

South Dakota State University
**Open PRAIRIE: Open Public Research Access Institutional
Repository and Information Exchange**

Bulletins

South Dakota State University Agricultural
Experiment Station

5-1-1985

Long Term and Recent Trends in South Dakota Farmland Markets

C. R. Swinson

L. L. Janssen

Follow this and additional works at: http://openprairie.sdstate.edu/agexperimentsta_bulletins

Recommended Citation

Swinson, C. R. and Janssen, L. L., "Long Term and Recent Trends in South Dakota Farmland Markets" (1985). *Bulletins*. Paper 699.
http://openprairie.sdstate.edu/agexperimentsta_bulletins/699

This Bulletin is brought to you for free and open access by the South Dakota State University Agricultural Experiment Station at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in Bulletins by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

Trends in South Dakota Farmland Markets Long Term and Recent



TO THE READER:

Many long-term and recent trends in South Dakota farmland markets are covered in this bulletin. A review of long-term trends in farmland values and rents and buyer-seller characteristics precedes the discussion of more recent (1971-1983) farmland market developments. These developments include regional price trends, characteristics of farmland tracts sold, and changing financing terms during this 13-year period. This report should be of particular interest to loan officers, farmers and ranchers, agricultural researchers, relators, prospective buyers and sellers of farm real estate, public officials, and others interested in farm real estate market developments.

The Federal Land Bank of Omaha provided detailed data on South Dakota farmland sales transactions for 1971-1983. A considerable amount of research results reported in the bulletin is based on our analysis of this data base. We wish to thank Mr. Dan Lamphecht, Fred Bement, and many other people in the Federal Land Bank of Omaha system for their fine cooperation in providing us with this dataset.

We also wish to thank our reviewers, John Thompson, Wallace Aanderud, Ardelle Lundeen, and Mary Brashier for their constructive comments and criticisms.

Sincerely,

Larry *Cindy*
Larry Janssen and Cindy Swinson

LONG TERM AND RECENT TRENDS IN
SOUTH DAKOTA FARMLAND MARKETS

by

Cindy R. Swinson
and
Dr. Larry L. Janssen

Cindy Swinson is a Research Assistant and Larry Janssen is an Associate Professor, Economics Department, South Dakota State University. Research results reported in this bulletin are based, in part, on Cindy's Masters' thesis and is supported by project H-152 of the South Dakota Agricultural Experiment Station.

TABLE OF CONTENTS

LIST OF TABLES

Summary 3

Introduction 5
 Purpose of Report 5
 Data Sources 6

Long-Term Farmland Market Trends 6
 Key Changes in Farmland Ownership
 and Tenure 6
 Farmland Buyer and Seller Trends .. 7
 Long-Term Trends in South Dakota
 Agricultural Land Values
 and Rents 8
 Explanation of Long-Term Trends
 in Farmland Values and Rents ... 12

Major Characteristics of Farmland
 Sales Transactions in South
 Dakota, 1971-1983 13
 Overview of Agricultural Land Sales
 in South Dakota by Year,
 1971-1983 13
 Overview of Agricultural Land Sales
 by Region, 1971-1983 15
 Tracts Sold with Buildings,
 1971-1983 16
 Non-Agricultural Influence,
 1971-1983 17
 Tracts with Irrigation,
 1971-1983 18
 Average Price Per Acre,
 1971-1983 19

Financial Characteristics 20
 Primary Lenders, 1971-1983 22
 Second Lenders 22
 Average Percent of Sale Price
 Financed by Lenders, 1971-1983 . 23
 Average Loan Size, 1971-1983 24
 Average Interest Rate, 1971-1983 .. 25
 Repayment Terms, 1971-1983 27

Major Forces Affecting Future Farmland
 Market Trends 28

List of References 29

Federal Land Bank of Omaha Farm and
 Ranch Sales Sheet 30

1. South Dakota Farm Real Estate
 Price Trends, 1910-1984 9

2. South Dakota Farm Cash Rent
 Trends, 1921-1984 11

3. Overview of Agricultural Land
 Sales in South Dakota, 1971-1983 . 14

4. Overview of Agricultural Land
 Sales in South Dakota by Crop
 Reporting District, 1971-1983 15

5. Non-Agricultural Influence by
 Region (CRD), 1971-1983 18

6. Overview of Irrigated Tracts Sold
 in South Dakota, 1971-1983 18

7. Average Price Per Acre by CRD and
 Year, 1971-1983 19

8. Overview of Credit Financing of
 Farmland Sales, Northern Plains
 States, March 1, 1945-1984 21

9. Number and Percent of South Dakota
 Farmland Sales Transactions by Year
 by Primary Lender, 1971-1983 23

10. Percent of Federal Land Bank (FLB)
 Financed Sales with Second
 Lender, 1975-1983 23

11. Average Percent of Purchase Price
 Financed by Lender by Year,
 1971-1983 24

12. Average Size of Loan by Lender by
 Year, 1971-1983 25

13. Average Rate of Interest by Lender
 by Year, 1971-1983 26

14. Average Length of Loan in Years by
 Lender by Year, 1971-1983 27

LIST OF FIGURES

1. Reason for Purchase, South Dakota
 Farmland Buyers, 1981-1983 8

2. South Dakota Farm Real Estate
 Prices, 1910-1984 10

3. South Dakota Farmland Value and
 Cash Rent Trends, 1921-1984 12

4. Regional Boundaries and Summary
 Statistics on Tracts Sold,
 1971-1983 16

SUMMARY

South Dakota farmland prices per acre have declined from late 1981 and early 1982 to the present. This is the first several-year period of declining agricultural land prices since the 1930s.

This report examines farmland market trends; the intent is an increased understanding of present and future farmland market trends. Specifically, this report presents:

- (1) Long-term trends in South Dakota farmland market values, rents, and changing characteristics of farmland owners, buyers, and sellers.
- (2) Recent trends (1971-1983) in sales prices, financing terms, and regional characteristics of farmland sold in South Dakota.

Information on recent trends was developed from a data base of farmland sales provided by the Federal Land Bank of Omaha (FLB). A total of 11,635 South Dakota farmland sales (limited to sales of 40 acres or more and not including sales between close relatives or legally forced sales) made up the data base for this study.

Long-Term Farmland Market Trends

Farmland values have fluctuated considerably in the 20th century. South Dakota average farmland values increased from \$39 per acre in 1910 to a peak of \$71 per acre in 1920. Values then declined for the next 21 years to a low of \$12 per acre in 1941. Farmland values then began another upward trend, peaking in early 1982 at \$291 per acre. The annual rate of increase in South Dakota farmland values was 4-5% from 1950-1972 and 12-13% from 1972 to 1982. Farmland values have steadily declined since early 1982.

Farmland market values are derived from net returns (rent) and expected future increases (or decreases) in net returns. Farm enlargement pressures, technological changes in agriculture, ex-

pected capital appreciation, taxation, and farm commodity programs have also been contributing factors.

South Dakota farmland values and rents have moved, annually, in the same direction for 55 of the past 64 years (1921-1984). The ratio of annual net rent-to-value varied 3.0-5.0% from 1921-1949 and 4.1-6.6% since then.

Since World War II, about two thirds of South Dakota's agricultural land has been owned by farm operators. During this time, farm operators have also been the predominant buyers of farmland, while farm operators and retired farmers have been the major sellers. Farm operators purchased 70-85% of farmland acres. Farm expansion has become the overwhelming reason for purchase.

Recent Farmland Market Trends

Major characteristics of over 11,600 farmland sales occurring in South Dakota between 1971-1983 were examined.

The average price per acre varied greatly by region. Peak average regional prices (in 1981-1982) varied from \$155-195 per acre in northwestern South Dakota to \$900-965 in southeastern South Dakota. There was substantial within-year variation of market prices in each region for each year. Most of the per-acre price variation across the state can be attributed to differences in land productivity and use.

The average sale price per acre for all South Dakota farmland tracts increased 4.4 times from 1971 to 1982 when it peaked at \$428 per acre. The average annual rate of increase in farmland sale prices during this period was 14.5%.

The average total sales price per tract increased each year from 1971 to 1981 when it peaked at about \$133,300. The average tract sold contained 366 acres, almost equally divided between cultivated land and pasture.

There were many regional differences in farmland sale tract characteristics.

The majority of agricultural land sales occurred in eastern South Dakota, although more acres were sold in central and western South Dakota. Tracts sold in eastern South Dakota averaged 145-224 acres; tracts sold in central South Dakota were between 327-477 acres, on average; and tracts sold in western South Dakota averaged more than 1,000 acres.

Eastern South Dakota land sold was predominately cultivated (66-76%); land sold in western South Dakota was mostly pasture (72-75%). Land sold in central South Dakota was a mixture of cultivated land and pastureland.

Irrigation systems were present on 1.8% of farmland tracts sold. Western South Dakota had the highest percent (8.5%) of tracts sold with irrigated land. However, only in eastern South Dakota was irrigated land more than 50% of the total acres sold of irrigated tract sales.

Nearly 27% of farmland tracts sold in South Dakota had building sites on them. Farm houses comprised 52% of reported building values.

Nonagricultural factors influenced the sale price of 5.2% of farmland tracts sold. Residential development was listed as a factor in more than half of these sales.

Farmland Financing Trends

A major structural change in the post World War II farmland market has been greater credit financing. Between 1945 and 1955, only 45-53% of farmland transfers in Northern Plains states were credit financed. Since 1970, 81-94% of farmland transfers were credit financed. The average percent of purchased price borrowed increased from 50-57% to 76-83%.

Sellers and the FLB are the principal farm real estate lenders in South Dakota. In 1971-1983, sellers financed 41% of the land sales and the FLB financed about 30%. All other lenders (FmHA, commercial banks, insurance companies, and others) were involved in financing another 15% of farmland sales. The rest were 100% equity financed.

The average percent of purchase price financed has also varied by lender over time. The FmHA financed a larger percent of the sales price than any other lender, averaging 89%. The FLB has, on average, financed 79% or more of the purchase price. Sellers have typically financed 75-80% of the purchase price.

Average loan size increased steadily until 1979 and has shown no clear trend since then. Average loan size was \$91,800 in 1983, compared to \$43,100 in 1971. The annual average size of seller financed loans (and contracts for deed) were always larger than FmHA loans and usually greater than the average size of FLB loans.

The annual average rate of interest on credit financed sales was less than 8% from 1971 to 1978. Interest rates accelerated to an average rate of 11% in 1982. A slight decline in the average rate of interest charged by each type of lender was noted for 1983.

The lowest average interest rates were reported on FmHA loans from 1971 to 1978 and seller financed sales since then. The FLB and commercial banks charged about the same rates until 1978 when commercial bank interest rates increased at a faster pace.

The average number of years to repay loans declined for most lenders during this 13-year period. FmHA financed sales had the longest repayment period (34.2-39.6 years). Average repayment periods on FLB financed sales have slowly declined from 30 years in the early 1970s to an average of 26.9 years in 1983. Seller financed sales averaged repayment periods of 10.4-13.5 years. Sales financed by commercial banks usually had the shortest repayment periods.

Future Farmland Market Trends

Farmland market price trends are fundamentally related to current net returns to farmland and expected increases or decreases in future net returns. Many factors--export markets, interest rates, financing terms, farm enlargement pressures, technological changes, federal

government monetary-fiscal policies, trade policies, and farm programs—affect both actual and expected net returns.

The major impact of these factors in recent years and the next few years is expected to be continued downward pressure on farmland prices.

Farm real estate credit trends in the 1970s made it attractive for many buyers to finance farmland purchases with debt capital. Farm credit terms have tightened in the early 1980s, and future loan requests will probably be based on a careful cash flow projection of repayment ability.

The major sellers and buyers of farmland over the next several years will probably continue to be farmers. Established farmers who maintained their farm operation or expanded from earnings and did not borrow heavily will probably be in the best position to purchase farmland. However, the number of sellers will be higher than normal, due to complete sellouts or partial liquidations.

