluntary Sales	Estate Settlements of Tax Sales	Forced Sales (Foreclosures, Tax)	Inheritance, Gifts, and All Other Transfers	Total
			Number per 1,000 Farms		
1960....	19.5	.7	.8	16.6	37.6
1961....	21.5	.9	.9	17.2	40.5
1962....	18.0	.2	.4	15.3	33.9
1963....	22.0	.3	-	13.3	35.6
1964....	18.5	-	.4	15.9	34.8
1965....	27.6	.7	.5	11.8	40.6
1966....	28.2	-	1.0	19.2	48.4
1967....	27.0	-	.7	12.6	40.3
1968....	26.9	-	-	12.1	39.0
1969....	22.1	.3	-	13.5	35.9
1970....	23.5	-	0.6	12.0	36.1
1971....	19.4	-	0.7	12.6	32.7
1972....	29.7	8.0	1.0	3.8	42.5
1973....	32.8	5.5	0.4	4.0	42.7
1974....	31.7	11.3	0.5	11.3	54.8
1975....	19.2	5.8	-	3.3	28.3
1976....	20.6	6.7	.2	5.4	32.8
1977....	19.8	8.1	1.2	5.7	34.8
1978....	14.4	8.4	1.9	6.0	30.6
1979....	22.9	9.0	1.9	6.1	39.8
1980....	21.9	8.2	1.1	7.0	38.3
1981....	21.3	8.1	1.2	5.7	36.3

[a/] Source: Farm Real Estate Market Developments report series, U.S. Department of Agriculture.

[b/] Since 1976, the year refers to the year ended February 1st.

transfers reported per 1,000 farms does not imply that 3.6 percent of the total farmland acreage was transferred. Given the historical pattern of transfer size being less than half the average size of farm units, it is likely that ownership changed on less than 2 percent of Nebraska's farmland during the past year.

Respondents to the 1981 Nebraska Farm Real Estate Market Survey also indicated rather stable market activity during 1980 relative to previous years (Table 6). More than half (56 percent) responded that the number of farmland sales in their area remained essentially unchanged from the previous year. One out of five respondents believed sales had increased. These reporters estimated sales had increased an average of 17 percent. Evidence of increased activity was most frequently reported in the western part of the State. Of those who reported sales were down, the average estimated decrease was 23 percent.

As for anticipated market activity during 1981, 70 percent of the respondents expected no change in farmland sales activity (Table 7). Less than one out of ten respondents (8 percent) expected reduced sales activity relative to the previous 12-month period, while 22 percent anticipated some increase in sales for their area.

Reasons for Buying and Selling Land in Nebraska During 1981

Survey respondents were asked to report the reasons among buyers for purchasing farmland/ranchland in their local areas during 1980. Referring to the frequency of responses presented in Table 8, expansion of the present operation continued to be the predominant reason reported in all crop reporting districts. Farm expansion accounted for 52 percent of all responses for both 1978 and 1979 respectively. Purchasing land as an

Table 6. Survey Respondents' Estimates of the Percentage Change in the Number of Nebraska Farmland & Ranchland Tracts Sold During the Past Year (Feb. 1, 1980 to Feb. 1, 1981).[a/][b/]

	The Number Sold:		
	Increased	Decreased	Remained the Same
Proportion of Responses Reported....	21%	23%	56%
Average Percentage Change Reported.....	+17%	-23%	

[a/] Source: 1981 Nebraska Farm Real Estate Market Survey.

[b/] Percentage change relative to sales during previous 12-month period.

Table 7. Survey Respondents' Estimate of the Expected Percentage Change in the Number of Nebraska Farmland and Ranchland Tracts Which Will Be Sold During the Next Year (1981-1982).[a/][b/]

	The Number To Be Sold Will:		
	Increase	Decrease	Remain the Same
Proportion of All Responses Reported....	22%	8%	70%
Average Percentage Change Reported.....	+17%	-25%	

[a/] Source: 1981 Nebraska Farm Real Estate Market Survey.

[b/] Percentage change relative to sales during previous 12-month period.

Table 8. Reasons Given by Reporters Why Land Was Purchased in 1980 by Crop Reporting District in Nebraska.[a/]

Crop Reporting District	Reasons for Buying							
	Expansion of Operation	Investment or Inflation Hedge	Starting Farming	Irrigation Development	No Land To Rent	Tax Advantage	Other	Total
	Percent							
Northwest.....	43	29	5	-	-	-	23	100
North.....	45	25	-	-	5	5	20	100
Northeast.....	48	32	8	-	2	-	10	100
Central.....	50	22	3	5	3	3	14	100
East.....	50	26	4	2	5	-	13	100
Southwest.....	50	22	8	3	3	-	14	100
South.....	55	30	7	-	4	-	7	100
Southeast.....	56	20	12	-	-	4	8	100
STATE.....	50	25	6	2	3	1	13	100

[a/] Source: 1981 Nebraska Farm Real Estate Market Survey.

investment or hedge against inflation also showed a high degree of frequency.

