PROPERTY TAXATION OF AGRICULTURE IN MINNESOTA

A DISCUSSION PAPER PREPARED FOR
THE MINNESOTA TAX STUDY COMMISSION

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This is a draft which is subject to change. Because the Tax Study Commission meeting is open to the public, this paper becomes a public document at 1:30 p.m., the day of the meeting. Persons quoting from this paper are requested to make clear that this is a draft. The final version will be released on December 15, 1984. Comments are welcome.

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IN MINNESOTA

Table of Contents

LIST OF TABLES

LIST OF FIGURES

PROPERTY TAXATION OF AGRICULTURE

-- Glossary --

Most of the terms used in this report are common to property taxation in general. Therefore, please refer to the glossary in Volume I, Tab B, of The Property Tax In Minnesota, September 26, 1984, for definitions of terms listed in the column below. Additional defined terms are listed thereafter.

Appreciation
Arm's-Length Sale
Assessed Valuation
Assessment - Sales Price Ratio
Capitalization
Classification
Comparable Sales
EARC Valuation
Effective Tax Rate
Equalized Values
Highest and Best Use
Market Value
Three Approaches to Value

Agricultural Homestead (Class 3b) - agricultural land (defined as contiguous land of 10 acres or more used for agricultural purposes) used for the purposes of a homestead. Must be owner-occupied; unlimited acreage; noncontiguous property within two townships; and farmed by owner-occupant or rented for agricultural use. See M.S. 273.13.

Agricultural Non-Homestead - agricultural land (as defined above) not used as a homestead; generally applies to agricultural land that is noncontiguous to an owner-occupant's homestead (not within two townships) or is rented.

Benchmark Farms - representative detailed appraisals which

assessors can use as a comparison standard in valuing other properties. Ideally, benchmark properties should be scattered throughout an assessment district, and should include examples of high, medium, and low value units.

Capitalization Rate - the rate used to convert an estimate of net income to an estimate of market value; the ratio of estimated net income to market value.

Comparable Sales Approach to Value - a method or approach in appraising in which a property's value is estimated by reference to comparable sales.

Comparable Sales - recently sold properties that are similarly in important respects to a property being appraised. The sales price and the physical, functional, and locational characteristics of each of the properties are compared to the property being appraised in order to arrive at an estimate of value.

Expansion Buyers - those farm owners, whether operators or investors, who purchase farmland to add to an existing farm unit.

Income Approach to Value - a method or approach in appraising which involves a capitalization of income figures. Income is generally defined as the payments to its owner that a property is able to produce in a given time span, usually a year, and usually net of certain expenses of the property.

Sole-tract Operator Buyers - those farmers who are not using their purchase of agriculture land to expand an existing farm.

Use-Value (Farmland) Assessment - the assessment of property upon the basis of its value in a particular use (agriculture), rather than upon the basis of its market value. Such value is usually determined by capitalizing estimated net income (i.e., the income approach to value).

EXECUTIVE SUMMARY

As an important part of Minnesota's economy, agriculture is distinguished from most other state industries by the land and capital intensive processes it uses to transform raw materials into finished products. Of particular significance to this Commission, however, is the role played by land. Both crop production and livestock grazing are land-based activities that are necessarily dispersed over wide geographic expanses. Farmland, of which there is a relatively fixed supply in the near- to mid-term, is priced according to the expected future returns from its use. As land appreciates, it increases the wealth of its owners, and thus (relative to most other types of realty) becomes a larger and often significant proportion of the total return from farming.

Real property wealth, however, is held in the form of unrealized capital gains. It is therefore not readily available to meet farm operating expenses, including the property tax. Instead, the tax is paid out of current income, and in many years, farming yields a relatively low income. This situation - real property wealth that is disproportionately large in relation to current income - is the cause of the hardship felt by many farmers when it comes time to pay their semi-annual property tax bills. It is also the crux of most agricultural property tax issues.

This report examines the property taxation of agriculture from both an economic and tax standpoint. It focuses its analysis on issues related to the valuation of farmland, and to the goals and methods of providing property tax relief to farmers.

OVERVIEW OF THE PROPERTY TAX ON AGRICULTURE

Significance of Property Tax. Farmers pay each of the major state and local taxes, but the property tax is by far the one that attracts the greatest share of their attention. For 1984, it is estimated that Minnesota farm owners will pay $294.2 million in property taxes. In 1982 (the last year for which data is available), farmers paid an estimated $32.6 million in individual income taxes, $20 million in sales taxes on farm machinery and equipment purchases, and $4.4 million in corporate income taxes.

Tax Base. The property tax in Minnesota is levied solely on farm real estate. Personal property, such as farm machinery and livestock, has been exempted since 1967.

Tax Trends. Between 1973 and 1984, taxes on farm property increased by 171% (unadjusted for inflation). Concurrently, the equalized market value of farm property rose by 549%, or nearly three times faster than farm property taxes. Consequently, the effective tax rate (taxes as a percent of equalized market value) decreased sharply from 1.55% in 1973 to 0.65% in 1984. Effective tax rates on farm property are considerably lower than those on other types of property.

Geographic Variation in Tax Burdens. The effective tax rate on farm property varies substantially across Minnesota, ranging from 0.15% and 0.26% in Lake and Cook Counties to 0.78% and 0.90% in Washington and Ramsey Counties. Overall, 42 of Minnesota's 87 counties have effective farm property tax rates of 0.50% to 0.69%.

Variation in Tax Burdens: Size and Type of Farm. Small and/or lower valued homestead farms have significantly lower tax rates than larger and higher valued homestead farms. Moreover, homestead farms have substantially lower effective rates

than non-homestead farms. Unlike homestead farms, the effective tax rate on non-homestead farms varies little due to farm size and not at all due to per acre value.

Minnesota and U.S. Comparative Farm Tax Burdens. Prior to 1970, farm taxes per $100 of full market value in Minnesota were substantially above the national average. For example, in 1960, the effective rate in Minnesota was 1.35 percent compared to the national average of 0.97 percent. In 1970, Minnesota's effective rate was 1.69 percent compared to 1.08 percent nationally. By 1981, however, Minnesota was slightly below average (0.43% vs. 0.48% nationally). Thus, the effective tax rate on farm property decreased substantially across the nation in the 1970s but it fell faster than average in Minnesota. And compared to its neighbors, Minnesota has slightly lower effective rates than Iowa and North Dakota, and significantly lower rates than Wisconsin, South Dakota, and Nebraska.

Property Taxes as Percent of Net Farm Income. Throughout the late 1970s, Minnesota farm property taxes were slightly below average in relation to net farm income. For example, in 1979, they were 7 percent of net farm income compared to 8 percent nationally. These rates were considerably lower than those in surrounding states. In 1979, property taxes as a proprortion of net farm income were 13.6 percent in Iowa, 9.6 percent in North Dakota, 12.4 percent in South Dakota, and 11.6 percent in Wisconsin (post-1979 data not available).

These trends indicate that major steps have been taken during the last decade to lower farm property taxes in Minnesota. As will next be discussed, Minnesota has followed a different path than most states in providing property tax relief to farmers.

FARM PROPERTY TAX RELIEF PROGRAMS

Tax Relief Goals. Today, virtually all states have enacted some type of property tax relief program for agricultural property. Although diverse in their structure, most states' programs are designed to address two goals: (1) to ease the cash flow problems of farmers whose real property wealth is disproportionately large in relation to current income; and/or (2) to encourage the preservation of farmland.