INTRODUCTION

Agricultural land market trends are major indicators of the economic well-being of agriculture and rural communities. Many people—farm operators, landowners, prospective buyers and sellers of farm real estate, agricultural lenders and agribusiness managers, public officials, and others—have interest in and are affected by farmland market trends.

Attention to farmland market trends and issues rises during rapid increases or decreases in land prices. Both of these trends have occurred since 1971.

For South Dakota, average farm real estate per-acre values have increased from \$85 in 1971 to \$291 in 1982, a 342% increase in nominal values in 11 years. Real, inflation adjusted, farm real estate values increased more than 50% during this same period.

Since late 1981 and early 1982, South Dakota farmland prices have steadily declined, reflecting sharply reduced profits in agriculture and poor prospects for a quick turnaround. A recent study by Janssen indicated that average sale price of South Dakota farmland declined 19% from late 1981 to early 1984 with a drop of 32% in southeastern South Dakota (Janssen, 1984).

Changing land prices affect the wealth position (farm real estate represents over two thirds of the value of farm business assets) and the borrowing capacity of farmland owners. Farm credit policies involving the amount of real estate security and loanable funds are directly related to expected land price and rental trends.

Changing land prices and rents also influence farm rental arrangements and public policies concerning property taxes, farm credit, and soil conservation and cost-of-production based farm commodity programs.

These recent farmland price movements direct our attention to several components of farmland market structure and behavior. For example, what are the major characteristics of farmland buyers and sellers and how have these changed over time? What are the relationships between farmland values and rents? How do land prices and other market characteristics differ in various regions of South Dakota? What are the major changes in farmland financing methods and why have they occurred? These issues are addressed in this report.

Purpose of Report

The information on and interpretation of long-term and recent farmland market trends in South Dakota is presented in three major sections:

- (1) Long-term (20th century) trends in South Dakota farmland market values and rents. Changing patterns in farmland ownership and tenure and characteristics of farmland buyers and sellers are also discussed.

- (2) Recent trends (1971-1983) in sale prices and tract location characteristics of farm real estate sold in different regions of South Dakota.
- (3) Recent trends in financing farmland sales transactions in South Dakota.

Data Sources

Long-term trends in farmland market values, rents, and changing characteristics of farmland buyers and sellers are summarized from data available in U.S. Department of Agriculture (USDA) Farm Real Estate Market Developments.

Recent trends in sale prices, financing terms, and other characteristics of farmland sold in South Dakota were developed from a computerized farmland sales transaction data base provided by the FLB of Omaha.¹ Beginning in January 1971, loan officers in each FLB Association have recorded agricultural land transactions in their local areas, regardless of whether the FLB was involved in financing the sale. (A copy of a recent farm and ranch sales sheet used by FLB loan officers is shown in Appendix I).

Farmland sales transaction data from 1971 to 1975 were less complete than information from 1976 to 1983. During the earlier years, data were incomplete in terms of a lower percentage of farmland sales recorded and less information obtained on each recorded sale. Since 1975 FLB of Omaha personnel have made major efforts to upgrade the completeness of this data base.

¹Through a cooperative agreement with the SDSU Economics Department, the FLB provided information on most sale tract characteristics (see Appendix I) except for the name of the seller and buyer and related confidential information. The data base is used only for research purposes such as summarizing sale tract characteristics by region, year, lender, etc., and for development of econometric models explaining various land market trends. It is an invaluable source of data for detailed analyses of the farmland sales market at a statewide, regional, or subsector level.

The FLB of Omaha uses this information to monitor farmland market trends and update benchmark farm valuations for lending purposes. The data base used in this study was limited to bonafide farm real estate sales² transactions of 40 acres or more which occurred between January 1971 and December 1983. A total of 11,635 South Dakota farmland sales transactions were included in the data base for this study.

LONG-TERM FARMLAND MARKET TRENDS

The behavior of farmland markets over time is conditioned by farmland ownership and tenure. Key changes in South Dakota farmland ownership and tenure patterns are important factors in understanding long-term and recent farmland market trends.³

Key Changes in Farmland Ownership and Tenure

In 1910, three fourths of South Dakota farms and farmland were operated by farmers who owned some or all of their land. Declining economic conditions (the Depression) during the 1920s and 1930s drastically increased farm tenancy in South Dakota, which reached a peak in 1940 when 53% of the farmers were tenants and 39% of farmland was rented by tenants. Farm tenancy increased as thousands of farmers, who purchased land with credit

²The FLB farmland sales collection program emphasizes bonafide sales of farmland tracts of 40 acres or more regardless of whether they were financed by the FLB of Omaha. Bonafide sales are market sales of farmland between willing buyers and sellers who are not closely related and where there are no unusual pressures (compulsion) to quickly sell or to purchase. Bonafide farmland sales do not include sales between close relatives, gifts or inheritance transfers, farm foreclosures, or bankruptcy sales.

³A more complete discussion of trends in South Dakota agricultural land ownership and tenure is available in Janssen and Edelman, 1983. National and state information on farmland ownership patterns in 1978 is available in Gustafson, 1983.

during boom times when land prices were rapidly increasing, were unable to meet their loan payment obligations. Nearly one fourth of South Dakota's farmland was in foreclosure during the period of 1921-1937 (Lundy and Pengra, 1951).

Farm tenancy drastically declined during the 1940s when favorable economic conditions returned and many farmers were able to re-acquire title to farmland lost through mortgage foreclosure or tax delinquency. This trend was aided by passage of farm credit and commodity program legislation in the 1930s.

Farm credit repayment terms placed greater emphasis on future repayment ability; commodity programs provided greater protection from commodity price declines which made farmland purchases a more attractive investment.

Since World War II, part ownership (where farm operators own some land and rent additional land) has emerged as the dominant trend. Part owners, on average, operate much larger farms than full owners and tenants. They are more likely to have larger amounts of debt, higher debt-to-asset ratios, and most of them rely on farm earnings as their major source of family living expenses (Janssen and Edelman, 1983).

In 1978, more than two thirds (68%) of South Dakota's privately owned agricultural land was owned by farm operators. Retired persons and persons engaged in nonfarm occupations each owned about 15% of the rest (Daugherty and Otter, 1983).

The proportion of agricultural land owned by farm operators has not changed very much from 1946 to 1978. However, during this same period, the number of farm owner-operators has declined and the number of nonoperator landlords has increased. The typical farm operator owns larger amounts of land and rents from more landlords than did his father or grandfather. A majority (55%) of South Dakota's farmland owners are nonoperator landlords.

The trend to increased part ownership and more nonoperator landlords has emerged for two reasons. First, farm operators

needed to expand their land holdings to obtain a larger sized unit. At the same time, many people viewed land ownership as an effective inflation hedge. Nonfarm investors, retired farmers, and off-farm heirs wished to hold land in their investment portfolio but did not have the expertise nor the willingness to farm.

Farmland Buyer and Seller Trends 4

For the United States and Northern Plains states, including South Dakota, farm operators are the major buyers of farmland, and farm operators and retired farmers are the major sellers of farmland.

In the Northern Plains states, farm operators comprised 75-85% of farmland buyers and purchased 70-85% of acres sold. Other local residents and absentee owners purchased the remaining farmland. The proportion of farm operators purchasing agricultural land has not changed noticeably since 1945.

What has changed since 1945 is the type of farm operator buying farmland and the major reason for purchase. In the late 1940s tenants were as likely to purchase farmland as farmers who already owned some farmland. Farm expansion or enlargement was not as important as establishing a complete farm unit.

Each year from 1965 to 1984, established farmland owners (part owners and full owners) have purchased 60-75% of farmland tracts and acres sold, while tenants purchased only 10-17% of tracts and acres sold. Nonfarm investors (local and nonlocal) bought the remainder. Farm expansion was the overwhelming reason for buying farmland during this time period.

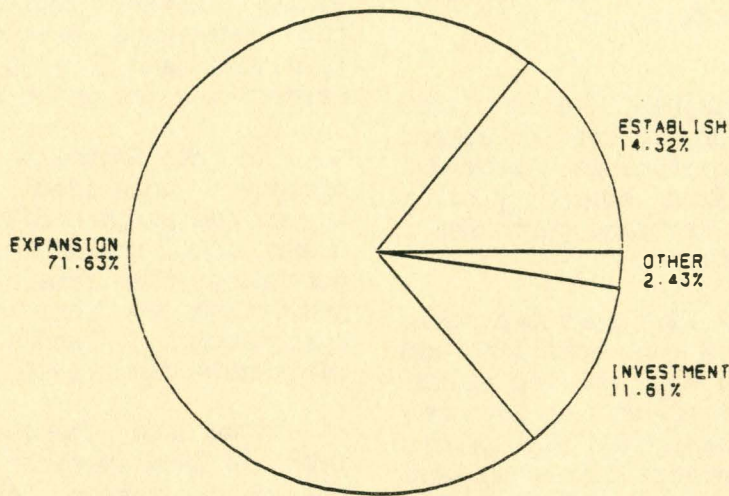
Recent data (1981-1983) from the FLB for South Dakota farmland sales confirm these trends. Data from 3,617 sales during this 3-year period indicate 71.6%

⁴Trends discussed in this section are mainly a summary of data in tables and discussions of various issues (from 1960 to 1984) of USDA Farm Real Estate Market Developments.

of tracts were purchased for farm expansion. Only 14.3% of tracts were bought to establish a farm; 14.1% were primarily purchased for investment or other purposes (Figure 1).

year, sold 30-40% of farmland tracts and retired farmers have sold 15-20% of farmland tracts. Estate settlements have totaled another 18-28% of farmland sales. In each year, owner-operators, retired

FIGURE 1. REASON FOR PURCHASE - SOUTH DAKOTA FARMLAND BUYERS, 1981-1983



Source: Federal Land Bank dataset of South Dakota farmland sales based on complete data for 3,617 sales. Excluded are 97 sales where reason for purchase was not obtained.

Farm enlargement pressures contributed to rapidly rising per-acre farm prices because per-acre net returns were often increased from an add-on farm unit which allowed fuller utilization of labor and larger machinery. Because of farm enlargement trends and rising per-acre prices, farmland tract parcels were sold instead of complete farm units. Also, many buyers placed less valuation on farm building sites because they were in surplus and many farm buildings were becoming technologically obsolete even if they were in good repair.

Active and retired farm operators were the principal sellers of farm real estate in the Northern Plains. In 1970-1984, owner-operators have, each

farmer, and estates have sold at least two thirds of the farmland tracts and typically sold 75-80% of farmland tracts. The average acreage sold by owner-operators was generally greater than acres sold by other types of sellers.

Long-term Trends in South Dakota Agriculture Land Values and Rents

During the first half of the twentieth century, South Dakota farmland values behaved like a roller coaster. Farmland values increased from \$39 in 1910 to a peak of \$71 per acre in 1920. Land values then declined for 21 years in a row, reaching a low point of \$12 per acre in 1941. Agricultural land values in-

creased most years during World War II and the post war and Korean war period and reached \$40 per acre in 1955 (Table 1 and Figure 2).

The decline is more dramatic if one views farmland values in terms of real purchasing power—with land values adjusted for the effect of inflation. In real

TABLE 1. SOUTH DAKOTA FARM REAL ESTATE PRICE TRENDS, 1910-1984

Year ^a	Average price	Average price	Year	Average price	Average price
	per acre	per acre		per acre	per acre
	Current \$	1972 \$ ^b		Current \$	1972 \$
1910	39	n.a.	1960	51	71
1915	42	193	1965	62	80
1920	71	162	1970	84	91
1925	45	123	1971	85	89
1930	35	99	1972	87	87
1935	20	67	1973	94	91
1940	13	42	1974	119	106
1945	19	43	1975	145	118
1950	31	54	1976	163	124
1955	40	62	1977	194	141
			1978	227	157
			1979	256	163
			1980	273	158
			1981	290	158
			1982	291	143
			1983	271	128
			1984	263	121

Sources: Clifton, I.D. and W.D. Crowley, Jr. Farm Real Estate Historical Series Data: 1950-1970, ERS 520, USDA, June 1973.

USDA, Farm Real Estate Market Developments, various issues.

n.a. = Not available

^aPrice information is collected in the early months of each year and is usually reported as of March 1 or April 1. Annual price information has been collected since 1910, but in this table only five year intervals are reported from 1910-70, annual thereafter.

^bThe GNP-PCE deflator (gross national product implicit deflator for personal consumption expenditures) was used to deflate farm real estate prices to constant (1972) dollars. Prior to, 1929, the GNP-PCE statistics were not calculated and the Department of Labors Cost-of-Living Index (later changed to the CPI - Consumer Price Index) was used from 1913-1929. The GNP-PCE includes many of the data components used in calculating the CPI, but the weighting factors and procedures used to calculate each index are different. The GNP-PCE statistic is a broad measure of inflation (deflation) in the private sector.

South Dakota farmland values increased each year from 1955 to 1982 when values peaked at \$291 per acre. At their peak, land values were 725% above their 1955 levels and 334% of their nominal values only 10 years earlier (1972). From 1955 to 1972, the annual rate of increase in South Dakota's agricultural land values was 4-5%. From 1972 to 1982, farmland values increased at an average annual rate of 12.8% with some year-to-year increases exceeding 25%.

South Dakota farmland values have been declining since early 1982, reaching an average of \$263 per acre in April 1984. At that time nominal values had declined to 1979-80 levels.

terms, farmland values in April 1982 were back to their levels in 1975-1976 (Table 1 and Figure 2).

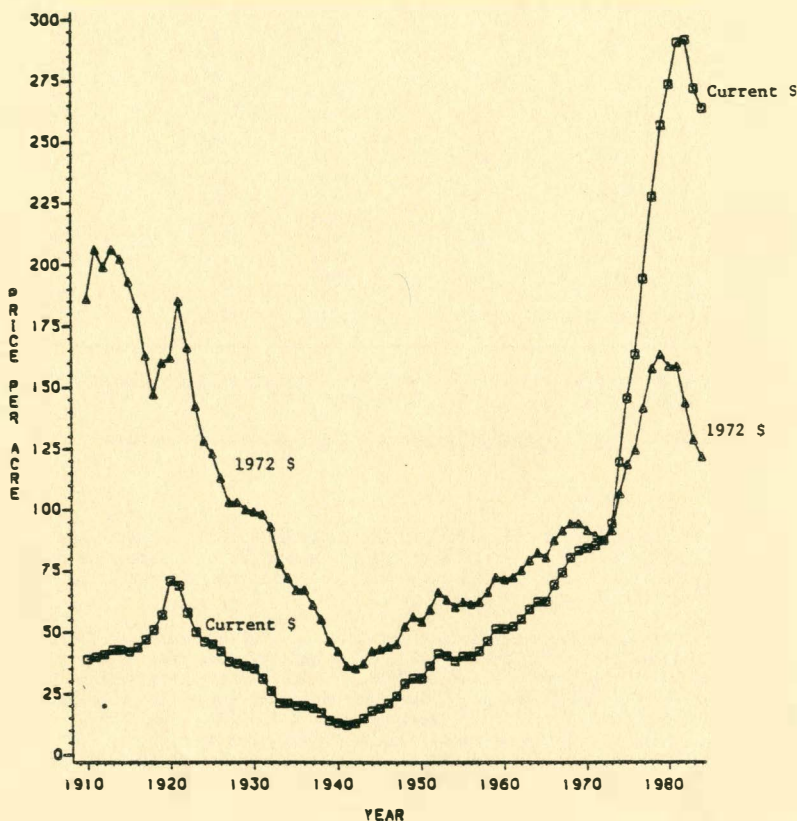
It is interesting to note that real (1972 dollars) farmland values were higher in the 1915-1920 time period than they have ever been since.⁵ Real values (in

⁵One suggestion made to the authors was that this conclusion may be sensitive to choice of index numbers used to deflate land values. The GNP deflator for personal consumption expenditures was chosen because it is one of the broadest indicators of changing dollar values. An examination of alternative indices (CPI and index of farm production expense, interest, wages, and taxes) leads to the same conclusion.

1972 dollars) declined from \$193 in 1915 to \$42 in 1940 and \$43 in 1945. From 1945 to 1973, land values slowly increased in real terms although real value increases did not occur each year. The effectiveness of increased land values as an inflation hedge dramatically improved from 1973 to 1979 but has declined sharply since then.

available since 1921 and condensed summaries are shown in Table 2 and Figure 3. Data on gross and net cash rent per acre are compared to the average value of cash rented land and rent-to-value ratios are calculated.⁷ Also shown is the annual average yield on Moody's Aaa corporate bonds—a proxy for the opportunity cost of landlord investment in farmland.

FIGURE 2. SOUTH DAKOTA FARM REAL ESTATE PRICES, 1910-1984



Source: USDA, *Farm Real Estate Market Developments*, various issues.

Farmland price trends in 1920-1941 contributed greatly to more tenancy, higher foreclosure rates, and changes in ownership. Post World War II trends of generally rising farmland values have contributed to the dominant trend of part ownership.

Long-term trends in farmland values are fundamentally related to actual and anticipated trends in net returns to farmland. Different approaches can be used to estimate net returns over time, but one of the most widely used and reliable sources of information is the trend in farmland cash rents.⁶ Annual average farm cash rent data for South Dakota are

⁶Other approaches to estimate net returns per acre are based on estimating owner-operator receipts and expense or landlord share of receipts and expenses (See Murray et al, 1983, or any farm real estate appraisal reference for further information and specific procedural explanation). Comparisons of results from each approach will likely result in different estimates of net returns in a given year, but trends in net returns estimates from each method over time are highly correlated. A cash rent series is used because data are easier to obtain and fewer cost allocation assumptions are required.

⁷A comparison of the average value of

TABLE 2. SOUTH DAKOTA FARM CASH RENT TRENDS, 1921-1984

Year	Average value per acre of cash rented land	Gross cash rent per acre	Net cash rent per acre ^a	Ratio of		Average Yield on Moody's Aaa corporate bonds
				Gross rent to value	Net rent to value	
-----Current dollars-----						
1921	\$ 91	\$ 4.37	\$ 3.42	4.8%	3.8%	6.0%
1925	54	2.63	1.71	4.9	3.2	4.9
1930	44	2.74	1.82	6.2	4.2	4.6
1935	25	1.56	1.01	6.2	4.0	4.0
1940	19	1.41	0.87	7.42	4.6	2.8
1945	30	2.26	1.57	7.5	5.2	2.6
1950	47	3.51	3.01	7.5	6.4	2.6
1955	60	4.53	3.94	7.6	6.6	3.1
1960	72	5.36	4.62	7.4	6.4	4.4
1965	89	6.48	5.60	7.3	6.3	4.5
1970	114	8.50	7.14	7.5	6.3	8.0
1971	114	8.74	7.30	7.7	6.4	7.4
1972	119	8.56	7.08	7.2	5.9	7.2
1973	126	9.17	7.68	7.3	6.1	7.4
1974	167	11.18	9.58	6.7	5.7	8.6
1975	185	11.41	9.65	6.2	5.2	8.8
1976	211	13.93	12.12	6.6	5.7	8.4
1977	244	15.65	13.57	6.4	5.6	8.0
1978	269	16.53	14.16	6.1	5.3	8.7
1979	300	17.80	15.13	5.9	5.0	9.6
1980	335	19.20	16.20	5.7	4.8	11.9
1981	360	20.90	17.81	5.8	4.9	14.2
1982	373	21.30	18.18	5.7	4.9	13.8
1983	363	22.90	19.77	6.3	5.4	12.0
1984	343	22.70	19.73	6.6	5.8	12.7

Source: U.S. Department of Agriculture. *Farm Real Estate Market Developments*, CD-89 and CD-86, 1984 and 1981 issues were used to obtain 1979-1984 cash rent and rent to value ratios. Annual cash rent data has been collected by USDA since 1921 and is found in various issues of the same source. Data for 1921-1978 published in summary form by Larry Walker, "Land Values - Part I; Report to Great Plains Resource Committee," June 5-7, 1979.

^aNet rent per acre is gross cash rent minus property taxes and 1% of gross rent deduction for management and maintenance of land. Prior to 1950, a deduction of 5% of building values was also charged before farm enlargement became the principal reason for land purchases.

Several important findings are revealed from data in Table 2. First, land values and rents generally move up and down together. Annual changes in land values and rents were in the same direction for 55 of 64 years. Second, land has been a competitive investment with corporate bonds during much of the 64-year period, based only on net rents and excluding consideration of capital appreciation. The ratio of annual net rent-to-

value was generally 3.0-5.0% for 1921-49, and 4.1-6.6% for 1950-1984. During periods of rapid increase in net rents and land values (1972-1982) the ratio of net rent-to-value remained below the yield on corporate bonds—a fixed income, low risk investment. Third, capital appreciation made farmland an attractive investment to owner-operators and nonfarm investors.

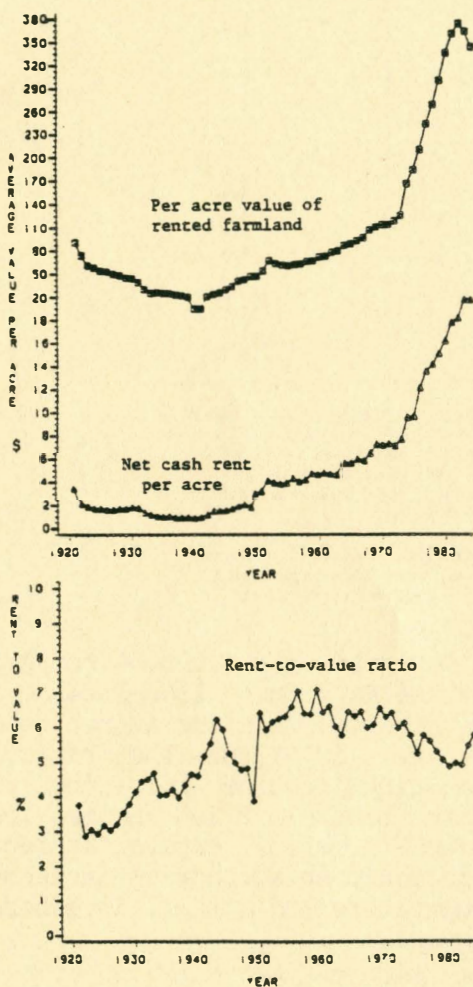
⁸The purpose of this section is to briefly discuss the economic relationships between land values and rents and economic determinants of temporal changes in farmland prices, as summarized in some key studies of farmland market behavior. Literature cited is selective, not exhaustive. Econometric investigations of South Dakota farmland market behavior are not reported in this study.

South Dakota cash rented land in Table 2 to average values of South Dakota farmland in Table 1 reveals a higher per-acre value each year for cash rented land. This finding occurs because a higher proportion of cropland is cash rented than range land.

Explanation of Long-Term
Farmland Value and Rent Trends

The relationship between farmland market values and rents has been documented in several studies over the past 60 years. (Chambers 1924; USDA, 1964 and 1965; Walker, 1979.) Market values of capital assets, including farmland, reflect actual and expected trends in net returns.

FIGURE 3. SOUTH DAKOTA FARMLAND VALUE AND CASH RENT TRENDS, 1921-1984



When returns to farmland (rents) are increasing and if these increases are expected to continue, then farmland market values will also rise.⁹ For example, during the 1970s, farm operators—the major buyers of farmland—had experienced increased dollar returns to land. Many

expected this trend to continue. Because rents (net returns) were rising rapidly it was not unusual for buyers to bid up the price of farmland to the point that rates of return to farmland, in the year of purchase, were less than rates of return on alternative, fixed-income long-term investments such as corporate bonds.

Essentially, farmland buyers were competing for the right to obtain expected future increases in land income or net returns. This additional expected income would be used to help make the loan payments.

Since the level of interest rates is largely determined by factors in the national and international money and bond markets, it was not unusual for interest rates on long-term debt (including farm real estate debt) to exceed current rates of return to farmland.

However, if expected increases in net returns do not materialize—which happened in the early 1980s—market prices of farmland will also decline. The rate of decline in market prices is steeper than declines in net returns. In fact, even if farmland rents are holding steady or slightly increasing but the rate of increase is much less rapid than prior experiences or expectations, farmland market prices will likely decline from previous peak levels.

Long-term trends in farmland market prices are fundamentally related to trends in net returns to farmland (rent). However, several other important factors are related to farmland market price trends because they indirectly influence net returns or expected net returns. The most important of these variables are technological change in agriculture, farm enlargement pressures, government farm programs and taxation, interest rates, and capital appreciation.

⁹This explanation of farmland values and rent relationships is adapted from a paper by Larry Walker, 1979. The major thrust of his paper was the thesis that there is no paradox between farmland prices and incomes.

Herdt and Cochrane, in a major study of farmland market prices in 1910-1963, emphasized technological advance in agriculture as an important factor explaining farmland price trends. Technological advances lower unit costs and increase expected income, thus providing the incentive for farm expansion, which leads to more competition between buyers and to higher farmland prices (Herdt and Cochrane, 1966).

A study by Tweeten and Nelson of farmland values in 1923-1963 emphasized competition among farmers for farm enlargement as a major source of farmland price increases. They also found government farm programs, changing financial structures, and variables associated with changing farm-nonfarm economic relationships as contributing factors (Tweeten and Nelson, 1966).

Reynolds and Timmons found government farm program payments, expected capital gains, and farm enlargement were the major variables explaining farmland price trends from 1933 to 1965 (Reynolds and Timmons, 1969).

A more recent study of 1929-1975 farmland price trends by Duncan found farm enlargement pressure, farm income, and expected capital gains were the major price determinants (Duncan, 1977a).

These four studies of U.S. farmland market price trends are key examples of economic analysis of farmland markets by different econometric techniques, examining the major variables generally hypothesized to explain farmland price trends over time.

MAJOR CHARACTERISTICS OF FARMLAND SALES TRANSACTIONS IN SOUTH DAKOTA, 1971-1983

The preceding review of long-term trends indicates that farm real estate markets have been quite volatile since the early 1970s compared to the previous 30 years. Farmland prices and rents soared upward from the early 1970s until early 1982 (in South Dakota) and have been declining since then.

Federal policy shifts to flexible exchange rates and greater reliance on agricultural exports fueled the farmland price boom during the 1970s. Higher interest rates, greater cash flow requirements, and weakened commodity prices reduced net return prospects in the early 1980s, which led to lower farmland sales prices.

Major characteristics of South Dakota farmland sales transactions were examined over this recent volatile time period, 1971-1983. Sale tract characteristics were analyzed by year and by region (Crop Reporting District). Characteristics examined in this section include (1) land use and average size of tract sold, (2) total sales volume and average sale price per tract, (3) the average price paid per acre, (4) the proportion of tracts sold with buildings and their value, (5) the degree of nonagricultural influence, and (6) the proportion of irrigated tracts and acres irrigated per tract.

Financial characteristics are reported in a later section.

Overview of Agricultural Land Sales In South Dakota by Year, 1971-1983

An overview of South Dakota agricultural land sales¹⁰ from 1971-1983 is shown in Table 3. A total of 11,635 sales, containing approximately 4.26 million acres, was recorded during this 13-year period. Average tract size was 366 acres which was almost equally divided between cultivated land and pasture. Approximately 27% of tracts sold had building sites.

Fewer sales were annually recorded before 1976 than in later years. This is partly due to incomplete recording during the earlier years. Since 1975, the FLB has increased efforts to record as many sales as possible. This has resulted in a dataset that is fairly complete with regard to the actual number of transactions.

¹⁰Agricultural land sales are limited to bonafide sales transactions of 40 acres or more regardless of whether they were financed by the FLB of Omaha.

The average size of tract sold was greater than 300 acres in all years except 1982. Prior to 1977, the average size tract was more than 400 acres and varied more from year to year than in later years. Some of the earlier year variations were probably due to incomplete recording of sales.

located west of the Missouri River where they numbered one fifth of tracts sold.

Finally, 53.8% of tracts sold contained pasture and cultivated land. These tracts were located in roughly equal proportions across the state, and average tract size was 470 acres.

TABLE 3. OVERVIEW OF AGRICULTURAL LAND SALES IN SOUTH DAKOTA, 1971-1983

Year	Sales		Acres Purchased		Ave Size of Tract in Acres	Land Use			Tracts with Buildings	Ave Total Sale Price	Ave Price Per Acre
	#	%	#	%		Cultivated	Pasture	Other			
1971	431	3.7	184242	4.3	428	43.7	53.1	3.2	29.0	\$41427	\$ 96.91
1972	449	3.8	243479	5.7	522	32.6	64.6	2.8	31.0	54405	100.33
1973	397	3.4	240030	5.6	605	37.2	60.6	2.2	34.0	72536	119.97
1974	445	3.8	223127	5.2	501	42.1	55.1	2.6	31.0	87818	175.14
1975	687	5.9	298885	7.0	435	47.9	48.7	3.4	29.5	90016	206.91
1976	985	8.5	398721	9.4	405	47.2	49.8	3.0	29.6	101772	251.42
1977	1045	9.0	378619	8.9	362	49.7	47.3	3.0	28.2	102438	282.73
1978	1132	9.7	351021	8.2	310	51.1	44.8	4.1	28.8	97537	314.55
1979	1257	10.8	442293	10.4	352	52.4	43.9	1.7	29.2	124643	354.27
1980	1093	9.4	374858	8.8	343	49.1	47.7	3.2	25.2	122357	356.77
1981	1336	11.5	428194	10.1	320	56.1	40.7	3.2	23.4	133342	416.04
1982	1091	9.4	278014	6.5	255	51.5	44.8	3.7	22.4	109135	428.28
1983	1287	11.1	420656	9.9	327	52.0	45.1	2.9	20.8	113826	348.25
Total	11635	100.0	4262099	100.0	366	48.3	48.5	3.2	26.8	--	--

Source: Federal Land Bank of Omaha data base for South Dakota.

^aNumber and percent of sales for 1971-1975 is considerably less than for other years. This is due to less complete recording of sales by the Federal Land Bank in those years compared to more complete recording in later years.

^bCultivated land includes cropland, diverted idle acres, summer fallow and hayland. Pasture land includes rangeland and improved pasture.

Land use and average percent of acres sold in each category are (1) cultivated, 48.3%; (2) pasture, 48.5%; and (3) other, 3.2%.¹¹ In 1971-1976, the percentage of pasture and rangeland exceeded the percentage of cropland, especially in 1972 and 1973. In 1977-1983, the proportion of cultivated land sold slightly exceeded the proportion of pastureland sold. Average tract size was generally higher when a higher proportion of pastureland was sold.

Further analysis of sale tract land use characteristics showed that 38% of tracts sold were cultivated with no pasture. Average size was 173 acres. Two thirds of these tracts were located in eastern South Dakota where they comprised 45% of all tracts sold.

Approximately 8.2% of the tracts were pastureland with no cultivated acres. The average size of these tracts was 574 acres. Five eighths of these tracts were

For 1971-1979, the percent of tracts with buildings was above the 13-year average of 26.8% but has declined since then to a low point of 20.8% in 1983.

The average total sales price per tract had generally been increasing from 1971 to 1981 when it peaked at \$133,342. A large decrease in average total sale price and average size of tract sold occurred in 1982. Average total sale price increased slightly in 1983 but remained considerably below 1979-1981 levels. There were few consistent regional differences in average annual total sale prices but major differences in average price per acre.

¹¹"Other" land includes homesteads, farm building sites, ponds, creeks, forest, marsh, wasteland, and all other acres that are not used for cultivation or pasture.

The average price per acre in each year includes the value of buildings and is weighted by acres purchased. Average price per acre is sensitive to year of sale and regional location within South Dakota. The typical price per acre of agricultural land is much higher in southeastern South Dakota than in western South Dakota, as will be shown later. Thus the proportion of and value of farmland acres sold each year in different regions affects the average price per acre shown in Table 3.

The average price per acre substantially increased from 1971 to 1982. The peak price of \$428 per acre in 1982 is 4.4 times higher than the 1971 per acre average price of \$97. The average annual rate of increase was 14.5% and the greatest annual rate of increase occurred in 1974.

A major price decline of \$80 per acre occurred in 1983. Closer inspection of the price data indicates sale prices actually began declining in late 1981 through mid-1982 in different regions of South Dakota, but the major impact did not occur until the last few months of 1982 and throughout 1983.

For each year, the average price per acre of farmland sold (Table 3) is higher than the average value of South Dakota farmland reported by USDA (Table 1).

These differences occur for several reasons. USDA estimates the value of all

farmland (including buildings) and not just the farmland and building tracts that are sold. The USDA data were developed by surveying knowledgeable individuals about farmland price movements in their locality. Land value estimates are developed at the Crop Reporting District (regional) levels and are weighted by total land in farms in each region to establish the statewide average per-acre value. The annual land value estimate developed from these surveys is linked to average land value information reported by farm operators and published in the U.S. Census of Agriculture every 5 years (USDA, 1981).

By comparison, the statewide average price per acre of farmland sold (Table 3) is simply the sum of the purchase prices of all tracts sold divided by the sum of total acres of agricultural land sold. No adjustments are made for possible annual variation in regional location, land use, and soil productivity of tracts sold.

Overview of Agricultural Land Sales By Region, 1971-1983

Many characteristics of agricultural land vary between regions of South Dakota. South Dakota is divided into nine Crop Reporting Districts (CRDs), but for purposes of this research the Southwest CRD and the West-Central CRD were combined to form the Western CRD (Figure 4). This was done because of the relatively low number of sales recorded in each of these regions. An overview of agricultural land sales by region for 1971-1983 is shown in Table 4.

TABLE 4. OVERVIEW OF AGRICULTURAL LAND SALES IN SOUTH DAKOTA BY CROP REPORTING DISTRICT, 1971-1983

CRD	Sales		Acres Purchased		Ave Size of Tract in Acres	Land Use			Tracts with Buildings
	#	%	#	%		Cultivated %	Pasture %	Other %	
Northeast	2136	18.4	477346	11.2	224	66.3	25.4	8.3	30.0
East Central	2197	18.9	377151	8.7	172	75.0	18.3	6.7	28.6
Southeast	2205	19.0	320615	7.5	145	75.9	19.2	4.9	27.5
North Central	1910	16.4	625349	14.7	327	57.2	39.2	3.6	21.8
Central	1165	10.0	541356	12.6	465	55.4	42.4	2.2	23.3
South Central	887	7.6	422783	9.9	477	39.5	58.5	2.0	20.8
Northwest	488	4.2	522590	12.6	1071	24.6	74.6	0.8	30.5
Western	647	5.5	974909	22.8	1507	27.1	72.0	0.9	34.0
Total	11635	100.0	4262099	100.0	366	48.3	48.5	3.2	26.8

Source: Federal Land Bank of Omaha data base for South Dakota.

There are more sales of agricultural land in eastern South Dakota than in central or western South Dakota, but more land is sold in the central and western regions. A majority (56.3%) of agricultural land sales occurred in eastern (Northeast, East-Central, and Southeast CRDs) South Dakota. Approximately 34% of tracts sold were located in central South Dakota (North-Central, Central, and South-Central CRDs); 9.7% were located in western (Western and Northwest CRDs) South Dakota. However, only 27.4% of acres sold were in eastern South Dakota compared to 37.2% in central South Dakota and 35.4% in western South Dakota.

western South Dakota averaged more than 1,000 acres. The East-Central and Southeast CRDs of South Dakota had predominately cultivated land (75-76%) while the opposite was the case for western South Dakota (24-27%). Agricultural land sold in the central part of the state was a mixture of cultivated and pasture land.

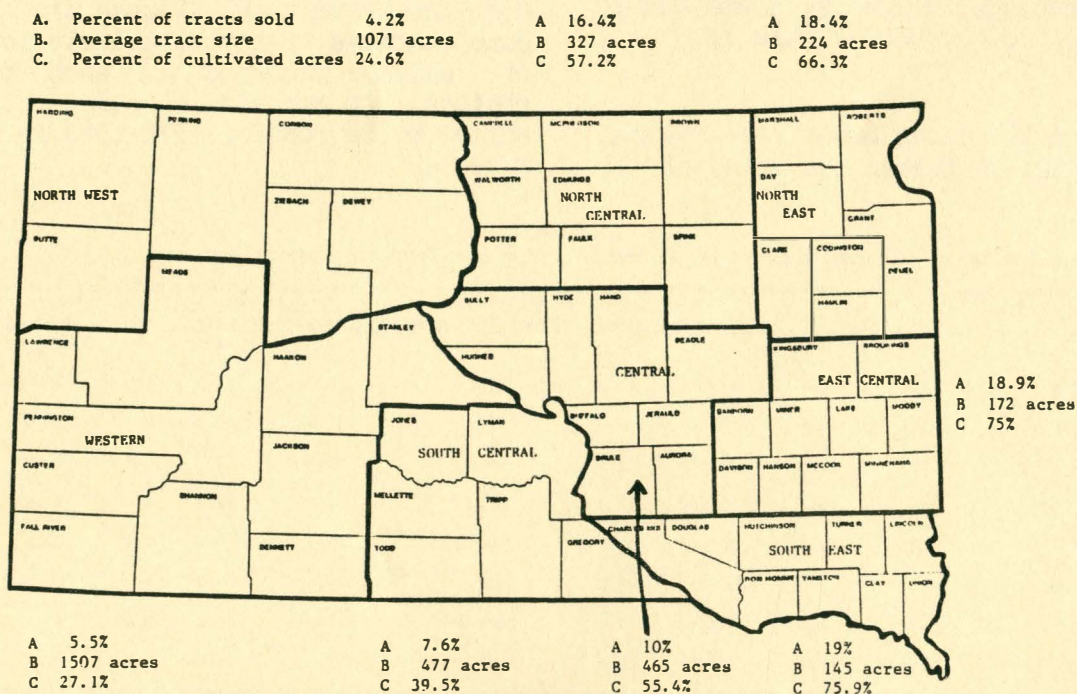
There were major regional differences in average size and land use of tracts sold in South Dakota. Generally, tracts sold in eastern South Dakota were smaller in size and had a higher percentage of cultivated land than tracts sold in central or western South Dakota. Tracts sold in eastern South Dakota regions averaged 145 to 224 acres; tracts sold in central South Dakota were between 327 and 477 acres, on average; and tracts sold in

There was a higher percent of "other" land sold in regions where a majority of acres were cultivated instead of pasture. This was expected since pastureland tends to have less land that is considered "unproductive" than does cultivated land. Creeks and tree stands are considered a natural part of pastureland but "unproductive" on cultivated land.

Tracts Sold with Buildings, 1971-1983

Building values were reported on 3,123 sales, 26.8% of total recorded sales. The value of buildings was 5.7% of the total purchase price of all 11,635 tracts and 13.9% of the total purchase price of tracts with buildings. Building

FIGURE 4. REGIONAL BOUNDARIES AND SUMMARY STATISTICS ON TRACTS SOLD



values were more than 25% of the purchase price of one in four tracts sold with buildings.

Building values are estimated by the FLB loan officer making the report. They use either a comparable sales approach or a cost approach to estimate the value of buildings. The percent of tracts sold with buildings did not vary much between 1971 and 1979 but has declined steadily since then. By 1983, only 20.8% of tracts sold had building values reported (Table 3). Building values were reported on 30.5-34% of tracts sold in western South Dakota, 27.5-30.3% of tracts sold in eastern South Dakota, and 20.8-23.3% of tracts sold in central South Dakota (Table 4). Building value as a percent of purchase price of tracts with building sites was highest in the Southeast CRD (16.4%) and lowest in the Western CRD (7.6%).

The value of buildings includes the value of the house (principal dwelling). Approximately 87% of tracts sold with building sites also had a house located on the property. Houses comprised about 52% of the reported value of buildings. Further analyses showed that in years when building values as a percent of purchase price were relatively high, house values as a percent of building values were the lowest.

Overall, the analysis of average size of tract, land use, and tracts with buildings in each region of South Dakota indicates that farm expansion is the principal reason for purchasing tracts during this 13-year period. In each region, average size of tract sold was 20-40% of the average size of farms or ranches operated in that region.

Cultivated land was a somewhat higher percentage of farmland sold than its share of actual land use in each region. During this period, farm expansion progressed more rapidly in the cropland areas than in the rangeland areas of South Dakota, partly due to a need to spread machinery costs over more acres. This situation and the strong perception that farmland was a good investment led to an active farmland purchase and rental market.

The presence of buildings on only 26.8% of agricultural tracts sold indicates that most farms were purchased for their cropland or pasture and not for farm building sites or farm housing. In fact, building sites and lots are often sold separately from cropland or pastureland. In some cases, the same buyer purchases both tracts, but in many cases the building sites and farmland are separately sold to different buyers. Since this dataset contains only sales of 40 acres or more it is possible that some building sites were sold along with the farmland tracts but are not included in this dataset because such tracts were less than 40 acres.

Nonagricultural Influence, 1971-1983

The price of farmland can be affected by nonagricultural influences: (1) commercial development, (2) residential development, (3) recreational development, (4) highways, (5) mineral rights, and (6) other. Nonagricultural influences are reported by FLB loan officers who are familiar with the area. Only 5.2% of South Dakota agricultural tracts sales were influenced by these nonagricultural factors during the 1971-1983 period (Table 5). The peak years of nonagricultural influence were 1977-1979.

Residential development at nearly 52% was the most prevalent influence. For tracts with reported sale price influenced by nonagricultural factors, the degree of influence was slight on 51.8% of these tracts and moderate to great on 48.2% of the tracts. A moderate to great influence was reported more frequently than slight influence in only 3 years (1972, 1973, and 1979).

Nonagricultural influence was present in only 2.9% of the tracts sold in the Northeast CRD and the Central CRD, but was present in 18.4% of the tracts sold in the Western CRD (Table 5). The Western CRD includes the Black Hills area of South Dakota which has considerable recreational and residential development, whereas land in the Northeast and Central CRDs has little residential development. In the East-Central and North-Central CRDs, residential development was reported on over 70% of the sales with nonagricultural

influence. This is partly explained by the presence of larger towns and cities (Sioux Falls, Aberdeen, and Brookings) in these regions. Sales recorded in the South-Central and Western CRDs reported residential development on less than 30% of the sales with nonagricultural influence.

The degree of influence was reported as slight more frequently than moderate to great in six of the eight Crop Reporting Districts. Sales influenced by non-agricultural factors in the Northwest and Western CRDs reported the degree of influence moderate to great in more than 60% of those sales.

Tracts with Irrigation, 1971-1983

Irrigation is a comparatively small but growing component of South Dakota agriculture. About 1% of South Dakota's agricultural land and 2% of its cropland are irrigated. About 5% of South Dakota's farmers operate some irrigated land (1982 Census of Agriculture).

Because irrigation is becoming more important in South Dakota, characteristics of irrigated farmland tracts were examined.

There were 214 tracts (1.8% of all

TABLE 5. NON-AGRICULTURAL INFLUENCE BY REGION (CRD), 1971-1978

CRD	Proportion of farmland tracts influenced by non-agricultural factors	Type of influence		Degree of influence as % of tracts with influence	
		Residential	All Other	Slight	Moderate to great
		--% of tracts that were influenced by non-agricultural factors --			
Northeast	2.9	50.0	50.0	54.8	45.2
East Central	5.4	72.9	27.1	60.2	39.8
Southeast	5.4	52.5	47.5	62.7	37.3
North Central	5.1	70.1	29.9	54.6	45.4
Central	2.9	44.1	55.9	50.0	50.0
South Central	3.9	22.9	77.1	57.1	42.9
Northwest	4.7	43.5	56.5	39.1	60.9
Western	18.4	28.6	71.4	30.3	69.7
Total	5.2	51.8	48.2	51.8	48.2

Source: Federal Land Bank of Omaha data base for South Dakota.

TABLE 6. OVERVIEW OF IRRIGATED TRACTS SOLD IN SOUTH DAKOTA, 1971-1983

CRD	Total Tracts Sold	No. of Irrigated Tracts Sold				Irrigated Tracts			
		Total	Total by Years		Ave Total Acres	Ave Acres Irrigated	% Irrigated	Ave Acres Cultivated	% Cultivated
			1971-76	1977-83					
Northeast	2,136	6	1	5	958	241.5	25.2	496	51.8
East Central	2,197	2	1	1	222	147.5	66.3	162	73.0
Southeast	2,205	25	5	20	156	112.3	71.9	137	88.1
North Central	1,910	18	3	15	942	229	24.3	630	66.9
Central	1,165	13	5	8	1,614	432	27.2	1,423	88.2
South Central	887	10	5	5	2,230	229	10.3	600	26.9
Northwest	448	92	40	52	560	153	27.3	182	32.4
Western	647	48	15	33	2,376	201	8.4	782	32.9
State	11,635	214	75	139	1,103	188	17.1	452	41.0

Source: Federal Land Bank of Omaha data base for South Dakota.

tracts) in the FLB dataset that included some irrigated land (Table 6). More tracts with an irrigation system were sold in the Northwest CRD than any other. Only two tracts with irrigation were sold in the East-Central CRD.

The percent of tracts with irrigated land was highest in the Western CRD (8.4%). This region also had the largest average total acres per irrigated tract. The CRD with the lowest average acres sold per irrigated tract, the Southeast, had the highest percent of tract irrigated (71.9%).

The percent of tract under cultivation also corresponds to the average size of tract. In general, the larger the size of tract sold the lower the percent cultivated. In the Central CRD this did not hold true; nearly 88% of an irrigated tract was cultivated and the average size tract was over 1,600 acres, but there were relatively few irrigated tracts sold in this region.

Average Price Per Acre
By Region and Year, 1971-1983

Regional variations in the average annual per-acre farmland sales price are very great in South Dakota (Table 7). Price variations across the state are primarily explained by differences in land productivity and use and the changing economics of agricultural enterprises that predominate in different areas of the state. Per-acre sale prices generally decrease from southeastern to western South Dakota (excluding the Black Hills). As noted earlier, cropland as a percent of total acres sold also decreases from southeast to west. Average per-acre sale prices tend to vary inversely with the average number of acres sold per tract.

Farmland per-acre prices have been consistently highest in the Southeast CRD followed by land prices in the East-Central CRD. For these two regions the percent of cropland (75-76%) and land productivity are highest, while the number

TABLE 7. AVERAGE PRICE PER ACRE BY CRD AND YEAR, 1971-1983

CRD	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Northeast													
Ave Price Per Acre	126.99	108.25	154.56	209.51	274.36	292.39	341.94	380.92	422.67	485.81	558.73	548.22	451.82
% Cultivated	66.2	56.4	77.2	72.9	66.7	65.2	66.9	68.1	65.3	61.4	69.5	69.1	63.2
Number of Sales	78	59	51	86	122	214	202	218	247	209	259	192	198
East Central													
Ave Price Per Acre	196.61	195.42	212.71	322.84	342.84	413.73	499.91	535.69	710.87	651.20	636.76	698.58	681.67
% Cultivated	76.7	81.3	76.5	74.0	77.0	72.4	76.1	74.7	76.6	76.9	71.5	74.5	74.6
Number of Sales	50	73	52	49	88	184	263	258	261	178	281	250	210
Southeast													
Ave Price Per Acre	195.35	214.76	253.64	311.34	403.91	467.67	438.73	682.84	839.38	833.92	964.33	892.79	768.41
% Cultivated	77.4	78.6	78.5	77.1	75.0	72.6	61.8	75.8	78.1	78.3	80.1	82.8	72.1
Number of Sales	94	152	111	119	124	166	147	210	190	197	236	213	245
North Central													
Ave Price Per Acre	89.05	103.49	122.99	193.92	223.98	246.40	307.01	318.13	353.80	332.61	383.60	397.91	351.58
% Cultivated	51.2	63.4	44.6	51.1	58.7	46.6	61.9	56.8	62.8	50.2	60.6	63.2	65.6
Number of Sales	84	32	54	54	139	189	176	176	210	178	193	167	258
Central													
Ave Price Per Acre	96.63	111.82	145.92	184.07	227.91	255.90	299.68	289.65	287.22	333.13	328.62	318.53	318.61
% Cultivated	44.9	67.5	54.5	41.4	62.7	50.7	63.6	59.8	68.2	50.8	63.4	46.7	56.1
Number of Sales	66	39	62	80	74	85	91	65	122	106	145	89	141
South Central													
Ave Price Per Acre	87.95	81.86	101.31	184.00	182.33	212.74	213.15	200.56	229.67	231.88	262.10	274.88	252.41
% Cultivated	48.7	26.7	31.5	49.4	43.5	39.5	42.3	36.0	36.3	40.7	51.8	38.1	40.5
Number of Sales	23	31	27	23	68	55	69	110	110	103	94	87	87
Northwest													
Ave Price Per Acre	44.59	86.54	77.57	167.31	130.60	137.63	163.96	168.93	172.69	165.53	199.29	155.95	153.14
% Cultivated	16.0	13.3	13.3	66.7	25.9	25.2	23.3	36.4	35.4	25.0	26.9	12.5	29.0
Number of Sales	15	18	17	13	36	55	47	41	40	50	54	37	65
Western													
Ave Price Per Acre	57.79	69.97	89.06	93.16	127.86	161.81	144.84	158.53	201.77	209.92	289.61	223.81	223.55
% Cultivated	15.6	12.6	23.3	13.1	26.7	28.4	26.2	29.3	25.6	38.0	41.5	26.0	39.9
Number of Sales	20	45	23	21	36	36	50	54	77	72	74	56	83

Source: Federal Land Bank of Omaha data base for South Dakota Containing 11,635 sales.

of acres sold per tract and average farm size are lowest. The average price per acre was similar for the two regions until 1978 when farmland in the Southeast CRD began selling at considerably higher prices. The highest regional average price (\$964 per acre) was recorded in 1981 in the Southeast CRD. Since 1981, land prices have declined more rapidly in this region than elsewhere in South Dakota. In 1971-1981, the highest percentage increase in farmland prices in South Dakota occurred in this region.

Price trends in the heavily corn, soybean, and feeder livestock farm economy of southeast South Dakota are closely related to price trends in the cornbelt regions of northwest Iowa, northeast Nebraska, and southern Minnesota. Export market prospects for corn and soybeans and profitability of feeder cattle and hog operations are the major factors affecting the agricultural economy of this region and, indirectly, its farmland values and prices.

After 1977, farmland prices in the East-Central CRD did not increase (or later, decrease) as rapidly as farmland prices in the Southeast. Farmland in this region has a higher percentage of small grain and is more susceptible to drought than farmland in most southeastern counties.

The Northeast CRD ranked third in the annual average per-acre sale price in 1971-1983. Average price peaked in 1981 at \$559 per acre and declined by 20% in 1983. Farmland prices in this region are influenced by the varied fortunes of corn, dairy, beef cattle, oilseeds, wheat, and numerous small grain enterprises.

Farmland prices in the North-Central and Central regions (CRDs) are closely tied to the changing economics of wheat, small grains, and cattle enterprises. Annual average farmland prices were roughly equal in these two regions in 1971-1977. Since then, North-Central region farmland prices have consistently been 10-25% greater, partly reflecting the greater importance of spring wheat and oilseeds in this region.

Rangeland and wheat are the dominant uses of agricultural land sold in most counties located west of the Missouri River (South-Central, Western, and Northwest CRDs). Irrigation tract sales are also important in the Black Hills foothills regions in the Northwest and Western CRDs. Average per-acre agricultural land prices which were generally highest in the South-Central CRD and lowest in the Northwest CRD were considerably lower than agricultural land prices in all other regions of South Dakota. Again, regional average prices coincide with differences in land productivity and use, which in the semi-arid regions are related to rainfall and other climatic variables.

FINANCIAL CHARACTERISTICS

Credit availability and terms are extremely important variables in the farmland market.

Credit financing was an important characteristic of the farmland price boom in the early 1900s. The inability of many farmland owners to repay their real estate loans during the depressed farm economic conditions of the 1920s and 1930s led to high foreclosure rates and was a major factor in the magnitude of farmland price declines.

The post World War II trend toward greater credit financing and lower downpayment requirements was another major structural change in the farmland market. Data for the Northern Plains states, which includes South Dakota, indicated 45-53% of farmland transfers were credit financed during the 1945-1955 period. Creditors typically financed 50-57% of the purchase price.

By 1970, 81% of farmland transfers was credit financed and debtors borrowed an average of 74% of the purchase price. The peak year of credit financing occurred in 1980 when 94% of farmland transfers were credit financed and debtors typically borrowed 83% of the purchase price (Table 8). Since 1980 the proportion of credit

financed transfers has declined and average downpayment requirements have increased.

Other financing terms and methods also changed rapidly during the later 1970s and early 1980s. For example, interest rates generally increased and financing terms emphasized variable interest rates¹² and shorter repayment periods. Financing terms were changing in response to "tight money" policies of the Federal

Reserve system (since early 1979) and to greater deregulation of financial markets. Agricultural and rural business credit terms are no longer largely insulated from national and international money market trends.

Several credit-finance characteristics are examined for South Dakota farmland tracts sold in 1971-1983. During this period, 86.3% of all the 11,635 farmland sales reported in the FLB dataset involved credit financing.

TABLE 8. OVERVIEW OF CREDIT FINANCING OF FARMLAND SALES, NORTHERN PLAINS STATES, MARCH 1, 1945-1984^a

Year	Credit-financed farm real estate transfer % of farmland transfers	Debt to purchase price ratio on credit-financed transfers %
1945	45	56
1950	48	51
1955	53	57
1960	60	64
1965	67	71
1970	81	74
1971	87	75
1972	83	74
1973	86	81
1974	83	80
1975	88	78
1976	88	74
1977	89	80
1978	90	81
1979	92	82
1980	94	83
1981	93	81
1982	91	81
1983	85	80
1984	85	76

Source: U.S. Department of Agriculture Farm Real Estate Market Developments CD-83, July 1978, Tables 31, 32 and CD-89, August 1984, Tables 20, 22.

^aNorthern Plains states include South Dakota, North Dakota, Nebraska and Kansas. The USDA does not provide state level estimates of credit financing.

¹²FLB has used variable interest rate financing since 1967, but this practice was not widely adopted by other lenders until the early 1980s. Variable rates of interest on loans allow lenders to adjust interest rates in line with changing economic conditions and to reduce losses by lenders during periods of rising interest rates. A variable interest rate policy shifts interest rate risk to borrowers, which lowers their cost during periods of declining interest rates and increases borrower cost during periods of rising interest rates.

The analyses of credit-finance characteristics are mostly limited to sales where "complete" credit related information was reported. Credit related data were considered "complete" if information was available on lender, interest rates, years to repay, percent of purchase price borrowed, loan size, and (beginning in 1975) the amount of cash received by seller upon settlement.¹³

"Complete" information was available for a total of 8,782 of the 10,040 farmland sales involving credit financing—87.5% of credit financed transfers. Information was complete on 91% of

credit financed transfers in 1975-1983 and only 6% of credit financed transfers in 1971-1974.

Primary Lenders, 1971-1983

Data in Table 9 show the proportion of credit financed farmland sales by primary lender and the proportion of equity financed sales for 1971-1983. Information from all 11,635 sales is included in this table.

Sellers and the FLB Associations are the two main sources of farm real estate credit. In 1971-1983, sellers financed 41% of total sales and the FLB Associations financed another 29.8%.

All other lenders (FmHA, commercial bankers, insurance companies, Production Credit Associations, agriculture credit associations) financed a total of 10.4% of farmland sales.

Another 5.1% of sales was also credit financed, but the primary lender was not reported or was listed as "unknown." Most "unknown" lender sales were recorded during 1971-1974 when the dataset was less complete in coverage. Since 1975, "unknown" lender financed sales have averaged 1.2-2.8% of total farmland sales.

Equity financed sales were 10-13% of total sales until 1982 and 1983 when they increased to over 20% of total sales. The abrupt increase in equity financing is related to tighter credit standards and reduced availability of credit in the early 1980s.

Second Lender

In some cases, more than one lender is involved in financing specific farmland

transactions. In 1975-1983, second lenders were recorded if the FLB was involved in financing a farmland sale.¹⁴ During this period a second lender was reported on nearly 25% of FLB financed sales (Table 10). The seller or the FmHA was the second lender listed most often.

The FLBs secure their loans only with a first mortgage; any second lender reported would have to hold a second mortgage (or remain unsecured). Because of this, when the seller is listed as the second lender with the FLB, the seller does not have a contract for deed, but rather holds a second mortgage or is unsecured.

Loans financed by the FLB and FmHA can be financed simultaneously between the two lenders, with the FLB as first mortgage holder. Or an original FmHA loan can be subordinated to provide the security needed for the FLB loan.

Any other lender listed with the FLB would also hold a second mortgage.

The FLB financed sales with another lender more frequently between 1975 and 1978 than it has since. Prior to 1979, FmHA was most often listed as the second lender with the FLB. Beginning in 1979, the seller was listed most often as the second lender.

The average percent of sales price financed and the average loan size were examined for farmland sales financed by FLB and another lender and then compared to farmland sales where the FLB was the only lender. When the sale was financed by the FLB and FmHA, both the average percent of total sale price financed and the average loan size were higher, in each year, than for sales financed by the FLB only. Average loan size of combined FLB and seller financing was significantly higher each year than FLB-only sales or

¹³Prior to 1975, the FLB farm and ranch sales sheet did not obtain any data on the amount of cash the seller received upon settlement. Consequently, prior to 1975, a sale with "complete" financial data did not contain any information on this variable.

¹⁴Prior to 1975 no information was obtained on second lenders. Since 1975 the FLB has also not obtained information on second lenders when FLB was not involved in financing the sale. In many cases this information would not be available.

FLB-FMHA financed sales. However, there were no major differences in average percent of total sale price financed on FLB-seller financed sales and FLB-only financed sales. In general, total sale price of FLB-seller financed sales was higher than FLB-only sales.

In most years the FmHA financed 25-45% of total credit extended in an FLB-FmHA financed sale. In most years the seller financed a higher proportion of credit extended than the FLB in a joint FLB-seller financed sale.

Average Percent of Sale Price Financed by Lenders, 1971-1983

The average percent of total sale price financed by lenders is shown in Table 11. Data are shown by year and by lender and are based on all sales with complete financial information.

Overall, the average percent of total sales price financed by lenders declined during the 1970s and early 1980s. In 1971-73, average percent financed by all creditors varied from 83.9 to 85.5% of to-

TABLE 9. NUMBER AND PERCENT OF SOUTH DAKOTA FARMLAND SALES TRANSACTIONS BY YEAR BY PRIMARY LENDER, 1971-1983^a

Years	Lender						Equity financed	Number of transactions
	FLB	Seller	FmHA	Bank	Other ^b	Unknown		
	---percent of farmland sales transactions---							
1971-74 ^c	36.7	21.7	4.5	2.2	1.5	23.8	9.6	1,722
1975	43.1	33.8	4.2	1.6	1.8	2.0	13.5	687
1976	30.9	43.9	5.2	3.3	2.2	1.4	13.2	985
1977	24.4	51.1	5.4	2.6	2.2	2.8	11.6	1,045
1978	25.9	44.9	9.8	3.0	2.3	1.9	12.1	1,132
1979	27.6	46.5	7.1	2.1	2.6	1.7	12.5	1,257
1980	32.8	46.9	5.5	1.7	1.1	1.8	10.2	1,093
1981	32.5	44.3	6.6	1.2	1.8	2.5	11.2	1,336
1982	23.2	44.1	5.2	2.2	1.7	1.7	21.8	1,091
1983	23.2	39.5	6.1	5.2	2.1	1.2	22.8	1,287
Total	29.8	41.0	6.0	2.5	1.9	5.1	13.7	11,635

Source: Federal Land Bank of Omaha data base of South Dakota farmland sales transactions.

^aAll sales in the data set are included in the table, including sales where lender is not known or where other financial information is not complete.

^b"Other" lender includes insurance companies, the Production Credit Association, agriculture credit corporations, private individuals (other than seller) and any other financial organization not listed that is involved with agricultural lending.

^cData for 1971-74 was combined because annual variation in primary lender proportions in this period are due to incomplete information on many sales.

TABLE 10. PERCENT OF FEDERAL LAND BANK (FLB) FINANCED SALES WITH SECOND LENDER, 1975-1983^a

	1975	1976	1977	1978	1979	1980	1981	1982	1983	Average 1975-83
FLB Only	63.9	65.5	72.2	76.9	76.7	83.4	80.5	80.9	83.0	75.4
FLB & FmHA	21.3	16.1	13.5	13.4	6.9	2.9	3.6	4.4	3.7	8.9
FLB & Seller	10.5	13.8	10.5	6.9	9.6	9.9	8.1	11.5	7.8	10.3
FLB & All Other	4.3	7.7	3.8	2.9	6.9	3.8	7.8	3.2	5.4	5.4

Source: Federal Land Bank of Omaha data base for South Dakota.

^aBased on 2,695 Federal Land Bank financed sales from 1975-1983 which recorded complete information on financial characteristics. Excluded are 134 FLB sales from 1975-1983 with incomplete information on financial characteristics. Prior to 1975, second lender information was not obtained on FLB financed loans.

tal sale price. In 1981-1983, the average percent financed declined to 78.6 to 80.5% of total sale price.

The average percent financed varied considerably over time by lender. The FmHA financed a larger percent of the sale price than any other lender in every year examined (1971-1983). In each year FmHA financed, on average, more than 89% of total sale price. This means that FmHA accepted lower downpayments than commercial lenders or sellers.

The FLB financed, on average, more than 79% of total sales price in all years and above 88% in 1976 and 1977. In many cases, the FLB obtained a first mortgage on additional farm real estate owned by the buyer, as their percentage ratio of loan value to security was less than the percent of sale price financed.

Sellers financed more than 80% of total sale price prior to 1975, but only 75-77% since then. In most years sellers were more cautious in financing farmland tract sales than other lenders. The typical sellers usually required a higher downpayment percentage than other lenders.

The average percent financed by bankers and other lenders varied greatly from year to year. This is primarily due to (1) relatively few sales financed by banks and other lenders and (2) less standardization of financing terms among these lenders.

Average Loan Size, 1971-1983

The average size of loan in dollars by lender is shown in Table 12. The size of loan for each sale was computed by multiplying the total purchase price by the percent of purchase price financed.

Average loan size steadily increased until 1979. The average loan size showed no clear trend in 1979-1983.

The average size of an FLB loan increased from about \$30,900 in 1971 until it peaked in 1981 at \$127,800. Small decreases were reported in 1978 and 1980. In 1982 and 1983, the average size of an FLB financed loan decreased by more than \$43,000 from 1981.

The average loan size made by FmHA did not increase as much as those made by

TABLE 11. AVERAGE PERCENT OF PURCHASE PRICE FINANCED BY LENDER BY YEAR, 1971-1983^a

Year	FLB	FmHA	Seller	Bank	Other	Over-All
1971	83.6	96.4	83.7	81.9	60.5	84.8
1972	85.9	89.5	83.7	75.6	86.6	85.5
1973	84.8	91.7	80.8	83.7	74.0	83.9
1974	85.6	93.1	81.2	77.5	92.4	84.3
1975	85.5	96.2	76.4	88.3	85.2	82.3
1976	88.3	98.7	75.6	71.2	76.1	81.6
1977	88.9	97.2	75.0	77.1	80.0	80.6
1978	84.2	98.3	75.7	87.2	93.9	81.6
1979	84.5	97.6	76.5	78.7	77.1	80.8
1980	83.1	95.6	77.0	88.4	85.1	80.7
1981	84.7	96.3	75.1	91.3	80.9	80.5
1982	81.0	91.5	75.5	83.8	85.8	78.6
1983	79.6	95.6	75.1	89.0	87.2	78.8

Source: Federal Land Bank of Omaha data base for South Dakota.

^aBased on 8,782 sales where complete financial data were available.

FLB and began decreasing after 1979 until 1982. FmHA loans, on average, were larger than FLB loans between 1971 and 1973 and again in 1980, 1982, and 1983. In all other years FLB loans were larger than FmHA loans.

The average size of seller financed loans (and contracts for deed) were always larger than the average size of bank and FmHA loans and in most years larger than FLB loans. The largest average size of seller financed loans was in 1973 at nearly \$118,000. In 1975-1978, the average seller financed loan size was about \$80,000; in 1979-1982, average size increased to over \$100,000. Higher average loan size and lower percent of sale price financed by sellers means that sellers were generally financing the larger volume sale tracts than the FLB or FmHA.

The size of loans financed by either banks or "other" lenders varied greatly from year to year. No clear trends can be seen in size of loans financed by "other" lenders.

Average Interest Rate, 1971-1983

The average rate of interest by year by lender can be seen in Table 13. The interest rate stated on the sale transactions was the effective annual rate of interest for sales financed by the FmHA, banks, sellers, and other lenders with the exception of the FLB.

The interest rate stated on FLB loans is approximately 0.5% lower than the effective rate of interest because the borrower only received 95% of the total amount borrowed; the remaining 5% was used to purchase required stock in the FLB. All FLB farm loans were on a variable interest rate program during this time period.

It is not known how many of the non-FLB mortgages and seller contracts for deed were using a variable rate, although variable interest rates have been rather common since 1980.

The average rate of interest for all

TABLE 12. AVERAGE SIZE OF LOAN BY LENDER BY YEAR, 1971-1983^a

Year	FLB	FmHA	Seller	Bank	Other	Over-All
	thousands of dollars					
1971	\$30.9	\$42.9	\$48.7	\$26.1	\$156.5	\$43.1
1972	37.2	45.0	89.2	19.3	48.8	45.7
1973	37.0	59.0	117.9	43.5	248.0	62.7
1974	53.8	50.0	102.5	57.1	147.2	75.1
1975	73.9	55.5	83.4	42.7	97.5	76.9
1976	77.9	73.8	83.6	49.6	53.6	79.7
1977	87.5	67.2	81.5	47.0	320.0	85.6
1978	86.1	81.4	79.9	45.9	185.0	83.4
1979	99.7	97.2	106.5	53.6	159.7	104.0
1980	94.2	95.4	103.3	92.7	137.9	99.5
1981	127.7	90.5	108.3	65.5	110.7	114.2
1982	84.0	90.8	101.1	55.2	121.9	94.7
1983	83.0	91.4	94.3	72.4	204.5	91.8

Source: Federal Land Bank of Omaha data base for South Dakota.

^aBased on 8,782 sales where complete financial data were available.

sales increased slightly each year from 1971 to 1975 and then decreased during the next 2 years. In 1978, average interest rates increased slightly and then accelerated upward, peaking in 1982 at 11.0%. In 1983, the average interest rate declined for all lenders.

Sales listing FmHA as primary lender reported the lowest interest rates, on average, until 1978 when interest rates began to climb. It appears that a conscious policy decision was made by FmHA at that time to maintain a constant percentage subsidy of interest rates rather than a constant interest rate. This meant that as interest rates and the federal government's cost of funds rose, the interest rate charged by the FmHA would increase by a similar amount.

Bank financed sales and FLB financed sales charged approximately the same average rate of interest until 1978 when bank interest rates began to rise at a quicker pace than FLB interest rates. This happened at this point because of the difference between the two lenders in their source of funds. The FLB obtains its funds in the long-term bond market and

uses average cost pricing when setting interest rates. This allows interest rates to rise or fall at a slower pace. Commercial banks obtain most of their funds from time deposits and demand deposits, which have relatively short maturities compared to average repayment periods on farm real estate loans. Therefore, bank interest rates change more quickly than FLB rates because their costs of funds change more rapidly.

The interest rate on sales financed by "other" lenders averaged approximately the same as bank loan interest rates except in 1979-1982 when bank loan interest rates were much higher.

Interest rates on sales with seller financing increased at a slow, steady pace until 1980 when larger increases in interest rates were obtained by all lenders. After 1978, average interest rates on seller financed loans were lower than those offered by other farm real estate lenders.

TABLE 13. AVERAGE RATE OF INTEREST BY LENDER BY YEAR, 1970-1983^a

Year	FLB ^b	FmHA	Seller	Bank	Other	Over-All
1971	7.88	5.50	6.03	7.71	6.44	6.64
1972	7.50	5.28	6.13	7.78	8.00	7.15
1973	7.79	5.83	6.45	7.83	7.75	7.36
1974	8.41	5.20	6.98	8.50	8.76	7.69
1975	8.67	5.08	7.20	8.88	8.40	7.90
1976	8.50	5.20	7.15	8.75	8.58	7.57
1977	8.45	5.35	7.27	8.99	8.13	7.53
1978	8.38	6.73	7.36	9.32	8.57	7.67
1979	9.34	7.99	7.91	10.44	9.10	8.46
1980	10.42	9.38	8.72	13.74	9.69	9.48
1981	11.62	10.97	9.52	15.88	12.49	10.50
1982	12.61	10.37	10.03	14.93	12.13	11.00
1983	11.78	9.74	9.54	12.92	11.59	10.50

Source: Federal Land Bank of Omaha data base for South Dakota.

^aBased on 8,782 sales where complete financial data were available.

^bThe average interest rate reported on FLB loans includes average interest rates on FLB-only financed sales and FLB-FmHA, FLB-seller and FLB-all other lender financed sales.

Repayment Terms, 1971-1983

Farm real estate loan (and contract for deed) repayment terms can be structured many different ways. One common method, used by FLBs and FmHA, is a fully amortized loan with equal payments over the loan life. The amount of interest paid each year declines over the life of the loan and the amount of principal paid increases. On variable interest rate notes, annual payments may be recomputed as interest rates change over the loan repayment period.

Other amortization plans, such as decreasing or increasing payment loans, may be offered by some lenders. Some lenders, especially sellers and commercial banks, offer partially amortized loans with a balloon payment in the final year.¹⁵ Some lenders allow partial or full prepayment without penalty while others do not.

Repayment term information obtained on the FLB farm and ranch sales sheet for credit financed sales is limited to number of years to repay. Average repayment period (in years) by lender in 1971-1983 is shown in Table 14. Overall, the average length of loan was above 22 years in 1971-1975. In 1976-1981, average repayment period varied from 18.5 to 20.3

years. Average repayment period declined to 17.5 to 17.7 years in 1982 and 1983.

The average number of years to repay loans varied considerably between lenders in any given year. Also, average repayment length declined for most lenders during the 13-year period.

FmHA financed sales reported longer repayment periods than sales financed by other lenders for all years examined (1971-1983). FmHA average repayment periods varied from 37.0 to 39.6 years in 1971-1979 and in 1983. Average loan repayment period was less than 37 years in 1980-1982.

¹⁵The major reasons for offering a partially amortized loan with a balloon payment in the final year is to reduce the annual payment for the borrower (except during the final year) and to reduce the total number of years of loan repayments. For example, a \$100,000 loan could be partly amortized for 10 years at 10% annual interest rate with a \$40,000 balloon payment in the final (11th) year. The annual payment for years 1-10 would be approximately \$13,762 and the final (11th year) payment of principal and interest would be \$44,000. If the \$100,000 loan had been fully amortized in 11 years the annual payment would have been approximately \$15,400.

TABLE 14. AVERAGE LENGTH OF LOAN IN YEARS BY LENDER BY YEAR, 1971-1983^a

Year	FLB	FmHA	Seller	Bank	Other	Over-All
1971	34.1	37.0	12.2	13.8	16.3	22.1
1972	33.4	38.0	12.8	15.8	23.0	29.7
1973	30.6	37.9	13.6	1.0	20.0	26.0
1974	29.6	38.7	12.8	3.0	18.8	22.9
1975	29.1	39.6	12.3	8.6	18.6	22.3
1976	28.3	39.0	12.5	12.8	22.3	20.1
1977	28.2	38.6	12.0	12.2	16.4	18.5
1978	29.1	39.6	11.6	11.1	19.3	20.3
1979	28.1	38.7	12.2	10.0	18.6	19.6
1980	28.6	36.5	11.2	4.9	24.4	19.4
1981	28.8	34.2	11.3	4.3	13.5	19.6
1982	27.3	36.3	10.7	5.1	12.8	17.5
1983	26.9	38.7	10.4	6.7	15.4	17.7

Source: Federal Land Bank of Omaha data base for South Dakota.

^aBased on 8,782 sales where complete financial data were available.

Sales financed by the FLB had average repayment periods above 30 years in 1971-1973. Since then, repayment period length slowly declined to an average of 26.9 years in 1983. Seller financed sales had average repayment periods of 10.4 to 13.6 years. Repayment period slowly declined in average length from 1973 to 1983. For each year there was considerably more variation in repayment periods among seller financed sales than was the case for FmHA or FLB financed sales.

Sales financed by commercial banks had the shortest term to maturity in 9 of the 13 years examined. There was considerable variation in average maturity length over time, partly due to low sales frequency in some years.

The average repayment period for sales financed by "other" lenders was always shorter than repayment period of FLB or FmHA loans and always longer than repayment periods on commercial bank and seller financed sales.

MAJOR FORCES AFFECTING FUTURE FARMLAND MARKET TRENDS

The major forces affecting farmland market price trends are net returns and the expected increases or decreases in net returns. Factors influencing both are commodity prices, interest rates, financing terms, farm enlargement pressures, technological changes in agriculture, and changes in government farm programs.

In recent years, federal "tight" monetary policies and large federal budget deficits have combined to increase the level of real interest rates and strengthen the value of the U.S. dollar in terms of trading partner currencies. This has reduced our nation's ability to increase agricultural exports, has lowered our commodity prices, and has maintained higher interest rates than would otherwise be the case.

A major impact of these forces is an expected downward trend in farmland prices throughout the mid-1980s. Current returns to farmland, especially cropland, are not

likely to show sustained increases in the next few years, unless export market prospects brighten considerably. (Rangeland market prices are linked more to economic trends in the cow-calf industry.)

Farmland credit trends of lower downpayment requirements, relatively low interest rates and longer repayment periods from 1975 to the late 1970s made it very attractive for increasing numbers of buyers to credit-finance land purchases at high leverage (debt-to-net worth) ratios.

Farm real estate credit terms were not the major cause of the farmland price boom in the 1970s, but relatively easy credit availability probably helped to sustain it.

Credit terms have tightened in the early 1980s with higher average downpayment requirements, reduced number of years to repay, significantly higher average interest rates, and—in many cases—a variable interest rate. Tighter credit terms based on a careful analysis of projected cash flow repayment ability are expected in the next several years.

In most regions, the major buyers and sellers of farmland will continue to be farmers and ranchers.

The principal buyers will be farmers and ranchers who have expanded or maintained their farm operations through earnings and who did not finance major capital purchases almost entirely with borrowed money. Many young, beginning farmers and nonfarm investors (local or absentee) will also be likely buyers.

In the mid-1980s the principal sellers of farmland are likely to be two groups of people. One is the traditional group of retired farmers, those farmers nearing retirement, and some nonoperator landlords.

The second group of sellers are farmers and ranchers forced to sell their operation because of their poor financial situation and other farmers partially liquidating their operation to reduce their debt load to a manageable level.

The size and magnitude of the latter group will vary by community, depending on past lender-borrower practices and type of agriculture. It will also depend on the nature and extent of proposed federal or state agriculture credit, debt restructuring, interest rate reduction, or buy down programs. However it is nearly certain that the second group of sellers will be large enough to cause downward pressure on farmland prices in most areas.

LIST OF REFERENCES

1. Chambers, Clyde R. Relation of land income to land value. Bul 1224, USDA, June 1924.
2. Clifton, I.D., and W.D. Crowley, Jr. Farm real estate historical series data: 1850-1970. ERS 520, USDA, June 1973.
3. Daugherty, A.B., and R.C. Otter. Farmland ownership in the United States. ERS Staff Report AGES 830311, USDA, June 1983.
4. Duncan, M. "Farm real estate values - some important determinants." Monthly Review, Federal Reserve Bank of Kansas City, March 1977a.
5. _____. "Farm real estate: Who buys and how?" Monthly Review, Federal Reserve Bank of Kansas City, June 1977.
6. _____. Farm real estate values: What's happening and why. Research Division, Federal Reserve Bank of Kansas City, June 1979.
7. Federal Land Bank of Omaha, Credit Department. June 1 sales report and land values based on benchmark farms. Omaha, NE, July 1984.
8. Gustafson, G.C. Who owns the land? A state and regional summary of land ownership in the United States. ERS Staff Report AGES 830405, USDA, April 1983.
9. Herdt, R.W., and W.W. Cochrane. "Farmland prices and technological advance." Journal of Farm Economics, May 1966, pp. 243-63.
10. Janssen, L., and M. Edelman. Changing structure of South Dakota agriculture. Economics Department Research Report 83-2. South Dakota State University, Brookings, SD, January 1983.
11. _____. "Recent trends in South Dakota's farmland market". Economics Newsletter 213, South Dakota State University, Brookings, SD, September 1984.
12. Lundy, G., and R.F. Pengra. Land market trends in South Dakota, 1941-50. Bul 413, SDAES, South Dakota State University, Brookings, SD, June 1951.
13. Murray, W.G., et al. Farm appraisal and valuation. Iowa State University Press. Ames, IA, 1983.
14. Reynolds, J.E., and J.F. Timmons. Factors affecting farmland values in the United States. Research Bul 566, AES, Iowa State University, Ames, IA, 1969.
15. Swinson, C.R. "Analyses of farmland sales transactions in South Dakota." Unpublished M.S. thesis. Economics Department, South Dakota State University, Brookings, SD, 1984.
16. Tweeten, L.G., and T.R. Nelson. Sources and repercussions of changing U.S. farm real estate values. Tech Bul T-120, Oklahoma State University, Stillwater, OK, April 1966.
17. U.S. Department of Commerce, Bureau of the Census. U.S. census of agriculture, South Dakota, vol 1, 1982.
18. U.S. Department of Agriculture, Economic Research Service. Farm real estate market developments. Various reports including: CD-86, August 1981; CD-84, August 1979; CD-73, August 1969; CD-67, August 1965; and CD-65, August 1964.
19. Walker, L.A. "Land values - part I." Report to Great Plains Resource Committee, June 5-7, 1979.

The Federal Land Bank of Omaha
FARM AND RANCH SALE SHEET

IDENTIFICATION

- 1. Assoc. No. and Branch Code Sale Number Month and year of sale
2. FLB loan number (Complete only if there is or will be an FLB loan on property)
3. Name of purchaser
4. Citizenship of purchaser. If purchaser is a U.S. citizen, leave both digits blank. If purchaser is not a U.S. citizen, complete both digits as follows: First digit (1-Resident alien) (2-Nonresident alien). Second digit (1-Canadian) (2-French) (3-Japanese) (4-Arabic) (5-North Central European) (6-Scandinavian) (7-Other known citizenship) (8-Unknown)

LOCATION AND DESCRIPTION

- 5. County (Where major portion of property is located) (Code) State
6. Section, Township, and Range
7. Type of non-farm influence (0-None) (1-Comm. or indus. devel.) (2-Residential devel.) (3-Military (incl. ardon) (4-Interstate hwy.) (5-Other hwy.) (6-Public and/or private recreation land) (7-Other factors) (8-Combination) (9-Mineral rights)
8. Degree of non-farm influence (0-None) (1-Slight) (2-Moderate) (3-Great)
9. Area class 1-2-3-4 and Farm class A-B-C-D
10. Principal product sold (Code) Secondary product sold (Code)

BUILDINGS

- 11. Livestock or poultry facility capacity (No. of head - one time, intensive feeding facilities only)
12. Type of facility (1-Broilers) (2-Eggs) (3-Other poultry) (4-Dairy) (5-Swine) (6-Beef) (7-Other livestock)
13. Assigned value of principal dwelling (If none, leave blank) \$
14. Total assigned value of all buildings, including dwelling (If none, leave blank) \$

LAND

- 15. Acres in permanent pasture (If none, leave blank)
16. Acres cultivated (If none, leave blank)
17. Total acres purchased

TERMS

- 18. Purchase price (per acre \$; per head - ranches only \$) Total consideration \$
19. Cash seller received or will receive at closing (Down pay if contract; same as line 18 if cash sale) \$
20. Percent of purchase price financed with first and/or second mortgage or contract %
21. Amount of purchase price financed by FLB (If none, leave blank) \$
22. If FLB financed, show second mortgage lender; if not FLB financed, who is the primary lender? (0-None) (1-FMHA) (2-PCA) (3-Insur. Co.) (4-Comm. Bank) (5-Seller) (7-Other) (8-Comb.) (9-Unknown)
23. Note (or contract) term (If none, leave blank)
24. Interest rate stated on the note or contract (If unknown or not applicable, leave blank) %
25. Primary reason for purchasing (1-Establish own farm) (2-Expansion) (3-Investment) (4-Non-ag development) (5-Rural home) (7-Other) (9-Unknown)
26. Method of sale (1-Auction - open bid) (2-Auction - sealed bid) (3-Private sale) (4-Realtor sale) (5-Other) (9-Unknown)
27. Reason for sale (01-Settle estate) (02-Voluntary liquidation) (03-Involuntary liquidation) (04-Retire) (05-Leave farming) (06-Estate planning) (07-Realize appreciation) (08-Purchase other land) (09-Other) (10-Unknown)

RELATIONSHIP TO BENCHMARK

- 28. Sale relates to benchmark number (If no relationship, leave blank)
29. Comparison to benchmark (1-Above) (2-Below) (3-Equal) Productivity Improvements Location
30. Loan officer's code
31. This price indicates an AV per (acre or head) on the above benchmark of \$
32. Type of Sale (1-Bona fide) (2-Non-bona fide)

IRRIGATION

(If not irrigated, skip items 33-35)

- 33. Total acres irrigated (Include crop and pasture)
34. Method of irrigation (1-Gravity) (2-Hand- or wheel-moved sprinkler) (3-Self-propelled sprinkler) (4-Solid set sprinkler) (7-Other) (8-Combination)
35. Classification of water supply (1-I) (2-II) (3-III) (4-IV)

GRAZING LAND

(Applies only to livestock ranches)

- 36. Total livestock carrying capacity - total AUs (number of head - cow-calf basis)
37. Percent of carrying capacity from assured leases
38. Type of assured lease (0-None) (1-Taylor, Sec. 15) (2-BLM) (3-Nat'l forest) (4-State) (5-Private) (6-Grazing ass'n) (7-Other) (8-Combination)
39. Number of months available for grazing (Pasture season)

Boldface items must be completed on all sales. Others are optional depending on the sale.

Remarks: (Continue on reverse, if necessary)

(Retain original. Submit copy to Bank.)