It should be pointed out that these reasons reported in Table 8 are not necessarily mutually exclusive of each other. For example, farm expansion and the desire for an investment to hedge against inflation may both be important in the final decision to purchase a land tract offered for sale. Likewise, these investment decisions are tied closely to tax advantage considerations for many buyers in the farm real estate market.

The most frequent reasons as reported in Table 9 for offering farmland/ranchland for sale in Nebraska during 1980 were: (1) estate settlement, (2) retirement or health, (3) financial problems and (4) investment profit taking. The frequency and ranking of importance for these reasons presented in Table 9 have remained consistent with the survey results reported in the three previous years. However, the findings in Table 9 show that there are some differences in the relative frequency of these reasons among the various crop reporting districts in Nebraska.

As in the three previous annual survey reports, the results presented in Tables 8 and 9 continue to suggest that land in Nebraska is held in "tight hands." Most landowners are not willing to sell their land holdings unless forced to do so by death, retirement, poor health or financial pressures. In essence, most farmland is locked into an existing farming operation with owners having little or no intention of offering it for sale within the immediate future. These characteristics of the farm real estate market in Nebraska tend to stabilize land values during periods of economic uncertainty and push land selling prices even higher during improved economic conditions.

Table 9. Reasons Given by Reporters Why Land Was Sold in 1980 by Crop Reporting Districts in Nebraska.[a/]

Crop Reporting District	Reasons for Selling						
	Estate Settlement	Retirement or Health	Profit Taking	Reduce Taxes	Financial Problems	Other	Total
	Percent						
Northwest...	18	40	5	-	5	32	100
North.....	18	32	9	5	27	9	100
Northeast...	32	24	14	2	14	14	100
Central.....	33	23	14	-	20	10	100
East.....	40	26	14	-	9	11	100
Southwest...	36	31	5	-	18	10	100
South.....	50	32	4	-	7	7	100
Southeast...	36	29	9	-	15	11	100
STATE.....	35	28	10	1	14	12	100

[a/] Source: 1981 Nebraska Farm Real Estate Market Survey.

Farmland Sales in Nebraska During 1980

The Federal Land Bank of Omaha maintains a comprehensive data series on farmland and ranchland sales for their entire four-state district. All federal land bank associations and their respective branch offices complete a land sale data reporting sheet for each bona fide land sale in their area. Using this procedure, information on nearly 1000 land sales in Nebraska was collected for 1980. Several interesting aspects from these sales can be identified from Table 10.

The average size of land tract sold varied widely among the crop reporting districts for Nebraska as shown in Table 10. For example, the 127 acre average for the East District suggests that most sales of land tracts were between 80 and 160 acres in size. In contrast, land tracts sold in the northern and western areas of Nebraska were considerably larger in size. The average size (225 acres) of all land tracts sold for 1980 in Nebraska was clearly smaller than the 307 acre average reported in 1979.

As reported in previous survey reports, the average size of each land tract sold is smaller than the average size of a farming operation. This implies that most sales in the Nebraska farm real estate market consist of land parcels rather than whole unit farms being sold. With larger capital outlays required for buying a farmland tract and record high interest rates for financing an increasingly larger share of the purchase cost, there are more potential buyers in the market for smaller size land tracts offered for sale. Thus sellers often receive a higher per acre selling price by dividing up a complete farming unit and selling the farm as parcels.

Results presented in Table 10 further show that 58 percent of all farm acreage sold during 1980 was cropland while the remaining 42 percent of the land sold in Nebraska was pasture. This is in sharp contrast to

Table 10. Characteristics of Bona Fide Farmland Sales by Crop Reporting Districts in Nebraska, 1980.[a/]

Crop Reporting District	Average Size of Tract Sold	Percent of Acreage:		Average Price		Percent of Sales:	
		Cropland	Pasture	Per Acre	Per Tract	For Cash	Where Debt Was Incurred
	Acres	Percent	Percent	Dollars	Dollars	Percent	Percent
Northwest.....	379	56	44	507	192,000	13	87
North.....	610	17	83	337	205,400	8	92
Northeast.....	159	85	15	1,084	172,400	11	91
Central.....	246	45	55	758	186,400	12	88
East.....	128	88	12	1,457	186,500	6	94
Southwest.....	426	41	59	510	217,300	7	93
South.....	176	62	38	1,000	175,800	14	86
Southeast.....	144	83	17	1,215	175,000	8	92
State.....	225	58	42	822	185,000	9	91

[a/] Source: Sales data for 1980 collected by the Federal Land Bank Associations in Nebraska of the Federal Land Bank of Omaha.