Acceptance of these goals by state policymakers is far from universal. Some suggest that the cash flow pinch imposed by the property tax is not a tax problem, but rather a problem of imperfect credit markets. Therefore, the provision of broad based permanent tax relief is an inappropriate solution; instead, some type of tax deferral mechanism should be provided. Secondly, the need to publicly influence land use patterns varies considerably between and within states, e.g., since 1970, Minnesota's total decrease in farm acreage was 1.6% compared to 21% in Anoka County. This suggests that the provision of tax relief for preservation should be done on a limited, and not statewide, basis.

Tax Relief Methods. There are three primary methods used to grant tax relief to farm property:

- Use-Value Assessment allows farm property to be assessed at its value in agricultural use rather than at its market value;

- Classification explicitly assigns a lower assessment ratio to farm property than to certain other types of property (use-value assessment does this implicitly);

- Tax Credits and Refunds lower the gross property tax bills of farmers through the subtraction of a nonrefundable credit (Minnesota's homestead credit) or the subsequent receipt of a property tax refund (a circuit breaker).

Minnesota's Use of Property Classification and Credits. Unlike most states, Minnesota has relied on its system of property classification and credits as a means of providing property tax relief to farmers. Ever since the early 1970s, the state has steadily reduced the percentage of a farm's value that is subject to tax, with farm homesteads receiving more favorable tax treatment than non-homestead farms. Next, it has provided the state school agricultural credit, which reimburses school districts for the reduction in farm property taxes (the credit used to be calculated by applying specific mill rates to the assessed value of given farm acreages; now it is a graduated percentage of the total property tax bill). The credit's structure strongly reinforces the more favorable tax treatment that is given to homestead farms by Minnesota's classification system. This is continued by the homestead credit, which pays 54% of the remaining tax bill up to a maximum $650. For purposes of receiving the credit, a farm homestead is broadly defined - owner-occupied; unlimited acreage; noncontiguous property within two townships; and farmed by owner-occupant or rented for farm use. Finally, Minnesota provides a circuit breaker refund to certain farmers depending on their household income and property tax bills.

In addition, Minnesota has implemented three less well-known programs, all of which are variations of the use-value assessment method of farm property tax relief. It has two programs -"Green Acres", enacted 1967, and Metropolitan Agricultural Preserves, enacted 1980 - that assess qualified and enrolled farmland at its value in agricultural use. And, third, since 1977, Minnesota has valued farmland at the average of its market and use-value for purposes of determining adjusted assessed values (EARC) for school aids.

Use-Value Assessment in Other States. Most states have relied more on use-value assessment for purposes of providing property tax relief to farmers. Their programs vary considerab-

ly in terms of scope, administration, and enforcement. However, most reject the conventionally used comparable sales (market) approach to property value. Instead, they rely on the income approach to value. This approach stresses the productivity and net earnings capacity of agricultural land. It uses soil quality, production, price and expense data to arrive at net farm income, which is then capitalized (divided by a rate of interest) to yield the use-value of farmland. Thus, use-value is a computed figure that depends on two factors: estimated net farm income and a capitalization rate.

HOW SHOULD AGRICULTURAL LAND BE VALUED?

In reality, the question of how farmland should be valued is actually one of whether farm assessments should be lowered. In addressing this issue, it is necessary to evaluate the strengths and weaknesses of the two methods of valuation - comparable sales and income capitalization.

Comparable Sales Approach to Value

There are several problems with the comparable sales approach to property valuation. For instance, there may be a scarcity of sales from which to establish reliable estimates of market value; if financing terms are not adjusted, they can result in an overstatement (understatement) of value; and, it is possible to introduce a systematic bias into market valuation (e.g., if a market is dominated by one type of buyer willing to pay more (less) for land).

In addition to these market problems, a common criticism is that market value taxation of agricultural land is inappropriate since it recognizes development potential and speculative value, as well as expected income from agricultural use. By recognizing these non-farm related anticipated increases

in value, the property tax system assigns values to farmland that are generally higher than if valuations were based on income capitalization.

While the use of market value has its drawbacks, it does not necessarily imply that it should be abandoned as the standard for valuation. Its greatest handicap - the paucity of comparable sales and the subsequent inadequacy of sales data - can be substantially overcome by expanding both the geographic area and the data used to value subject properties. Such expansion minimizes any bias in the selection and dollar adjustment of the comparable sales, and therefore allows assessors to better substantiate (and landowners to better evaluate) their analysis of the market.

No matter how improved the valuation process, however, it still does not relieve the cash flow pinch that arises from disparities in income and real property wealth. Although commonly depicted as a tax problem, this situation is more accurately a credit market problem. When viewed in this light, the solution is not broad-based permanent tax relief but rather some type of intervention in the capital or loanable funds market. A state financed tax deferral mechanism that allows farmers to defer (with interest) payment of part or all of their property tax liability is one example.

Income Capitalization Approach to Value (Use-Value Assessment)

Proponents of this alternative method of valuation suggest that its main advantage is that it is based on income and not wealth; therefore, it strikes at the heart of the farmer's cash flow problem -- large increases in land values and taxes that outpace income.

However, in terms of its design and administration, distribution of benefits and costs, and effectiveness, the method has several drawbacks.

Program Design and Administration.

- It usually produces values that are far below market value, even in areas where the only forseeable use of the land is for agricultural purposes;

- It "politicizes" the determination of net farm income, creating incentives to distort its estimation and dispute given estimates.

- If net income estimates are computed over rather large areas and not adjusted for differences in the level and variability of farm income associated with different types of farming, the method's averaging effect will result in an understatement of land values for the more productive lands.

- It is an administratively complex system of property valuation in that it requires the annual or periodic collection of detailed information on local soil quality, farm income and expenses, and economic trends in the commodity markets. This type of information is best gathered and analyzed at the state level.

- It changes the role of the local assessor. Generally, aggregate county farmland values are determined by a state agency, and the role of the local assessor is reduced to apportioning such values to individual parcels of land.

Distribution of Benefits. Perhaps the most controversial aspect of use-value assessment is that it redistributes property tax burdens among property owners within a taxing jurisdiction. Because the aggregate value of agricultural land is lowered, the resulting revenue loss is made up by increasing the tax rate (assuming tax revenues are held constant). This increases the property tax liability of all nonfarm property and offsets

to some degree the reduced assessment of farm property.

Other things being equal, use-value assessment tends to confer the greatest benefits to areas where farmland values are appreciating rapidly and where only a moderate amount of farmland is left within the taxing jurisdiction. This may or may not include the areas where farmers are most burdened by the property tax. This illustrates why use-value assessments have been called a "blunt policy instrument", i.e., it provides tax relief to all parcels of agricultural property regardless of an individual owner's income/wealth situation.

Distribution of Costs. In most states, use-value assessment programs are locally financed through the tax shifts described above. However, if the major goal of a state's farm property assessment laws is to relieve farmers' property tax burden (as is the case in Minnesota), then presumably such legislation yields benefits to a state as a whole and should be financed by all state taxpayers. Because state financing involves reimbursing local taxing jurisdictions for revenue lost due to lowered valuations, it provides greater benefits to agricultural landowners than locally financed programs. Despite their legislative goals, most states have balked at picking up this cost.

Effectiveness. Despite the long-standing existence of many use-value assessment programs in other states, there is scant empirical evidence as to whether this valuation method produces a "fairer" tax distribution or acts as an effective deterrant to development. What evidence exists suggests that use-value assessment is generally successful in reducing the property taxes of farmers. However, it does so by providing tax relief to all agricultural landowners regardless of their ability to pay. Moreover, unless carefully structured, it provides relief to both those who own farmland for farming purposes and those who hold farmland for purposes of value

appreciation. With respect to the second goal - agricultural land preservation - it is generally agreed that use-value assessment alone is an ineffective tool for influencing land use. While it may forestall development in the short-term, the opportunities for capital gains through sale or development remain unaffected; therefore, it is unlikely to have an appreciable influence on long-term land use patterns.

FINAL COMMENT

It is possible to provide any amount of property tax relief to farms without embroiling the state in the policy-laden mathematics of determining agricultural use-value and the complexities of its administration. Through its present system of classification and credits, Minnesota has already done a great deal to provide property tax relief to owners of farmland. The question remains, however, does Minnesota need to do more? The projections of state farm income through 1987 are adverse. Minnesota agriculture is beset by the same problems affecting farmers nationally, i.e., high interest rates, unfavorable exchange rates, and the depressed economic condition of many importing foreign nations.

This tax policy discussion raises the greater question of how the state should meet its long-standing commitment to maintaining the family farm. A serious and extensive state commitment to this goal will require more than just the local redistribution of property tax burdens and state expenditures for property tax relief. Specifically, it may require direct state assistance to economically vulnerable farmers, or conversely, a recasting of the state's overall policy toward agriculture.

I. INTRODUCTION

Agriculture is an important part of Minnesota's economy, and the taxation of agricultural property has long been a hotly-debated topic. Much of the controversy stems from the special character of farming. Like manufacturing, a farm is a business that buys raw materials, transforms them through a capital-intensive process, and then sells the finished products. However, a farm is distinguishable from a manufacturing company in several respects. First, it uses a biological production process that limits the speed in which farmers can respond to changing market conditions. Farm production (supply) is also less predictable because of the random effects of weather, disease, and insects. These factors contribute to what can be substantial year-to-year variability in farm income.

Agriculture also differs from other types of production processes in the role played by land. Both crop production and livestock grazing are land-based activities that are necessarily dispersed over wide geographic expanses. Farmland, of which there is a relatively fixed supply in the near to mid-term, is priced according to the expected future returns from its use. As land appreciates, it increases the wealth of its owner and thus becomes a larger and often significant proportion of an owner operator's total return. It also raises the entry cost for new farmers. In contrast to farmland, the physical capital used in most production processes is reproducible and therefore tends to depreciate over time.

Finally, farms differ from most non-agricultural operations in the proportions they use of labor and capital. A recent report by the President's Council of Economic Advisors[1] noted that most U.S. farms are family owned and operated, with little hired labor. Only 0.2 percent are

owned by nonfamily corporations. It also reported that in 1979, American agriculture used $43,000 of physical capital stock (machinery and buildings) per worker, compared with $21,500 for the economy as a whole. On a per unit output basis, farming used three times as much physical capital per unit of production (GNP) as the average for the total U.S. economy.

A. ORGANIZATION OF REPORT

The extent to which the above economic traits argue for preferential tax treatment is a key component of many agricultural tax policy debates. The purpose of this report, therefore, is to examine the major agricultural tax issues facing Minnesota from both an economic and tax standpoint. The report is divided into two parts. Section II reviews the past and present role of agriculture in Minnesota's economy, and the national trends that will strongly shape its future economic role. Section III pertains to agricultural tax policy, and because it is the largest tax paid by farmers, it focuses on the property tax. After first presenting background information in Section III A, Sections B and C examine issues related to the valuation of farmland for purposes of property taxation, and to the goals and methods of providing tax relief to farmers. A concluding statement is presented in Section III D.

B. DEFINITION AND DATA PROBLEMS

Any detailed study of farm issues is plagued by the inadequacy or lack of consistency in the available data base. This problem, which complicates national analyses, becomes even more acute at the state level.

For example:

Farm Unit. One problematic area is the definition of the farm unit, and in particular, the family farm unit. Existing data makes it impossible to separate "hobby farms" from small, struggling "serious farms". Both have low levels of farm income, but in the first case this is because income is relatively unimportant to the owner while in the second case it is a sign of economic distress if not poverty.

The federal government defines a farm as any place from which $1000 or more of agricultural products are sold or normally would have been sold during a calendar year. There are at least two problems with this definition. First, prior to the mid-1970s, a different definition was used, making comparisons over time most difficult. Second, rising and falling product prices can affect the number of reported farms by influencing the number of units exceeding the $1,000 sales threshold.

The State of Minnesota employs an even broader and non-income related definition of a farm:

> Agricultural land...shall mean contiguous acreage of ten acres or more, primarily used during the preceding year for agricultural purposes. Agricultural use may include pasture, timber, waste, unusable wild land and land included in federal farm programs. Real estate of less than ten acres used principally for raising poultry, livestock, fruit, vegetables or other agricultural products shall be considered as agricultural land, if it is not used primarily for residential purposes. (Minnesota Statutes, Chapter 273.13, Subdivision 6).

In 1982, according to the Minnesota Department of Revenue, there were more than 120,000 farm homesteads

in Minnesota for state tax purposes, but the Minnesota Department of Agriculture reported 103,000 farms and the U.S. Census Bureau counted only 94,382 farms. The difference between the latter two figures may reflect sampling error or differences in the treatment of separate parcels owned by the same household. The gap between the Department of Revenue figure and the others is attributable to the broader definition of a farm and to some assessors' mistakenly reporting data on parcels rather than homesteads.[2]

Net Farm Income. In addition to being a complicated statistic, net farm income is also a volatile measure that is subject to large errors at both the national and state levels. Table 1 illustrates the calculations that go into producing income statistics. In 1982, Minnesota gross farm income was $7.52 million. After deducting farm production expenses, net farm income was $1.19 million, but this did not consider the change in inventory levels. Because farm inventories were reduced that year, net farm income after inventory adjustment was $1.09 million. By contrast, net income before adjustments for inventories was lower in 1981, but inventories had risen sharply that year, so that net income after inventory adjustments was much higher in 1981 than in 1982.

As a result of incomplete data, this report must refer in some cases to national statistics rather than statistics specifically for Minnesota.

TABLE 1

MINNESOTA FARM INCOME CALCULATIONS
1981 AND 1982
(millions of dollars)

	1981	1982
Gross farm income:		
Cash receipts from farm marketings	$6508.5	$6672.2
Government payments	79.1	182.9
Nonmonetary income	581.2	591.8
Other farm income	73.9	78.2
TOTAL Gross farm income	7242.7	7525.0
Farm production expenses	6199.5	6339.3
Net farm income before inventory adjustments	1043.1	1185.7
Net change in farm inventories	455.6	-98.6
Net farm income after inventory adjustments	1498.7	1087.1

Source: U.S. Department of Agriculture, Economic Indicators of the Farm Sector: State Income and Balance Sheet Statistics, 1982, p. 72.

II. ROLE OF AGRICULTURE IN THE MINNESOTA ECONOMY

A. MEASURING AGRICULTURE'S ROLE[3]

There are many ways to measure the importance of agriculture in the Minnesota economy. To summarize:

Employment. In 1982, 148,093 persons were employed in agriculture; four out of five of whom were farm proprietors and the remainder were wage and salary workers. This represents a 6.4 percent decrease from 1969, when farm employment totaled 158,147. During this period, employment increased in all other major sectors of the economy, such that agriculture's share of total employment fell from 9.8 percent in 1969 to 7.3 percent in 1982. Still, this was nearly twice the national average. For the entire United States, only 3.8 percent of employment was in agriculture in 1982. Moreover, the proportional decline in farm employment in Minnesota was less steep than for the rest of the nation.

Employment Multiplier. The most careful work in measuring the role of agriculture in Minnesota has been done by Wilbur R. Maki of the University of Minnesota. Maki estimates that for every job directly on the farm in 1980, there were approximately two jobs in agricultural processing and marketing, other agricultural-related industries, and trade and service businesses servicing households directly or indirectly dependent on agriculture. This brings the proportion of total employment dependent on agriculture from 7.3 percent to approximately 22 percent. This percentage is lower than commonly cited estimates of up to 40 percent for the proportion of jobs dependent on agriculture in Minnesota.[4] It may be that the higher estimates include employment in retail food stores. While most of that employment

is related in some manner to agriculture, it would exist even if there were no farming in Minnesota since consumers have to eat. Food-related retail employment is largely independent of developments in Minnesota agriculture itself although it may be influenced somewhat by national agricultural trends.

Earnings.[5] Farm workers tend to have lower earnings than employees in other industries, so the farm share of total state earnings is lower than its share of total state employment. In 1982, total agricultural earnings in Minnesota were only 4.3 percent of the state total, down from 7 percent in 1969. Similar to employment, however, farm earnings are two or three times more important to Minnesota than to the nation as a whole.

Farm earnings are also volatile. They rose 13.5 percent between 1969 and 1979 and then plunged in the next three years, such that for the entire 1969-1982 period, farm earnings declined by 27.3 percent. This compares to a national decrease in agricultural earnings of 30 percent over the same thirteen year period.

Personal Income.[6] As illustrated in Table 2, agriculture's share of state personal income varies considerably over time. While personal nonfarm income rose in every year from 1970 to 1982, personal farm income fluctated widely. It was as high as 11.7 percent of total personal income in 1973 and as low as 3.2 percent in 1982.

Farm and Nonfarm Income. National statistics report that in 1982, the average farm family had an income of $25,618, of which $9,188 came from farming and $16,430 came from nonfarm sources. The average family income from the U.S. population that year was $27,391.[7] This

TABLE 2

MINNESOTA FARM AND NON-FARM PERSONAL INCOME TRENDS,
1970 TO 1982

Year	Farm Personal Income (billions of $)	Percentage Increase, Personal ncome		Farm Personal Income as percent of total Personal Income
		Farm	Nonfarm	
1970	$0.914			6.2%
1971	0.851	-6.9	6.8	5.4
1972	1.032	21.2	8.2	6.0
1973	2.389	131.6	11.6	11.7
1974	1.756	-26.5	10.2	8.1
1975	1.357	-22.7	9.6	5.9
1976	0.850	-37.4	11.3	3.4
1977	1.725	103.1	11.1	6.0
1978	1.736	0.6	12.4	5.4
1979	1.721	-0.9	13.4	4.8
1980	1.530	-11.1	11.1	3.9
1981	1.801	17.7	10.8	4.1
1982	1.464	-18.7	6.1	3.2

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

indicates that: (a) nonfarm income is an important income source for farmers (64% or nearly two-thirds); and (b) the average combined income of farm families is lower than for other families, but not by a great deal. Fifty years ago, the income differential between fam and nonfarm families was much greater. Its reduction is attributable to the tremendous increase in farm productivity and the accompanying increase in the number of off-farm jobs in rural areas. These two factors have prompted many farmers to become part-time farmers and supplement their relatively low farm incomes with nonfarm income. Unfortunately, comparable data regarding the percentage of total Minnesota farm family income coming from nonfarm sources is not available on a systematic basis.

Farm Purchases. In 1977, the purchases of the agricultural industry totaled $4.2 million or 9.3 percent of the total $45.5 million in purchases made by all Minnesota industries (1972 dollars). In the same year, the food products manufacturing industry made purchases of $5.6 billion, a somewhat larger share than that of agriculture (12.3%). Together, the $9.8 billion of purchases by these two food-related industries represented 21.8 percent of total in-state purchases by the Minnesota business sector.[8]

Farm Exports. Exports appear to be playing an increasingly larger role in the Minnesota farm economy in recent years. Unfortunately, estimates of Minnesota's farm exports are not available for the 1970s, but in the 1980 to 1982 period, they are estimated to have fluctuated between $1.9 billion and $2.3 billion. Nationally, the percentage of farm receipts coming from exports increased from less than 15 percent to almost 30 percent during the 1970s, and there was certainly a corresponding

increase in Minnesota, although its magnitude is uncertain.[9]

B. NUMBER OF FARMS[10]

According to the Minnesota Department of Agriculture, the number of farms in Minnesota decreased from 121,000 in 1970 to 104,000 in 1980, or an average loss of 1,700 farms per year. During the next three years, the total decrease was only 1,000 (to 103,000). This trend probably reflects the fact that during recessions the movement away from farms slows down or halts because of the lack of employment opportunities in cities. (Note also that for purposes of enumeration, operations with less than $1,000 of cash receipts are not counted as farms.)

The decline in the number of farms has been slowing over time. For example, there was a 22.4 percent decrease between 1960 and 1970 compared to a 14.0 percent decrease between 1970 and 1980. The major reason for this slowdown is that the health of the farm economy was relatively greater compared to the nonfarm economy in the 1970s than in the 1960s (i.e., through a shaking out process, the farms left tend to be more efficient, and therefore more stable, operations).

The decrease in the amount of land used for farming has also slowed. From 1960 to 1970, 1.5 million acres of land were taken out of farm use, but in the following years, only 500,000 more acres were lost to farming. These are relatively insignificant amounts in comparison with the state's total farm acreage of 30.4 million in 1983.

C. SIZE OF FARMS

There is a great deal of variability in the size of farms in Minnesota. Many are small-scale operations, so small in fact, that they cannot provide the principal livelihood for a family. A rule of thumb used by the Presidents Council of Economic Advisors is that a unit must have annual sales of at least $40,000 to be considered a commercial operation.[11] According to this standard, only 43.5 percent of Minnesota farms were commercial operations in 1982, but they accounted for 88.2 percent of total sales. Those farms with annual sales of more than $100,000 represented less than one-fifth of total farms, but they produced more than three-fifths of total sales (see Table 3).

Another way of looking at farm size is in terms of acreage.[12] The size of the average Minnesota farm has remained fairly stable in recent years (280 acres in 1974; 288 acres in 1978; and 294 acres in 1982). However, these averages obscure an important trend in the size of Minnesota farms. In the past six years, the number of very large and very small farms have increased, while the number of "average" farms have declined. Between 1978 and 1982, the number of very small farms (less than 50 acres) grew by 23 percent, the number of very large farms (with 1,000 or more acres) grew by 16 percent, and the number of mid-size farms (between 50 and 500 acres) declined by ten percent.

The significance of this trend is even more apparent when changes in farmland are examined. Farms of 500 acres or more, which account for only 15 percent of total Minnesota farms, account for 47 percent of the State's farmland in 1982. In 1974, 38 percent of farmland was found in farms of 500 acres or more (and only 23

TABLE 3

MARKET VALUE OF MINNESOTA AGRICULTURAL PRODUCTS SOLD,
BY AMOUNT OF SALES, 1982

Value of sales	Percent of farms	Percent of sales
Less than $2,500	12.7%	0.2%
$2,500 to $9,999	16.3	1.5
$10,000 to $19,999	11.7	2.7
$20,000 to $29,999	8.8	3.5
$30,000 to $39,999	7.0	3.9
$40,000 to $59,999	11.1	8.7
$60,000 to $79,999	8.3	9.2
$80,000 to $99,999	6.0	8.5
$100,000 to $249,999	14.5	34.1
$250,000 to $499,999	2.8	14.5
$500,000 or more	0.8	13.2
Summary figures:		
Less than $40,000	56.5	11.8
$40,000 or more	43.5	88.2
$100,000 or more	18.1	61.8

Source: U.S. Census Bureau, 1982 Census of Agriculture, Vol. 1, Geographic Area Series, Part 23, Minnesota State and County Data (AC82-A-23), Table 11.

percent in 1964). The amount of agricultural land in mid-sized operations has declined accordingly, from 77 percent in 1964 to 61 percent in 1974 and 52 percent in 1982. Small farms, while their number is growing, still account for only about one percent of state farmland.

D. FARM PRODUCTS[13]

Minnesota agriculture is unusually diversified. The $6.9 billion received by farmers for cash sales of farm products in 1981 included $3.5 billion from crops (51%) and $3.4 billion from livestock, dairy products, and poultry (49%). Listed by their share of the total value of crop and livestock production, the eight largest commodities produced in 1981 were as follows (98% of total value):

- 25 percent - Meat animals (cattle, calves, hogs, sheep and lambs).
- 21 percent - Feed grains (corn, oats, barley, and hay, primarily produced as feed for animals).
- 19 percent - Dairy products.
- 16 percent - Oil crops (soybeans, flaxseed, and sunflowers).
- 8 percent - Food grains (wheat and rye).
- 4 percent - Poultry and eggs.
- 3 percent - Sugarbeets.
- 2 percent - Vegetable crops.

Minnesota ranks among the top five producing states for numerous products. In 1982, it ranked:

- first in production of sugarbeets and sweet corn for processing;
- second in oats, sunflowers, turkeys, and cheese;
- third in hay, flaxseed, rye, green peas for processing, hog marketings, and butter;
- fourth in barley and milk;
- and, fifth in corn for grain and soybeans.

The various regions of the State differ considerably in terms of what farm products they produce. Figure 1 illustrates this point, showing the major product produced in each county. Cash crops predominate in the South and Northwest, dairy products are strongest in the center of the State, and meat animals lead in 12 scattered counties, half of which are in the extreme Southwest.

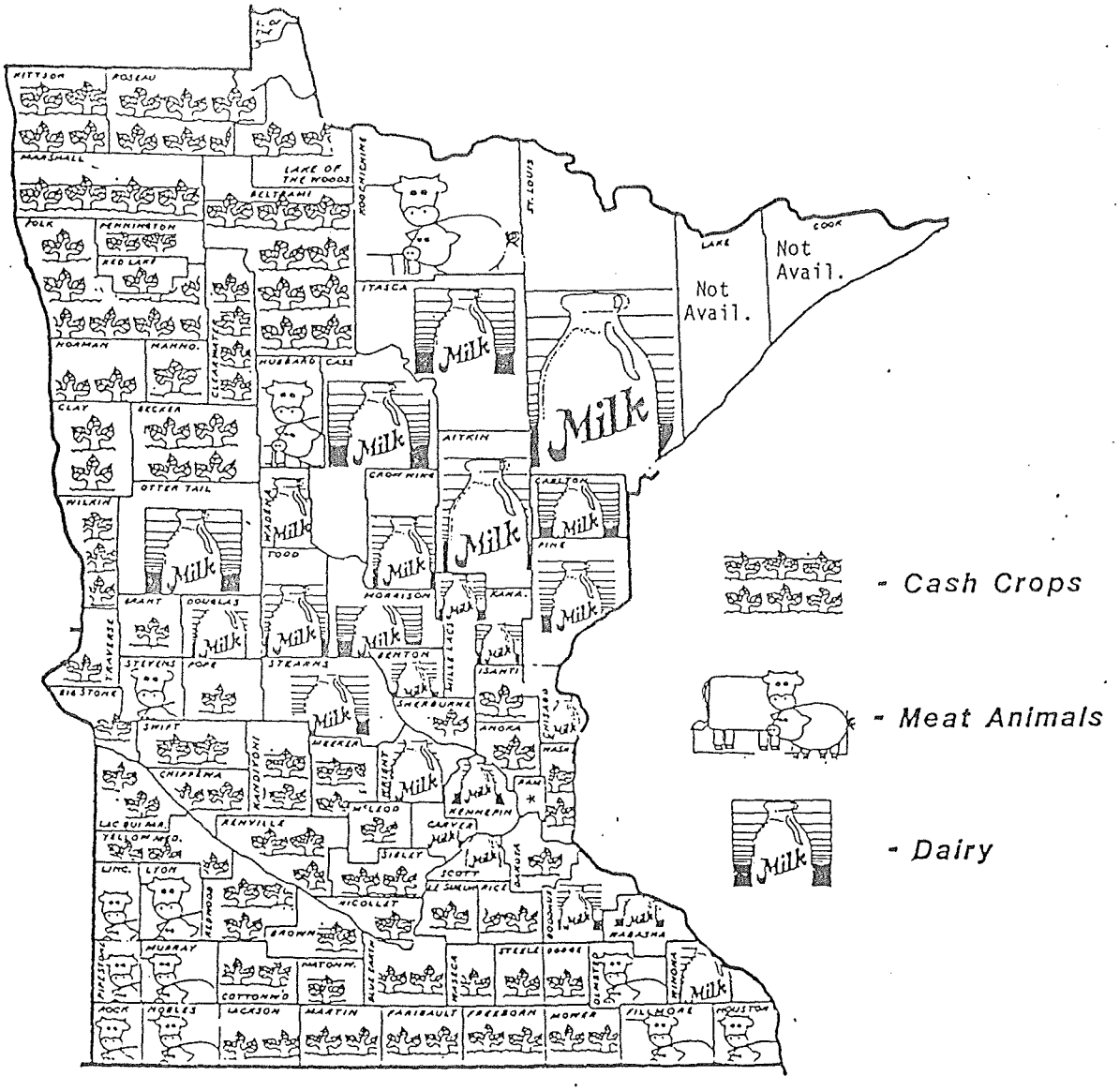
Table 4 indicates that these differences in the use of farmland are reflected in land values. In the Southwest, the average value per acre in 1983 was $1,669, more than four times as much as that in the Northeast ($411). It also shows that all sections of the State did not share equally in the inflation in land values that began in 1972. The Northwest region had the greatest increase and the East Central region had the smallest increase. The decrease in land values between 1981 and 1983 were relatively uniform, with four of the six regions having declines from 17 to 21 percent.

E. FARMLAND OWNERSHIP

The majority of Minnesota farmers own at least a portion of their land.[14] In 1982, 54% were full owners of their farms, 33% owned part of their land, and only 12 percent were tenant farmers. These percentages have

FIGURE 1

COMMODITY GROUPS WHICH ACCOUNTED FOR THE
MAJORITY OF COUNTY FARM CASH RECEIPTS IN 1981



*Ramsey county's major receipts come from nursery and greenhouse products.

SOURCE: BUREAU OF ECONOMIC ANALYSIS, U.S. DEPARTMENT OF COMMERCE, WASHINGTON, D.C.

TABLE 4

ESTIMATED AVERAGE VALUE PER ACRE OF FARMLAND,
BY DISTRICT, 1983, AND CHANGES SINCE 1972

District	1983 Value/Acre	Percentage change 1972-81	Percentage change 1981-83
Southeast	$1,354	362%	-21%
Southwest	1,669	450	-20
West-Central	981	446	-14
East-Central	561	317	-17
Northwest	658	595	-19
Northeast	411	505	-11
State	$1,065	428%	-19%

Source: Donna Downs, Mathew G. Smith, Philip M. Raup, "The Minnesota Rural Real Estate Market in 1983" (Minnesota Agriculutral Economist, January, 1984).

remained stable over the last eight years. Overall, 35 percent of Minnesota's farmland is rented and 65 percent is owner occupied.

Tenant farming is less common in Minnesota than in other parts of the country, especially when compared with its neighboring states. In Iowa, 21 percent of farm operators own none of their land, and the comparable figures in North Dakota and South Dakota are 17 percent and 16 percent, respectively.

Corporate farms still represent a very small part of Minnesota farming. In 1982, 88 percent of farms were run by individuals or families, ten percent by partnerships and only one percent by corporations (primarily family owned). Partnerships and corporations operate a slightly greater share of farmland than their share of the number of farms (14% and 5% of the land, respectively).

An important change in the Minnesota farmland market is the increasing share of farm sales to expansion buyers.* Prior to 1964, sole-tract buyers** were the most frequent purchasers of farms, but since that time the proportion of expansion buyers has grown steadily. In 1983, 78 percent of farms were purchased by expansion buyers. Sole-tract buyers accounted for 13 percent of purchases, and the remaining nine percent were bought by investors who do not farm.[15]

The decrease in the number of sole-tract buyers and tenant farmers is indicative of the great difficulty

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* Expansion buyers are those farm owners who purchase farmland to add to an existing farm unit.

** Sole-tract buyers are those farmers who are <u>not</u> using their purchase to expand an existing farm.

faced by anyone attempting to get started in farming, particularly if one cannot take over a farm that is already owned by one's family. The requisite initial investment is so large as to be prohibitive for most would-be farmers.

F. CHANGING FARM ECONOMIC CONDITIONS

During the 1970s, the financial experience of Minnesota's (and the nation's) agricultural sector was dominated by the mid-decade farm boom and its aftereffects. The boom was an unusual, although not unprecedented event. Farm booms of major proportions occurred two times earlier in this century, during and immediately after the World Wars, and twice in the nineteenth century, also triggered by the commodity demands of U.S. and European Wars. As noted in a recent report of the Federal Reserve Board:

> The effects of each boom extended over several decades, shaping the fortunes of an entire generation of farmers and their landlords, lenders and suppliers. In each case, the vast majority of farmers were lifted by an initial wave of unanticipated prosperity. After the booms, however, their experience varied according to how dependent they had become on continued high commodity prices, and thus how financially vulnerable they were as prices and incomes retreated. After each boom some farmers experienced lasting financial improvement, while others endured prolonged financial stress or went bankrupt.[16]

This pattern was generally retraced in the early 1970s. The farm boom, which began in 1973, was a result of the convergence of several forces. Very strong export demand resulting from poor Russian crops, a

decline in the value of the U.S. dollar, and unusually low anchovy harvest (a substitute for soybeans) combined with relatively static domestic supplies to send farm commodity prices and farm income soaring. For some farmers, particularly those in marginal farming areas who had made large capital investments and whose success depended on continued high prices, prosperity was fleeting; livestock prices and profits declined in 1974 followed by a decline in grain prices in 1976. However, the majority of farmers continued to enjoy real incomes above pre-boom levels and such incomes were boosted by a second surge in livestock and crop prices in 1978 and 1979. One result of this export-driven increase in farm income was higher land values. Between 1972 and 1979, the average value per acre of Minnesota farmland rose by 319 percent (unadjusted for inflation).[17] Land values continued to rise for two more years (by 26 percent) even though the farm boom generally ended in 1980 when farm commodity prices failed to advance and prices in general rose rapidly. Since 1981, the lowered prospects for a rebound in farm prices and income has prompted a sharp drop in Minnesota farmland values (down 18.7% between 1981 and 1983).[18]

The enormous increase in land values that occurred up through 1981 clearly indicates that farmers became wealthier. Even after the 1981-1983 decline, total farmland value in Minnesota was $24.5 billion, or more than three times its level in 1972. During this same period, however, farm production expenses and farm debt rose steeply. For example, compare 1978 -- a relatively high income year -- with 1982. In 1978, Minnesota realized gross farm income was $5.6 billion, and it rose 33 percent in the next four years to $7.4 billion. During this same period, however, farm production expenses rose even faster (from $4.2 billion in

1978 to $6.3 billion in 1982, or 51%). Since farm inventories rose slightly in 1978 and fell somewhat in 1982, net farm income fell from $1.5 billion in 1978 to $1.1 billion in 1982, a decline of 28 percent.[19]

The rapid expansion of farm debt is illustrated in Table 5, which summarizes the balance sheet of the Minnesota farming sector for the 1977-1983 period. It shows that during 1977-1981, farm debt increased by 113 percent, and farm asset values increased by a somewhat less rapid 80 percent. Thus, a large increment of debt was taken on with a relatively small increase in the ratio of debt to assets (from 16% in 1977 to 19% in 1982). Over the next two years, however, asset value fell by 8.4 percent while debt continued to grow by twenty percent. This resulted in a large jump in the ratio of debt to assets (25% in 1983) or a 16 percent decline in farm equity (net assets) between 1981 and 1983.

G. THE OUTLOOK FOR AGRICULTURE

Ever since 1970, agriculture - both in Minnesota and the nation as a whole - has been on a rollercoaster. Since 1970, Minnesota farm personal income has exceeded 1982's level of $1.46 billion by at least 15 percent in six years, while in four years, it was at least fifteen percent lower.

Such instability is likely to continue in the future. As noted earlier, export markets are much more important now than they were prior to the 1970s. Export demand is relatively unstable because it is strongly influenced by income levels, exchange rates, and trade policy in the rest of the world -- all of which tend to be unpre-

TABLE 5

BALANCE SHEET OF THE MINNESOTA FARMING SECTOR,
JANUARY 1, 1977-83
(millions of dollars)

Year	Assets	Debt	Equity
1977	$29,151.6	$4,659.5	$24,492.1
1978	33,461.5	5,791.4	27,670.1
1979	39,086.5	7,214.9	31,871.6
1980	45,368.7	8,649.5	36,719.2
1981	52,365.0	9,945.5	42,870.4
1982	51,469.8	10,717.8	40,752.0
1983	47,953.0	11,986.2	35,966.7

Note: Farm households are included in these statistics. Trends were similar for data excluding farm households.

Source: U.S. Department of Agriculture, Economic Indicators of the Farm Sector: State Income and Balance Sheet Statistics, 1982, Table 20. Data for 1977 and 1978 were obtained from Linda Wright, statistician for the Department of Agriculture.

dictable. In the 1980s, export demand was reduced by global recession, Third World debt, and the strong U.S. dollar. It is not expected to increase significantly in the next five years due to a number of factors. First, the ability of the Third World countries to finance the purchase of U.S. farm exports is likely to remain limited. This market is important because the growth of exports to Japan, Europe, and the U.S.S.R. is likely to be slow. Second, other major agricultural exporting countries have made large capital investments in farm and marketing facilities to expand their export capacity. This means that American farm exports face tougher foreign competition than they did a decade ago. Third, there is a risk of increased protectionism. If the U.S. and its trading partners became involved in a trade war, this would have very negative implications for American agriculture. Not only might other countries raise barriers to our exports, but also protectionism would impede the economic growth of the less developed countries, which would reduce their ability to purchase U.S. exports.[20]

Another source of added instability is the volatility in interest rates. Before 1979, fixed ceilings on interest rates applied to all deposit instruments that rural banks could readily market to their predominantly local depositors. Therefore, the cost of loanable funds at these banks changed little even as the level of interest rates rose and fell sharply in national money markets during periods such as 1969-1970 and 1973-1974. Due to the (inevitable) deregulation of the money markets sine 1979, the internal cost of funds to rural banks has reflected cyclical movements in money market rates and their loan rates have necessarily begun to track market rates.[21]

Higher interest rates have affected individual farmers in different ways, with highly leveraged, heavily indebted farmers faring the worst. A recent survey conducted for the Minnesota Department of Agriculture[22] found that of 318 respondents, 25 percent had debt to asset ratios of 70 percent or more, 26 percent had ratios between 40 and 70 percent, 36 percent had ratios of 10 to 40 percent, and 13 percent had ratios of less than 10 percent. Extrapolating these survey results to the State's population of about 100,000 farms yielded the Department's recently publicized finding that about 13,000 farm operations will be forced out of business during the next two years. Economists at the Minneapolis Federal Reserve Bank expect the number of farm failures to be somewhat less -- 12,000 over the next two years.

When the State Agriculture Department asked farmers which of eleven factors were responsible for their financial troubles, "low market prices", "high interest rates" and "production costs" were cited by over half of the 601 respondents as the most critical factors. "Local property taxes" were cited by less than four percent of the respondents. When asked to evaluate possible state/national solutions to these problems, the respondents were strongly supportive of marketing oriented programs.

In conclusion, the 1984 Economic Report of the President's Council of Economic Advisors makes an interesting point about the changing relationship between agriculture and the rest of the economy:

> Cyclical changes in the level of economic activity now have larger effects on agriculture than formerly. The agricultural sector...is strongly affected by interest rates and the value of the dollar. The agricultural sector therefore has a strong

> interest in reducing the federal deficit to which recent farm programs have contributed significantly. Macroeconomic policy may have as great an absolute effect on agriculture today as do the direct effects of farm policy.[23]

Predicting trends in agriculture is fraught with uncertainties, but it appears that the odds of a quick return to the prosperity of the 1970s are not good. One thing that emerges,however, is that local tax policy is not a major factor in determining the long-term health of the farm.

III. AGRICULTURAL TAX POLICY

Farmers pay each of the major state and local taxes, but the property tax is by far the one that attracts the greatest share of their attention. For 1984, it is estimated that Minnesota farm owners will pay $294.2 million in property taxes.[24] In 1982 (the last year for which data is available), farmers paid an estimated $32.6 million in individual income taxes, $20 million in sales taxes on farm machinery and equipment purchases, and $4.4 million in corporate income taxes. The remainder of this report, therefore, focuses on the property tax. Section A presents background information relevant to current agricultural property taxation issues, Section B discusses various methods used to relieve farm property taxes in Minnesota and other states, and Section C addresses tax policy issues related to alternative methods of farmland valuation. Concluding remarks are contained in Section D. (A brief discussion of the individual income and general sales taxes is included in Appendix D.)

A. OVERVIEW OF THE PROPERTY TAX ON AGRICULTURE

The property tax in Minnesota is the largest tax paid by the agricultural sector. It is levied solely on real estate. Personal property, such as farm machinery and livestock, has been exempted since 1967. While the trend nationally has been toward the exemption of personal property from the property tax base (e.g., most states exempt livestock), most states still impose a property tax on farm machinery.

For taxes payable in 1983, the Department of Revenue reports that the market value of taxable farm property was $34.2 billion and the assessed value (upon which taxes are levied) was $6.2 billion. Land accounted for the bulk of this value, as shown by the following breakdown:

	Market Value	Assessed Value	Assessed as Percent of Market Value
House, Garage and 1 Acre	$ 3.48 billion	$ 486 million	14.0%
Land	29.14 billion	5.39 billion	18.5%
Other Buildings	1.55 billion	217 million	14.0%

1. Tax Incidence: Who Bears the Property Tax?

One issue on which there is widespread agreement is the incidence of the property tax on farmland. As the above table shows, land accounts for the bulk of total farm value. According to standard economic theory, the property tax on farmland is capitalized, that is, it is reflected in a reduction in land values. The value of the land depends on the net income accruing to its owner over time; since the property tax lowers net income, it reduces the market value of the land.

The capitalization process has some interesting implications. Because the tax is immediately reflected in land values, a buyer who purchases farmland after the tax has been imposed does not bear the burden of the tax because he/she already paid a lower price for the land. Conversely, if taxes are unexpectedly reduced, farmland owners receive windfall capital gains because land values are automatically increased. A subsequent purchaser of the land does not benefit from the tax reduction because the seller's asking price will rise accordingly.

This analysis of tax incidence implies that the economic interests of those who supply farmers with inputs and purchase farmers' outputs may not be the same as those of the farmer. Those who sell products to farmers, such as farm implement dealers and small town merchants, benefit from tax reductions

or tax relief provided to farmers to the extent that enhanced wealth increases farmers' purchases. On the other hand, the consumers of farm products have less direct interest in how much property tax is paid by farmers unless they happen to own farmland themselves.

2. Tax Trends

a. Farm Taxes and Values

Table 6 summarizes what has happened to farm property taxes in the aggregate since 1973. Between 1973 and 1984, taxes on farm property rose by 171 percent (unadjusted for inflation). During this period, the rate of increase was uneven, with double digit annual increases occurring in 1975, 1977, 1979, 1980, 1982, and 1984. The largest increases occurred in the latter two years, with jumps of 29 percent and 17 percent, respectively. In the remaining years, tax increases were relatively low, and in 1981, a decline of nine percent occurred.

During this same period, the equalized market value of farm property rose by 549 percent, or nearly three times faster than farm property taxes.* Consequently, the effective tax rate (net taxes as a percent of equalized market value) decreased sharply from 1.55 percent in 1973 to 0.65 percent in 1984. Note, however, that the decline in farm property effective rates reached its low in 1981 (0.44 percent) and has since risen in each of the following three years. This historical pattern of irregular increases (decreases) in farm property taxes is expected to continue in 1985, when taxes are projected to decrease by 1.8 percent as a result of policies adopted by the state in 1984.[25]

*Due to the lag in assessments, this figure may somewhat overstate the extent of the increase because it does not fully reflect the decrease in values that occurred in the past three or four years.

TABLE 6

FARM EQUALIZED MARKET VALUE AND PROPERTY TAX
TAXES PAYABLE 1973-1984

Payable Year	Farm Property[a] 1 Equalized Market Value[b] (billions)	2 Tax[c] (millions)	3 Effective Tax Rate[d]	4 Percentage Change
1973	$7.429	$115.1	1.55%	
1974	8.297	115.6	1.39	0.4%
1975	9.820	130.6	1.33	13.0
1976	11.707	136.4	1.17	4.5
1977	16.026	159.5	1.00	16.9
1978	21.930	172.8	0.79	8.3
1979	27.661	195.9	0.71	13.4
1980	32.783	215.0	0.66	9.8
1981	44.671	195.8	0.44	-9.0
1982	47.244	251.7	0.53	28.6
1983	48.618	266.0	0.55	5.7
1984	48.229	311.9	0.65	17.2

Notes: Actual data for 1973-83; estimated for 1984.

a. Includes farm homestead and non-homestead property, and non-commercial vacant land located in townships.

b. Assessor's market value adjusted for the level of assessments as determined by assessment-sales ratio study.

c. Reflects homestead and state school agricultural credits but not the circuit breaker and targetted relief refund programs.

d. Tax divided by equalized market value.

Source: Minnesota Department of Revenue

b. Farm Share of Property Tax Burden

Farm taxes have risen slightly faster than total net property tax collections. As a result, the share of property taxes paid by farms increased from 12.6 percent in 1974 to 13.5 percent in 1983. During this same period, however, the equalized market value of farm property jumped from 20 percent to 29.7 percent of the state's total real and personal property tax base. In other words, the farm share of net property taxes increased slightly (7%) while the farm share of total property values increased substantially (48%).

3. Tax Burden: Effective Tax Rates on Farmland

a. Farm and Nonfarm Property

Effective tax rates on farmland (taxes as a percent of assessors' estimated market value) are considerably lower than those on other types of property. For taxes payable in 1983, effective tax rates were as follows:[26]

0.60%	Agricultural Homestead
1.00	Agricultural Non-Homestead
1.10	Residential Homestead
2.80	Residential Non-Homestead
3.50	Apartment
1.50	Seasonal/Recreational
4.30	Commercial/Industrial
1.70%	ALL CLASSES

There are two major reasons for the relatively low effective property tax rate on farms. First is the tendency for farmland to be undervalued in relation to market value when compared to other property types. For example, for taxes payable in 1983, the market value

of agricultural property (assessors' estimates) comprised 31 percent of Minnesota's total property tax base. However, after adjusting for errors (as revealed by assessment/sales data), the agricultural share of the state's tax base rose to 33.5 percent.[27] In other words, the agricultural share of equalized market value is somewhat more than its share of assessors' estimates of market value. This creates a de facto classification effect that is then reinforced by Minnesota's de jure system of classification and property tax refunds. The second reason for low effective rates is the tendency for rural tax rates to be lower than urban tax rates due to lower public spending in rural areas.

b. Variation in Farm Tax Burdens

Interstate. The effective tax rate on farm property varies substantially across Minnesota. For example, in 1983 the lowest effective rates were 0.15 percent in Lake County, 0.26 percent in Cook County, 0.28 percent in Itasca County, 0.35 percent in Hubbard County, and 0.36 percent in Renville County; while the highest tax rates were in Ramsey County (0.90 percent on the small amount of farm property located there), 0.78 percent in Washington County, 0.76 percent in Hennepin County, 0.75 percent in Kittson County, and 0.73 percent in Lake of the Woods County and 0.70 percent in Winona County.[28] Property in or near the Twin Cities metropolitan area tends to be more valuable due to the number of alternative (nonfarm) land uses, and tax rates are generally higher due to greater public services (higher public spending).

Despite the wide range in effective property tax rates for farms, 42 of Minnesota's 87 counties had rates between 0.50 and 0.59 percent for taxes payable in 1983.

Sixteen other counties were in the 0.60 to 0.69 percent range. Only six counties had effective rates higher than 0.69 percent and only five counties had rates lower than 0.40 percent. Most of these eleven outliers are counties with little farm property, either because they are heavily urbanized or are located in Northern Minnesota where the quality of land for agricultural purposes is generally poor. Winona and Renville Counties (with high and low effective tax rates, respectively) are the only two counties with relatively extreme tax rates that are not in the Twin Cities or northern areas.

Size and Type of Farm. There is also considerable variation in farm tax burdens according to the size and type of farm. Table 7 lists the effective tax rates for homestead and non-homestead farms varying from 250 to 1,000 acres in size and from $500 per acre to $2,000 per acre in market value. It shows that small and/or lower valued homestead farms have significantly lower tax rates than larger and higher valued homestead farms. For example, the effective tax rate for a 250 acre homestead farm valued at $500 per acre is 0.36 percent compared to 1.09 percent for a 1,000 acre homestead farm valued at $2,000 per acre.

Table 7 also shows that the effective tax rates of non-homestead farms are substantially higher than homestead farms, and unlike homesteads, they vary little due to farm size and not at all due to farm value. For example, the tax rates for a 250 acre, $500 per acre non-homestead farm versus a 1,000 acre $500 per acre farm are 1.13 percent and 1.18 percent, respectively. A 1,000 acre non-homestead farm valued at either $500 per acre or $2,000 per acre pays taxes at the same effective rate of 1.18 percent.[29]

TABLE 7

EFFECTIVE PROPERTY TAX RATES FOR FARMS OF VARIOUS SIZES, LAND VALUES, AND HOMESTEAD SITUATIONS, TAXES PAYABLE IN 1985
(percent of market value)

	Value per acre					
	$500		$1,000		$2,000	
Size	Homestead	Non-homestead	Homestead	Non-homestead	Homestead	Non-homestead
250 acres	0.36	1.13	0.57	1.13	0.73	1.13
500 acres	0.66	1.15	0.82	1.15	0.90	1.15
1000 acres	0.92	1.18	1.00	1.18	1.09	1.18

Note: Calculations assume that the tax rate is 70 mills. Taxes paid on buildings are not taken into account. The provision excluding the homestead and 1 acre from the state school agricultural credit is not considered. Calculations consider only the agricultural and homestead credits. The circuit breaker and targeted refund programs could lower effective tax rates for homesteads further. Calculations assume that farms are assessed accurately.

These differences in tax burden have implications for the tax rates on different types of farms. Because farms producing grains tend to be larger than others, their effective tax rate tends to be higher than average. Smaller farms, such as those producing vegetables or turkeys, tend to have lower effective tax rates than average. Since personal property is exempt from the property tax, farms using a high proportion of personal property rather than real property have a lower effective tax rate.

4. Comparing Tax Burdens Across States

The best data for comparing tax levels in various states is collected by the U.S. