A FINANCIAL PROFILE OF NORTH DAKOTA'S FARM SECTOR

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Historically, the farm sector has experienced periods of financial prosperity and decline. These episodes of "boom and bust" have been irregular and each time have resulted in different financial impacts, nationally and in North Dakota. The most recent experience covers the period from 1972 to 1984. During that period farm financial conditions changed dramatically, triggered by a burst in commodity prices and subsequently reversed by inflation and declining farm prices and profitability.

Crop and livestock operations were both affected by those changes. Moderate increases in farm commodity prices in 1972 and large increases in 1973 produced significantly higher net farm income and evidence of prosperity in agriculture. The rise in livestock prices was short-lived, however, as those prices and profits declined in 1974. Crop prices held at high levels for an additional two years due to a shortage of world grain supplies and high export demand.

A substantial amount of farm investment occurred in the post-1973 period, spurred by a resurgence of livestock prices in 1978 and 1979 and crops in 1979-80. Farmland prices were bid up substantially. Debt expansion paralleled the increase in land prices as farmers leveraged their equity to "get a piece of the action." Commercial lenders accommodated the expansion of debt based on the improved equity position of farm borrowers.

Farm earnings and cash flow showed signs of increasing financial stress in the post-1979 period. Higher farm debt, a large increase in interest rates, inflated prices of purchased farm inputs, and declining farm commodity prices have all led to financial deterioration. Financial distress has not been experienced by all farmers, however, and the financial position of most farmers in North Dakota remains strong. Most heavily indebted operators are experiencing financial distress and pose a serious economic problem.

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Farm Sector Balance Sheet

The balance sheet is commonly a statement of financial position of a single business entity. It summarizes the value of assets and outstanding debt at a point in time. The owner is the residual claimant of asset value after all external creditors have been paid. Equity capital represents the owner's claim. Similarly, the balance sheet of the farm sector represents aggregate asset value, debts, and equity of owner-operators and nonoperator landlords. North Dakota's farm sector balance sheet is shown in Table 1 for selected years between 1970 and 1984.

Several characteristics of the balance sheet are important to note. First, farm assets increased in value in years prior to 1983. However, the value of farm assets declined in 1983 and again in 1984 (according to a preliminary estimate). The primary contributor to this decline was the devaluation of real estate. Real estate accounted for 60 to 70 percent of total farm assets during the 1970-1984 period. The decline of other farm assets (machinery, equipment, and crop and livestock inventories) also contributed to the 1984 decrease in total farm assets. The exceptions to this decline were total financial assets held by the farm sector and the value of household goods. Second, farm debt increased in all years shown, except for a slight decrease in 1984. The 1984 decline was attributable to the decrease in CCC loans outstanding, which more than offset the continuing rise of real estate and nonreal estate debt.

Third, asset values increased faster than debt expanded between 1970 and 1982, so farm equity increased. Erosion of asset values in combination with higher debt levels reversed the trend of equity growth in 1983 and 1984. In nominal (current dollar) terms, the combined equity of farm operators and nonoperator landlords reached about $20.8 billion in 1982 but fell to just over $19 billion two years later.

Nominal dollar comparisons can be greatly misleading in gauging financial progress of the agricultural sector. A substantial amount of the new wealth in agriculture was unearned — a byproduct of inflation. Nominal equity values shown in Table 1 were deflated.[1]

[1]Nominal values were divided by the Gross National Product (GNP) Implicit Price Deflator series, using 1972 as the base year.

Table 1. Balance sheet of the farming sector (including farm households), North Dakota, January 1.

Item	1970[a]	1974[a]	1978	1979	1980	1981	1982	1983	1984[e]
Number of farms	45,000	43,000	41,000	40,500	40,000	39,000	38,000	37,500	37,500
Assets						million dollars			
Total farm assets	6,576.0	10,446.0	17,704.8	20,846.2	23,801.6	24,712.4	25,683.1	25,250.8	24,744.4
Physical assets									
Real estate	3,939.0	6,005.0	12,510.0	14,469.9	16,638.3	17,639.1	18,181.2	17,263.8	16.676.9[f]
Livestock & poultry	434.0	891.0	533.5	967.4	1,113.8	980.8	892.7	902.6	877.2
Machinery & motor vehicles	969.0	1,238.0	2,519.5	2,793.9	3,142.9	3,238.1	3,400.2	3,466.3	3,550.6
Crops[b]	585.0	1,164.0	1,082.5	1,344.1	1,529.4	1,414.1	1,641.3	1,869.5	1,642.8
Household equip. & furnishings	134.0	172.0	240.6	227.3	238.3	258.9	290.8	317.2	329.0
Financial assets									
Deposits and currency	225.0	534.0	280.9	293.6	296.9	293.9	300.4	311.8	325.8
U.S. savings bonds	75.0	192.0	78.2	170.2	161.5	148.3	138.5	133.9	137.9
Investments in cooperatives	215.0	250.0	459.6	579.8	680.6	739.2	838.0	985.7	1,037.8
Claims									
Total farm debt	1,177.0	1,393.0	2,504.0	3,252.8	3,906.9	4,238.7	4,879.1	5,685.4	5,657.1
Real estate debt	520.0	718.0	1,058.8	1,326.9	1,626.4	2,020.2	2,178.6	2,316.9	2,372.3
Nonreal estate debt[c]	427.0	646.0	1,163.2	1,496.3	1,914.5	1,995.5	2,224.5	2,417.5	2,449.9
CCC loans[d]	230.0	29.0	282.0	429.0	366.0	268.0	476.0	951.0	642.7
Equity (nominal dollars)	5,399.0	9,053.0	15,200.8	17,593.4	19,894.7	20,473.7	20,804.0	19,565.4	19,049.0
(real dollars)[g]	6,220.0	8,564.8	10,873.2	11,728.9	12,220.3	11,547.5	10,641.4	9,456.5	8,835.3
Ratios						ratio			
Equity/total assets	.821	.867	.859	.844	.836	.828	.810	.775	.770
Debt/equity	.218	.154	.165	.185	.196	.210	.235	.291	.297
Debt/total assets	.179	.133	.141	.156	.164	.173	.190	.225	.229
Debt/net farm income	4.9	1.3	4.5	7.5	15.6	5.8	11.8	n.a.	n.a.

[a]Prior to 1975 the Census of Agriculture definition of a farm included those with sales less than $1,000.

[b]All crops held on farms including crops under CCC and crops held off farms by farm operators.

[c]Includes debt owed to institutional lenders and to noninstitutional or miscellaneous lenders.

[d]Nonrecourse CCC loans secured by crops owned by farmers. These crops are included as assets.

[e]1984 was projected from historic ratios of North Dakota values to United States. Source: **Agricultural Finance Outlook and Situation,** AFO-24, December 1983.

[f]Real estate values were devalued by 3.4 percent. Source: Johnson, Jerome E., "Downward Adjustment in Farmland Values Continued in 1983." **North Dakota Farm Research,** Vol. 41, No. 4, January-February 1984.

[g]Real equity figures are derived by deflating nominal equity using the GNP Implicit Price Deflator series (1972 = 100).

SOURCE: U.S. Department of Agriculture, Economic Research Service, **Economic Indicators of the Farm Sector: State Income and Balance Sheet Statistics, 1977-1979.**

Resulting values express total equity of the agricultural sector in real (1972 constant dollar) terms. Real equity declined from 1981 to 1984. This indicates that although the nominal farm asset values continued to rise until 1982, the real purchasing power of each dollar of equity invested in farming began to fall as early as 1981.

Financial ratios (contained in Table 1) summarize information about growth and decline of North Dakota's farm sector. The equity/total asset ratio declined from 1974 to 1984 as asset values grew faster than equity. Debt/equity and debt/asset ratios (two measures of financial leverage) indicated that equity gradually represented less of total assets because debt was expanding. Debt as a percentage of total assets rose from 17.9 percent in 1970 to 22.9 percent in 1984. The debt/asset ratio decline in 1974 was due to a dramatic rise in farmland values. This pattern of increasing financial leverage in North Dakota mirrors the trend at the national level where the debt/total asset ratio increased from .16 in 1970 to .20 in 1983. The overall low debt/total asset ratio indicates that each dollar of farm sector debt continues to be backed by about 5 dollars of assets — a strong financial position. But debt security has not been the nemesis of the farm sector, it has been debt service (principal and interest payments). The debt/net farm income ratio (times-earnings ratio) indicates that farm earnings have been less adequate for debt service in the early 1980s than in the 1970-1978 period. The times-earnings ratio in 1982 indicated that based on net farm income in 1982 it would have taken nearly 12 years to repay the outstanding principal. That represents a long repayment period considering nonreal estate debt comprised between 40 and 50 percent of total farm debt. The trend toward higher times-earnings ratios in the post-1979 period can be explained by closely examining farm earnings.

Farm Sector Income Statement

Net farm income peaked in 1974 as shown in Table 2. The major contributors were a tripling of gross cash farm receipts and the associated sale of farm crop and livestock inventories. Cash farm receipts and liquidation of farm inventories were high again in 1980, but production expenses were also significantly higher due to inflation of input costs. A drought in 1980 also reduced farm production. Consequently, net farm income in 1980 was less than one-fourth of that in 1974.

Farm prices were approximately level during the 1979-82 period while farm expenses increased. Gross farm income increased about 25 percent, while production expenses rose approximately 31 percent. The decline of farm profitability can be expressed as an average annual rate. Gross income grew 7.5 percent while production expenses grew 9.3 percent per year between 1979 and 1982. The 1.7 percent difference

Table 2. Income statement of the farm sector (including households), North Dakota, January 1.

Item	1970[a]	1974[a]	1978	1979	1980	1981	1982
	million dollars						
Cash receipts from marketings	776.6	2,426.2	1,864.0	2,331.0	2,608.8	2,560.9	2,710.4
Government payments[b]	167.2	31.0	278.2	46.5	116.6	130.7	200.2
All other income[c]	65.3	99.7	161.7	180.5	201.7	216.6	231.6
Net change in inventory	−60.3	−225.0	89.4	5.6	−464.1	445.5	49.6
Gross farm income	948.8	2,331.9	2,393.3	2,563.6	2,463.0	3,353.7	3,191.8
Production expenses	709.6	1,247.6	1,837.6	2,127.2	2,212.7	2,620.7	2,777.5
Net farm income							
(nominal dollars)	239.2	1,084.3	555.7	436.4	250.3	733.0	414.3
(real dollars)[d]	261.4	943.7	370.5	268.1	141.2	374.9	200.2

[a]Prior to 1975 the Census of Agriculture definition of a farm included those with sales less than $1,000.

[b]Including net CCC loans.

[c]Nonmoney income and other farm income.

[d]Real net farm income figures are derived by deflating nominal income using the GNP Implicit Price Deflator series (1972 = 100).

SOURCE: U.S. Department of Agriculture, **Economic Indicators of the Farm Sector: State Income and Balance Sheet Statistics,** Economic Research Service, 1979-1982.

represents the well-publicized "cost-price squeeze" in agriculture. Net farm income in real terms indicates that the purchasing power of farm earnings did not keep pace with the rest of the economy. Average real net farm income from 1979 to 1982 was about $245 million, well below the $261 million earned in 1970.

North Dakota farm earnings are expressed as a percentage of farm asset value in Table 3 between 1970 and 1982. Annual income rate of return on total farm assets rose sharply to 11.7 percent in 1974 but fell back to the "normal" 2 to 3 percent range between 1978 and 1982. Real capital gains peaked in 1974 at 26 percent and remained "above-normal" into 1980. Real capital gains on farm assets were less stable than the income rate of return.

Average annual income rate of return (2.3 percent) represented approximately one-fourth of the total annual return on farm assets (9.1 percent) between 1978 and 1982. The other three-fourths accrued in the form of unearned returns as capital gains. Real capital gains represent unearned returns due to inflation of asset values. Farmers would have to sell farm assets at the inflated values to realize the gain. Some of this gain has been lost due to declining land values since 1982. Thus, while the total rate of return in farming has been comparable, or better than that of other sectors of the state and national economy, the annual earned income return of farm operators has been comparatively low. This inability to generate income to meet annual cash needs (including debt service) is the "cash flow problem" currently faced by a segment of the state's farm operators.

Farm Sector Cash Flow

Two cash flow patterns stand out in the 1977-82 period (and continuing through 1983) as shown in Table

Table 3. Annual rates of return on total farm assets for all operators and non-operator landlords in North Dakota for selected years, 1970-1982.

Year	Rate of Income Return on Total Farm Assets[a]	Real Capital Gains on Total Farm Assets[b]	Combined Rate of Return on Total Farm Assets
	%		
1970	3.6	0.3	3.9
1974	11.7	26.0	37.7
1978	3.3	7.6	10.9
1979	2.3	12.4	14.7
1980	1.1	10.3	11.4
1981	3.0	2.4	5.4
1982	1.6	1.3	2.9
Average (1978-82)	2.3	6.8	9.1

[a]The rate of income return on total farm assets was calculated as:

$$\frac{\text{Net Farm Income (after inventory adjustment)}}{\text{Average Total Farm Assets}}$$

[b]Real capital gain on total farm assets was calculated by: 1) deflating the change in total market value of farm assets, 2) deflating the change in total farm debt, 3) computing the change in real asset value net of debt (1 minus 2), and 4) dividing the net change in real asset value by the average real value of assets. Real dollar values were computed by deflating nominal dollar values using the GNP Implicit Price Deflator series (1972 = 100).

4. First, net borrowing has represented an important share of total annual cash flow in farming. Since farm income was insufficient to meet higher cash flow requirements, farmers generally met those cash demands by expanding indebtedness instead of voluntarily liquidating farm assets. Farmers also continued to supplement farm income with nonfarm earnings.[2] Second, interest paid as debt service claimed about 30 percent of net cash flow (before interest and taxes) in 1980-82. This was significantly higher than the 20 percent claimed by

[2]Nonfarm income is not reflected in the farm sector cash flow summary.

Table 4. Derivation of cash flow in North Dakota's agricultural sector, 1977-1982.

Item	Year 1977	1978	1979	1980	1981	1982
	million dollars					
Gross Farm Income	1,780.5	2,393.3	2,563.6	2,463.0	3,353.7	3,191.8
Less: Cash expenses (excluding interest and taxes)	993.2	1,172.5	1,244.4	1,218.5	1,424.7	1,500.8
Equals: Net cash flow (after tax, before interest)	722.1	1,147.8	1,248.2	1.168.1	1,852.7	1,609.5
Less: Interest paid	164.3	199.1	311.1	412.0	496.3	555.3
Equals: Net cash flow (after interest and taxes)	557.8	948.7	937.1	756.1	1,356.4	1,054.2
Plus: Net borrowing (excluding CCC loans)	295.6	437.9	717.1	474.8	387.4	331.3
Equals: Funds available for investment, consumption, and saving	853.4	1,386.6	1,654.2	1,230.8	1,743.8	1,385.5

interest during the 1977-79 period. The higher interest bill reflected higher farm indebtedness and sharply higher interest rates.

A third characteristic of farm sector cash flow is that it was highly erratic between 1970 and 1982. Net income rose rapidly and declined just as quickly during the 1970-77 period. It remained highly variable between 1977 and 1982. Farm cash flow followed the wide swings in farm earnings during this period. This compounded the problem of meeting larger, regular debt service needs in the latter 1970s and early 1980s.

The preceding financial statements indicate that farmers in North Dakota have experienced declining farm profitability coupled with erratic and reduced cash flow. Farmers have increased their borrowing and the higher interest costs have compounded the cash flow problem. Yet, a significant proportion of the individuals comprising the "agricultural sector" in North Dakota hold minimal amounts of debt or no debt at all. The next section disaggregates the agricultural sector balance sheet and indicates the increasing magnitude of the financial dilemma for indebted farm operators.

Balance Sheet of Indebted Farm Operators

The state farm sector is comprised of three groups of resource owners: 1) nonoperator landlords, 2) debt-free farm operators, and 3) indebted farm operators. The sector balance sheet was disaggreagted into these three groupings using data from the 1979 Farm Finance Survey (U.S. Census Bureau, 1979). Table 5 contains ownership shares of the agricultural sector balance sheet for 1979 derived from the survey. A similar disaggregation is shown for 1984, assuming the 1979 proportions remained constant for total assets and total debt. Total equity shares were adjusted to reflect asset and debt value changes between 1979 and 1984.

Two features of the balance sheet ownership shares are important. Nonoperator landlords claim over 40 percent of total farm sector equity but carry only 11.7 percent of the total debt. Indebted farm operators account for less than 40 percent of the total equity but

Table 5. Shares of the North Dakota farm sector balance sheet by owner group in 1979 and 1984[a].

Item	Nonoperator Landlords 1979	1984[c]	Debt-free Operators 1979	1984[c]	Indebted Operators 1979	1984[c]
	percent					
Total Farm Assets	37.8	37.8	15.6	15.6	46.6	46.6
Total Farm Debt	11.7	11.7	0.0	0.0	88.3	88.3
Total Equity[b]	42.6	45.5	18.5	20.2	38.9	34.3

[a]Based on the relative distribution of assets and claims reported for North Dakota in the 1979 **Farm Finance Survey**, Bureau of Census, U.S. Department of Commerce.

[b]Shares of equity for each year were derived from **Economic Indicators of the Farm Sector: State Income and Balance Sheet Satistics**, U.S. Department of Agriculture, Economic Research Service.

[c]Based on 1984 projected balance sheet (see Table 1).

carry 88.3 percent of total farm sector debt. Second, all three ownership groups have experienced declining net worth, but in different amounts. Equity shares shown in Table 5 indicate that nonoperator landlord and debt-free operator shares increased while indebted operators experienced a share decrease. These results are consistent since nonoperator landlords and debt-free operators simply had a larger share of a smaller total equity pie. These two groups escaped the cash flow problems faced by the indebted operator group because they had little or no debt.

Indebted farm operators comprised about 68 percent of the 40,500 farming operations in the state in 1979 — 94 — or 27,540 farms. Nearly 90 percent of the total sector debt was held by this group. Debt expansion in the latter 1970s and early 1980s had important financial impacts on indebted farm operators (Table 6). Total assets increased through 1982, but equity showed a slight decline in that same year. Erosion of equity occurred from 1981 through 1984. Nominal equity fell by 16 percent compared to a 7 percent decline for the entire farm sector. Real equity of the indebted operator group began to decline in 1981, one year earlier than the decline of real equity of the whole farm sector. By 1984

Table 6. Balance sheet of indebted farm operators in North Dakota[a].

Item	1978	1979	1980	1981	1982	1983	1984
	million dollars						
Total assets	8,250.4	9,714.3	11,091.5	11,515.9	11,968.3	11,766.9	11,530.9
Total debt	2,210.5	2,871.6	3,449.0	3,741.9	4,307.3	5,019.1	4,994.1
Equity (nominal dollars)	6,039.9	6,842.7	7,642.5	7,774.0	7,661.0	6,747.8	6.536.8
(real dollars)[b]	4,320.4	4,561.8	4,694.4	4,384.7	3,918.7	3,261.4	3,031.9
	ratios						
Equity/assets	.73	.70	.69	.67	.64	.57	.57
Debt/asset	.27	.30	.31	.32	.36	.43	.43
Debt/equity	.37	.42	.45	.48	.56	.74	.76

[a]Based on the 1979 distribution of assets and debts.

[b]Real equity figures are derived by deflating nominal equity using the GNP Implicit Price Deflator series (1972 = 100).

real equity of indebted operators had fallen 35 percent from the 1980 level.

The three-year decline in nominal equity between 1981 and 1984 in combination with greater use of debt resulted in significant increases in the debt/asset and debt/equity ratios between 1980 and 1984. The debt/asset ratio for all indebted operators was .43 in 1984 in contrast with .229 for the whole farm sector. The debt/equity ratio for the indebted operator group was .76 compared with .297 for the state's farm sector. Both ratios indicate the significant differences between the financial structure of the indebted operator group and the farm sector as a whole.

Expansion of debt between 1978 and 1984 and equity declines of the indebted operator group are shown in Table 7. Compound annual rates of change in nominal assets, debt, and equity were computed based on the indebted operator balance sheet. Slow growth (or decline) of asset values between 1980 and 1984 is clearly identified. Total farm assets grew at a 6 percent annual compound rate between 1978 and 1984. This rate could be compared to growth in the nominal value of a portfolio of stocks and/or bonds held over the same period. Liabilities grew at a 14 percent annual compound rate over this same six-year period. The most rapid expansion of debt occurred in the 1978-80 period. Rapid growth of debt contrasts with the slower growth in asset values. Resulting growth and subsequent decline of operators' equity is also shown in Table 7. Indebted operators lost substantial amounts of equity in the early 1980s. Compound rates of change in equity between most years shown and 1984 indicate a decline in the value of equity. An indebted operator who would have sold his farming operation and invested his equity in money market financial instruments in 1979 would have earned an average of 14 percent (before taxes) through 1984, in contrast with the 1 percent annual decline on farm equity shown in Table 7.

While the indebted farm operator group is clearly experiencing an acute financial problem, individual operators within this group exhibit quite varied financial positions. The ratio of assets to debt for the group in 1984 was about 1.3, which is significantly below levels

Table 7. Compound rates of change of farm assets, liabilities, and equity for indebted farm operators in North Dakota, 1978-1984.

Base Year	Ending Year Assets		Liabilities		Equity	
	1980	1984	1980	1984	1980	1984
	percent					
1978	16	6	25	14	13	1
1979	14	4	20	12	12	−1
1980	--	1	--	10	--	−3
1981	--	0	--	10	--	−5
1982	--	−4	--	8	--	−7
1983	--	−2	--	0	--	−3

which commercial agricultural lenders consider financially healthy. Some indebted operators within this group carry relatively low levels of debt, others are highly leveraged. Detailed current statistics are not available which would indicate how debt is distributed within the indebted operator group in North Dakota. A distribution of operators by debt/asset ratio was tabulated for the West North Central Region in 1979 (U.S. Departmentt of Commerce, 1982)[3]. Results of that survey indicated: 1) about 31 percent of all indebted farm operators had debt/asset ratios less than .22, 2) nearly 41 percent of indebted operators had a debt/asset ratio between .11 and .40, 3) about 20 percent had debt/asset ratios between .41 and .70, and 4) about 8 percent had ratios over .71.

Financial stress results when the farm operator perceives the inability to meet planned cash flow commitments. These cash requirements arise due to family living needs, cash farm expenses, debt service, etc. Financial stress is directly related to the cash flow problem. Severity of financial stress for these operators has been characterized based on current debt service capacity, ability to continue to expand debt and financial solvency (Melicher, 1984). About 72 percent of the indebted operators (those with debt/asset ratios less than 41 percent) are facing some or no financial stress, according to the survey. About 20 percent (those with debt/asset ratios in the 41-70 percent range) are ex-

[3]The West North Central Region includes: North Dakota, South Daktoa, Minnesota, Nebraska, Iowa, Kansas, and Missouri.

periencing moderate-to-severe financial stress. The remaining 8 percent of the indebted operators in the region are in severe financial trouble. If the survey results for the West North Central region are indicative of the financial situation among North Dakota's indebted operator group, about 28 percent are in moderate-to-severe financial difficulty. This translates into 18 percent of all operators in the state, or approximately 7,000 farmers. A disturbing aspect of this financial situation is that a relative minority of operators carry a major share of total farm debt in North Dakota. Failure of a significant number of these farms could have widespread repercussions in the state.

Conclusions and Implications

During the 1979-84 period, the farm sector's financial condition deteriorated due to lower net farm income, increased dependency on borrowed money, and higher interest rates. These developments contributed to the cash flow problems of farm operators in the state. Erosion of equity in the post-1979 period has made farmers financially more vulnerable to future instability in commodity prices and interest rates.

Financial stress among heavily indebted farm operators is most acute. Operators with debt/asset ratios exceeding 40 percent have experienced moderate-to-serious cash flow problems simultaneous with a significant loss of equity capital. The result has been reduced ability to service or expand existing debt. These farm operators carry a significant proportion of total farm sector debt.

There are several implications for the agricultural economy in North Dakota. First, farm attrition through foreclosure or voluntary liquidation will likely increase, especially among the indebted operator group, if 1979-84 economic conditions continue. Second, farm lenders will realize the financial impacts of expanded delinquency and insolvency. Both trends reduce the profitability of farm loans. Third, forced liquidations place farm assets (land and machinery) on markets which are already weak. Fourth, rural communities and businesses will continue to experience the secondary effects of reduced farm profitability. Potential impacts include lower retail sales, reduced provision of public services, and out-migration of rural residents.

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recreation as important sources of income and employment. This trend also helps to explain the reduction in out-migration as more jobs are available to our young people in the state.

Farms have grown larger over the past 15 years to take advantage of size economies. The average size farm is getting closer to the economically efficient size farm. Productivity gains on North Dakota farms continue to increase at an amazing rate.

While our farm operators strive for greater efficiency, there is increasing financial stress in North Dakota agriculture. The financial position of most farmers in the state remains strong; but in recent years the combination of higher farm debt, increasing interest rates, higher prices of purchased inputs, and low commodity prices have created financial stress for some operators.

During the latter part of the 1970s some farm operators increased the size of their farm/ranch operation through land acquisition. They were encouraged by an average annual rate of increase in farmland values of 15 percent that they expected to continue and relatively high commodity prices. Some operators became highly leveraged and now face serious cash flow problems. Asset devaluation in recent years (land values decreased at an average annual rate of 2.4 percent between 1981 and 1984) has further compounded their financial problems.

In looking to the future, our farmers will be operating with smaller margins of error. They will continue to rely on borrowed capital for farm expansion; because of this fact, growth in farm size will probably not match the growth rate of the 1970s.

Sale of crops and livestock and government payments represent the primary sources of farm income in the state. Although the value of livestock receipts has increased over time, crop revenues have increased more rapidly and they are growing in importance as a source of farm income. Farm program payments to North Dakota farmers have varied significantly; in 1983 the payment-in-kind program accounted for 8 percent of total agricultural cash receipts.

One of the most dynamic industries in the state is the grain handling and transportation industry. Rapid

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