1979 when 43 percent of all land sold was cropland. As would be expected, these proportions of cropland and pasture varied widely among the crop reporting districts across Nebraska.

Nearly all sales of farmland during 1980 involved the use of credit in the purchase transaction. Only 9 percent of all sales reported were cash purchases. This compares to 8 percent and 10 percent of all sales reported respectively for 1979 and 1978.

Although the average selling price ($822 per acre) for 1980 was 31 percent higher than the average selling price of $627 per acre reported for 1979, the total selling price per tract ($185,000) was 4 percent less than the total selling price of $192,600 per tract in 1979.

1981 Cash Rental Market Situation

In analyzing the farm real estate situation, it is important to consider the farmland rental market for two reasons. First, the incidence of farmland leasing is significant. In Nebraska, about two out of every five acres of farmland is rented. Consequently, active farmers often view the rental market as a companion to the transfer market, since both can be viable alternatives for acquiring the necessary land base. Secondly, rental returns (either crop-share or cash) represent a reasonable measure of returns to farmland investment. Since farmland is a productive asset whose value is tied closely to expected earnings, rental rates are a key variable in analyzing land values trends.

In light of the above, several questions pertaining to cash rental rates were asked in the 1981 Nebraska Farm Real Estate Market Survey.

Reporters were asked to estimate 1981 cash rental rates for various types of land use in their area. These average rates and ranges are presented in Table 11.

Table 11. Estimated 1981 Cash Rental Rates of Nebraska Farmland For Different Types of Land by Crop Reporting District, Feb. 1, 1981.[a/]

Type of Land	Crop Reporting District							
	North-west	North	North-east	Central	East	South-west	South	South-east
	Dollars Per Acre							
Dryland Cropland								
Average Rate	b/	b/	60	43	68	35	38	55
Range	b/	b/	25-80	20-75	40-100	20-60	25-40	40-85
Gravity Irrigated Cropland								
Average Rate	b/	b/	107	117	114	97	117	115
Range	b/	b/	100-120	80-150	90-135	65-120	75-135	75-150
Center Pivot Irrigated Cropland								
Average Rate	b/	71	117	102	118	91	126	119
Range	b/	60-105	100-135	75-150	90-145	75-120	100-140	85-150
Dryland Alfalfa								
Average Rate	b/	b/	53	47	56	31	45	45
Range	b/	b/	30-80	35-75	35-80	25-40	40-60	30-60
Irrigated Alfalfa								
Average Rate	b/	b/	88	92	96	b/	90	b/
Range	b	b/	50-120	65-110	60-125	b/	50-110	b/
Other Hayland								
Average Rate	b/	21	b/	37	39	34	b/	35
Range	b/	18-25	b/	30-40	25-65	20-40	b/	25-45
Pastureland (Per Acre)								
Average Rate	6	8	33	16	28	10	14	26
Range	4-8	5-13	20-45	12-25	12-45	7-15	12-17	15-50
	-Dollars Per Animal Unit/Mo.-							
Pastureland (Per Animal Unit/Mo.)[c/]								
Average Rate	13.00	13.30	12.85	15.80	12.65	14.40	13.75	12.90
Range	12-15	11-17	8-15	12-18	10-17	13-16	12-15	10-17

a/ Reporters' estimated cash rental rates for the 1981 season, 1981 Nebraska Farm Real Estate Market Survey.

b/ Insufficient number of reports.

c/ A cow and calf combination is assumed to be 1¼ animal units.

In most regions, 1981 rents on irrigated cropland are in excess of $100 per acre. Rates of $115 to $135 per acre were commonly reported. Generally, cash rents on center pivot irrigated tracts were slightly above those for gravity irrigated cropland. The labor savings with center pivot systems may encourage tenants to bid higher cash rents for these tracts. In the Central District, however, rates on center pivot systems were lower than gravity rates. This probably reflects a land quality differential between the two types of systems for this area.

Irrigated land cash rents are up slightly in 1981, but certainly showing a more moderate increase than those of recent years.[4/] One apparent exception to this upward movement is the North District. Returns to irrigation in this area were down in 1980, resulting in cash rental rates being lower in 1981.

For 1981, dryland cropland rates across most of the State are similar to year-earlier levels. Cash leasing, by nature, places the full risk of adverse weather conditions on the tenant. Given last year's short crop and a large moisture deficit entering 1981, many tenants were apparently reluctant to bid aggressively for cash rental land. In contrast to the above, dryland cropland rental rates in Southwestern Nebraska were reportedly about 9 percent above 1980 levels; reflecting a more favorable crop and income situation for that part of the state.

According to survey respondents, pasture rental rates increased slightly in 1981. On an animal unit per month basis, the current rate is generally in the S13 to $14 range.

4/ For 1980 estimated rents, see Nebraska Farm Real Estate Market Developments in 1979-80, Report No. 105, Department of Agricultural Economics, UNL, June, 1980.

Respondents in the 1981 survey were also asked about characteristics of cash rental contracts in their area. One question asked for an estimate of the relative incidence of written contracts versus oral agreements. On the basis of responses ot this question, more than three out of every five cash rental arrangements (63 percent) are written contracts. For those contracts which are written, reporters estimated that more than three-fourths (78 percent) are one-year contracts subject to annual renewal. Also of these written cash leases, about one out of every seven were estimated to have disaster clauses which would alter the negotiated cash rental rate if a crop failure and/or other adverse economic conditions occurred.

Payment patterns for cash rental leases generally involve two payments during the year. Ninety-three percent of the respondents indicated that the two-installment payment scheme is the typical pattern in their area. Most noted that the first payment is due on March 1st of each crop year, with the second payment due at a specified date in the fall (the most frequently-reported date being September 1st).

As previously noted, farmland cash rental rates represent a proxy for earnings. Therefore, some correlation exists between these rates and the market values of farmland. This historical pattern is presented in Table 12 which summarized, in three-year moving averages, the average gross rent and associated rent-to-value ratio for irrigated land, dry cropland, and grazing land in Nebraska. This time series reveals a steady increase in cash rental rates for each type of land. For the past 10-year period, rental rates have more than doubled. However, this upward trend in cash rental rates has not been as dramatic as the value increases. This is evidenced by the gradual decline in the average rent-to-value ratio. This decline is one indication that an expectation of future growth in earnings over time has

Table 12. Reported Cash Rents and Ratios of Rent-To-Value For Various Land Types in Nebraska, 3-Year Moving Averages, 1971-81.[a/]

Time Period (3-Yr. Moving Average)	Irrigated Land		Dry Cropland		Grazing Land	
	Rent Per Acre	Rent-To-Value Ratio	Rent Per Acre	Rent-To-Value Ratio	Rent Per Acre	Rent-To-Value Ratio
	Dollars	Percent	Dollars	Percent	Dollars	Percent
1971-73.....	42.70	8.7	19.30	7.4	5.00	5.6
1972-74.....	49.30	8.9	22.20	7.5	5.30	5.2
1973-75.....	58.30	8.8	25.10	7.3	6.30	5.4
1974-76.....	69.30	8.2	28.80	6.8	7.30	5.3
1975-77.....	79.30	7.7	32.40	6.5	8.30	5.1
1976-78.....	85.30	7.4	35.70	6.3	9.10	5.1
1977-79.....	89.70	7.3	40.60	6.2	9.70	5.0
1978-80.....	93.70	6.8	43.80	6.0	10.00	4.8
1979-81.....	100.70	6.6	47.20	5.8	10.40	4.5

[a/] Source: Based upon unpublished data collected annually by the Nebraska Crop and Livestock Reporting Service.

been bid increasingly into land values. In other words, current earnings will not justify today's land values; but apparently in the minds of today's buyers the anticipated growth in earnings will.

The ratio of cash rent to market value can serve as a guideline in the determination of value. Take, for example, dryland cropland. If a particular tract is (or could be) cash rented under competitive conditions for $75 per acre, then its market value should be approaching $1,300 per acre ($75 ÷ .058). Likewise, Nebraska grazing land with a cash rent of $18 per acre has a market value in the $400 per acre range ($18 ÷ .045). Obviously, such an estimate is only an approximation of market value. Nevertheless, it may be an indicator, just as the price-earnings ratio is for stock investments.

Appendix Table 1. Farm Real Estate Values in Nebraska, Historical Series, 1915-1981.[a/][b/]

Year	Ave. Value of Land & Buildings		Year	Ave. Value of Land & Buildings	
	Per Acre	Per Farm		Per Acre	Per Farm
	Dollars	1,000 Dollars		Dollars	1,000 Dollars
1915...	50	15.9	1950...	58	25.5
1916...	51	16.5	1951...	66	29.7
1917...	54	17.8	1952...	72	32.9
1918...	62	20.7	1953...	75	34.6
1919...	71	23.8	1954...	70	33.0
1920...	88	29.8	1955...	73	35.1
1921...	82	27.5	1956...	73	35.9
1922...	71	23.7	1957...	72	36.5
1923...	68	22.6	1958...	79	41.0
1924...	63	20.7	1959...	86	45.1
1925...	60	19.8	1960...	89	48.3
1926...	60	19.9	1961...	90	49.8
1927...	58	19.5	1962...	95	54.1
1928...	57	19.5	1963...	97	56.2
1929...	57	19.6	1964...	105	62.5
1930...	56	19.3	1965...	111	67.2
1931...	52	18.0	1966...	120	73.6
1932...	44	15.4	1967...	132	81.2
1933...	35	12.2	1968...	143	88.8
1934...	35	12.2	1969...	150	94.3
1935...	34	11.9	1970...	154	97.9
1936...	34	12.1	1971...	157	100.7
1937...	32	11.8	1972...	170	115.2
1938...	30	11.3	1973...	193	131.2
1939...	28	10.6	1974...	242	166.3
1940...	24	9.4	1975...	282	194.1
1941...	22	8.9	1976...	355	247.0
1942...	24	9.9	1977...	425	300.1
1943...	27	11.1	1978...	419	295.8
1944...	33	13.9	1979...	525	392.1
1945...	37	15.8	1980...	598	453.8
1946...	42	17.9	1981...	658	499.3
1947...	47	20.5			
1948...	56	24.3			
1949...	62	27.1			

[a/] Source: Farm Real Estate Historical Series Data: 1850-1970 and Farm Real Estate Market Developments Series, released by the U.S. Department of Agriculture.

[b/] Includes revisions from previously published estimates, based on 1978 Census of Agriculture data.

Appendix Table 2. Deflated Indexes of Nebraska Farmland Values and Percent Changes, 1950-1981.

Year	Index of Average Value/Ac. (1967=100)[a]	GNP Price Deflator[b] (1967=100)	Deflated Index of Average Value/Ac.[c]	Year-to-Year Change In: Index of Deflated Farmland Values[d]	Year-to-Year Change In: GNP Price Deflator
			(1967=100)	Percent	Percent
1950	46	67.5	68.1	-	-
1951	53	73.1	72.5	6.5	8.3
1952	59	75.7	79.0	8.8	2.2
1953	62	76.2	81.4	3.0	2.0
1954	58	77.1	75.3	-7.5	1.2
1955	61	77.7	78.5	4.3	0.8
1956	60	79.8	75.2	-4.2	2.7
1957	59	83.1	71.0	-5.6	4.1
1958	63	85.6	73.6	3.7	3.0
1959	67	87.1	76.9	4.5	1.8
1960	69	88.4	78.1	1.6	0.6
1961	70	89.9	77.9	-0.3	1.7
1962	75	90.8	82.6	6.0	1.0
1963	75	91.9	81.6	-1.2	1.2
1964	81	93.4	86.7	0.2	1.6
1965	86	95.0	90.5	4.4	1.7
1966	92	97.0	94.8	4.8	2.1
1967	100	100.0	100.0	5.5	3.1
1968	108	103.4	104.4	4.4	3.4
1969	113	108.4	104.2	-0.2	4.8
1970	115	114.3	100.6	-3.5	5.4
1971	117	120.6	97.0	-3.5	5.5
1972	127	124.7	101.8	4.9	3.4
1973	145	129.1	112.3	10.3	3.5
1974	183	141.0	129.8	15.6	9.2
1975	215	156.9	137.0	5.5	11.3
1976	271	165.7	163.5	19.3	5.6
1977	307	174.1	176.3	7.9	5.1
1978	295	183.4	160.9	-8.7	5.3
1979	360	200.0	180.0	11.9	9.1
1980	410	217.6	188.4	4.7	8.8
1981	450	238.1	189.0	0.3	9.4

[a] Refers to year ending March 1, except for 1976-79 which is the year ending February 1.

[b] U.S. Department of Commerce Implicit Price Deflator for the 1st Quarter.

[c] Computed by dividing the Index of Average Value Per Acre by the GNP Price Deflator.

[d] A positive value entry in this column represents a real increase in asset value for the year (i.e., the rate of land value appreciation exceeded the rate of inflation).

Appendix Table 3. Farm Real Estate Statistics by County and Crop Reporting District as Reported by the 1978 Census of Agriculture.[a/]

County & Crop Rpt. District	Number of Farms[b/]	Land in Farms	Ave. Size of Farm	Percentage Cropland	Ave. Value of Land & Bldgs. Per Farm	Ave. Value of Land & Bldgs. Per Acre
	(No.)	(Acres)	(Acres)	(Percent)	(Dollars)	(Dollars)
Banner	213	410,239	1,926	42.8	486,984	267
Box Butte	564	658,453	1,167	52.4	476,015	394
Cheyenne	747	791,959	1,060	69.2	352,571	342
Dawes	461	741,622	1,609	23.5	306,890	193
Deuel	312	316,730	1,015	73.1	467,470	450
Garden	343	1,005,840	2,932	20.4	572,841	201
Kimball	370	560,793	1,516	64.6	412,764	258
Morril	562	757,044	1,347	28.9	495,071	349
Scottsbluff	1,082	461,201	426	48.6	327,776	803
Sheridan	723	1,467,632	2,030	24.8	392,605	185
Sioux	388	1,154,578	2,976	7.8	642,351	228
NORTHWEST	5,765	8,326,091	1,444	35.3	458,832	293
Arthur	78	525,344	6,735	9.0	766,467	114
Blaine	121	405,387	3,350	13.1	406,155	125
Boyd	476	292,914	615	46.5	163,160	273
Brown	362	679,150	1,876	22.5	593,000	326
Cherry	674	3,797,034	5,634	12.0	813,510	143
Garfield	263	336,773	1,281	27.7	297,803	210
Grant	82	751,537	9,165	8.5	1,124,945	123
Holt	1,335	1,420,649	1,064	41.3	446,402	424
Hooker	60	330,602	5,510	5.1	531,139	96
Keya Paha	279	500,760	1,795	22.8	430,009	231
Logan	162	347,515	2,145	18.7	403,025	187
Loup	156	304,773	1,953	16.5	382,637	192
McPherson	131	402,101	3,207	11.2	386,599	120
Rock	326	622,814	1,910	57.0	499,274	262
Thomas	91	338,910	3,724	5.1	464,558	125
Wheeler	182	298,396	1,640	29.4	519,072	297
NORTH	4,778	11,354,657	2,376	18.9	501,500	198
Antelope	1,123	506,976	451	70.2	262,812	584
Boone	912	440,604	483	66.9	269,206	556
Burt	847	316,159	373	88.0	408,677	1,145
Cedar	1,194	426,523	357	79.5	239,482	648
Cuming	1,305	355,957	273	87.4	342,830	1,256
Dakota	411	157,445	383	80.0	329,149	896
Dixon	804	266,965	332	79.0	242,390	727
Knox	1,328	665,607	501	57.1	212.817	404
Madison	1,025	345,870	337	81.7	274,147	750
Pierce	932	326,806	351	81.6	284,128	737
Stanton	749	249,362	333	79.8	259.540	763
Thurston	584	214,589	367	84.0	321,596	841
Wayne	852	269,294	316	88.5	296,698	879
NORTHEAST	12,066	4,542,157	376	76.2	282,921	735
Buffalo	1,208	577,504	478	63.0	412,366	831
Custer	1,462	1,529,191	1,046	28.8	372,118	336
Dawson	1,049	731,393	697	45.7	509,336	758
Greeley	458	315,629	689	46.5	332,208	401
Hall	859	326,140	380	77.4	430,609	1,162
Howard	721	314,044	436	63.3	269,353	612
Sherman	569	294,590	518	51.0	275,788	464
Valley	562	335,717	597	47.5	273,494	471
CENTRAL	6,888	4,424,208	642	46.2	377,953	574

Appendix Table 3 continued

County & Crop Rpt. District	Number of Farms[b]	Land in Farms	Ave. Size of Farm	Percentage Cropland	Ave. Value of Land & Bldgs. Per Farm	Ave. Value of Land & Bldgs. Per Acre
	(No.)	(Acres)	(Acres)	(Percent)	(Dollars)	(Dollars)
Butler	1,067	367,152	344	85.1	367,100	1,053
Cass	976	324,088	332	80.5	340,124	954
Colfax	872	258,479	296	81.8	279,638	940
Dodge	1,075	321,469	299	89.7	375,795	1,222
Douglas	518	131,258	253	83.2	383.777	1,504
Hamilton	864	339,794	393	71.2	572,732	454
Lancaster	1,510	473,310	313	83.8	314,906	1,000
Merrick	708	278,679	394	80.0	411,090	1,024
Nance	519	248,568	479	69.0	316,963	642
Platte	1,326	403,765	304	84.8	288,626	926
Polk	797	279,548	351	85.0	455,088	1,215
Sarpy	460	131,109	285	81.9	384,120	1,387
Saunders	1,471	449,200	305	84.2	311,428	1,045
Seward	1,038	340,715	308	85.9	408,319	1,122
Washington	851	228,466	268	83.9	397,971	1,325
York	978	350,762	359	88.1	464,731	1,270
EAST	15,030	4,926,362	328	84.2	372,151	1,063
Chase	453	560,128	1,236	53.5	613,948	487
Dundy	396	542,713	1,370	39.7	462,021	314
Frontier	531	549,137	1,034	43.6	399,588	396
Hayes	337	440,676	1,308	42.1	403,422	300
Hitchcock	462	414,445	897	54.7	338,892	352
Keith	410	687,815	1,678	39.8	745,945	442
Lincoln	1,071	1,554,411	1,451	27.2	439,830	304
Perkins	566	595,231	1,052	74.5	587,716	556
Red Willow	506	441,597	873	54.6	406,158	464
SOUTHWEST	4,732	5,786,153	1,223	43.8	482,003	391
Adam	797	355,023	445	81.5	468,347	1,099
Franklin	569	352,787	620	55.2	440,622	711
Furnas	565	452,625	801	60.5	379,969	509
Gosper	336	248,204	739	57.7	484,178	654
Harlan	451	329,883	731	61.4	360,137	519
Kearney	624	319,366	512	82.2	565,200	1,121
Phelps	623	402,961	647	72.8	771,957	1,190
Webster	519	313,267	604	62.0	308,685	545
SOUTH	4,484	2,774,116	619	66.9	481,177	798
Clay	719	365,346	508	79.4	694,737	1,231
Fillmore	843	371,404	441	89.0	527,507	1,144
Gage	1,411	530,210	376	83.4	350,355	896
Jefferson	790	331,453	420	74.2	376,737	913
Johnson	603	203,432	337	70.9	258,917	667
Nemaha	705	245,989	349	78.5	276,931	813
Nuckolls	668	353,535	529	72.0	388,150	704
Otoe	1,082	356,785	330	81.9	272,596	809
Pawnee	585	232,668	398	67.6	257,879	668
Richardson	876	306,080	349	76.9	254,415	782
Saline	994	340,435	342	81.0	294,581	808
Thayer	760	360,476	474	78.5	451,038	920
SOUTHEAST	10,036	3,997,813	398	78.8	363,801	867
STATE[c]	63,779	46,131,559	723	48.3	387,923	525

[a] Derived from Preliminary County Reports, 1978 Census of Agriculture, U.S. Department of Commerce, Bureau of the Census.

[b] A farm, for statistical purposes is any place from which $1,000 or more of agricultural products were sold, or normally would have been sold, during the census year.

[c] State totals represent aggregated county data and differ slightly from Preliminary State Totals published by the Department of Commerce.

Appendix Table 4. Average Reported Value of Nebraska Farmland For Different Types of Land by Crop Reporting District, 1978,1981.[a/]

Type of Land & Year	Crop Reporting District							
	North-west	North	North-east	Central	East	South-west	South	South-east
	Dollars Per Acre							
Dryland Cropland (No Irrigation Potential)								
1978...	289	253	648	319	817	360	468	660
1979...	317	319	813	397	1,061	387	541	808
1980...	347	340	920	471	1,296	454	626	971
1981...	419	346	1,009	519	1,409	546	754	1,060
Dryland Cropland (Irrigation Potential)								
1978...	409	387	741	590	1,128	471	873	953
1979...	449	514	930	708	1,411	520	1,102	1,152
1980...	533	565	1,132	767	1,733	628	1,282	1,352
1981...	680	533	1,225	880	1,785	733	1,432	1,402
Grazing Land (Tillable)								
1978...	177	191	433	299	549	215	465	433
1979...	186	229	521	347	701	259	479	574
1980...	200	261	583	395	760	307	621	643
1981...	251	257	622	435	881	332	697	636
Grazing Land (Nontillable)								
1978...	115	126	308	216	384	119	268	315
1979...	134	156	340	267	486	148	309	417
1980...	143	169	394	304	549	190	346	473
1981...	164	182	418	339	620	217	398	474
Hayland								
1978...	232	266	370	372	477	231	298	371
1979...	287	308	436	397	593	281	345	509
1980...	301	338	506	441	699	349	402	554
1981...	323	331	558	482	738	368	417	532
Gravity Irrigated Cropland								
1978...	1,246	796	1,030	1,545	1,624	1,134	1,412	1,404
1979...	1,300	964	1,289	1,705	1,910	1,197	1,746	1,772
1980...	1,369	1,020	1,547	1,976	2,317	1,329	2,046	2,026
1981...	1,555	1,054	1,781	2,088	2,403	1,493	2,230	2,026
Center Pivot Irrigated Cropland[b/]								
1978...	771	678	956	877	1,484	813	1,023	1,286
1979...	915	770	1,164	1,076	1,690	895	1,291	1,590
1980...	894	886	1,372	1,223	2,043	971	1,535	1,795
1981...	973	816	1,456	1,312	2,110	1,105	1,732	1,900

[a/] February 1st estimates reported in the Annual Nebraska Farm Real Estate Market Surveys.

[b/] Pivot not included in per acre value.

Appendix Table 5. Farm Real Estate: Indexes of Average Value Per Acre of Irrigated Land, Dry Cropland, and Grazing Land in Nebraska, 1960-1981 (1967=100).[a/][b/]

Year[b/]	Index of Average Value Per Acre:			
	Irrigated Land	Dry Cropland	Grazing Land	All Land
1960.....	66	71	67	69
1961.....	67	71	67	70
1962.....	71	75	77	75
1963.....	73	75	75	75
1964.....	79	80	85	81
1965.....	84	85	88	86
1966.....	93	91	94	92
1967.....	100	100	100	100
1968.....	110	108	109	108
1969.....	117	112	113	113
1970.....	122	114	114	115
1971.....	123	116	117	117
1972.....	132	127	125	127
1973.....	146	144	147	145
1974.....	192	184	178	183
1975.....	238	214	207	215
1976.....	293	273	256	271
1977.....	345	306	290	307
1978.....	324	300	271	295
1979.....	395	366	333	360
1980.....	450	428	360	410
1981.....	485	474	398	450

[a/] Includes improvements. Published in Farm Real Estate Market Developments Series, Economics & Statistics Service, USDA.

[b/] March 1 indexes of value for 1960-1975 and February 1 indexes of value for 1976-1981.

A Comment on Index Numbers of Nebraska Farmland Values

The U.S. Department of Agriculture prepares and publishes periodically an index of farmland values for each state. In states where irrigation is important, an index of value change is calculated separately for three basic types of farmland: (1) irrigated land with improvements, (2) dry cropland with improvements, and (3) grazing land with improvements. These series by type of land have been published annually for Nebraska since 1960 (See Appendix Table 5). The all-land index has been maintained for Nebraska and other states since 1912.

An index of farmland value is very similar to the Consumer Price Index. Quite simply, it is a measure of percentage change relative to a base period. It is calculated by dividing the average value for a reporting date by the average value in the base period. When that answer is multiplied by 100, the result is the index number for that reporting date. If the base period is March, 1967 (as used in Appendix Table 5) the index for that date is 100. For example, the February, 1981 index for Nebraska irrigated land is 485. This means that irrigated values as of February, 1981, were 485 percent of the 1967 index, an increase of 385 percent (485-100). What about the value change since February, 1980? The February, 1981 index is 7.8 percent larger than the February, 1980 index (485 ÷ 450), indicating irrigated land values rose an average of 7.8 percent during that period.

There are several practical applications of these farmland index series.* Here are three important ones:

1. TO SHOW RELATIVE CHANGES IN FARMLAND VALUES.

   We have already presented an illustration of determining change in value from the previous period. However, a measure of percentage change can be determined for any time period within the index series. If one were interested in the change in grazing land value during the 1970 decade, you would divide the February, 1980 index (360) by the March, 1970 index (114). This indicates that at the end of the decade, average grazing land values were 316 percent of beginning decade levels -- or an increase of 216 percent (316 - 100).

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* Based upon: 1) Reiss, Franklin J., "Index Numbers of Illinois Farmland Values," Farm Economics Facts and Opinions, Illinois Cooperative Extension Service, April, 1980, and 2) Johnson, Bruce B., "Farm Real Estate Market," NebGuide, G77-332, Cooperative Extension Service, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

2. TO INDICATE APPROXIMATE CURRENT VALUE FROM AN EARLIER PURCHASE PRICE.

   The procedure is one of using the appropriate index series to determine the percentage change in average value since purchase. The purchase price is then multiplied by this percentage change. For example, assume dry cropland were purchased in the Spring of 1975 for $600 per acre. The February, 1981 index of dry cropland is 222 percent of the March, 1975 index (474 ÷ 214). Thus, current estimated value is $1,332 (2.22 x $600).

3. TO APPROXIMATE A VALUE AT SOME POINT IN THE PAST FROM A CURRENT KNOWN VALUE.

   Retrospective appraisal of this type may be necessary in an estate settlement where the cost basis or the price paid for the land is unknown. Likewise, the determination of capital gains (or losses) on which taxes are based cannot be calculated unless both the cost basis and market price are known. For illustration purposes, assume a seller sold a farm in early 1981 for $1,100 per acre. The seller inherited the farm in 1960 but does not know what it was worth at that time. We can approximate a value by reversing the procedure used in No. 2. The all land index in 1960 is 15.3 percent of the February, 1981 index (69 ÷ 450). Taking 15.3 percent of $1,100 gives $168, the indicated value in 1960.

While these are important uses of the index series for farmland values, one must always remember the associated limitations. First, the USDA index series represent changes in value for the State as a whole. For numerous reasons areas of the State may historically be experiencing land value trends considerably different from the state trend. Second, when evaluating a specific property, the use of a state-level index assumes there has been little or no physical change in the property over the time period. If such changes have occurred, then values must be adjusted to reflect them. Third, the known value of a property, either present or in retrospect, must be a reasonably good measure of its true value. If there is either upward or downward bias in the dollar this will be directly carried over to the calculated value when the index change is applied.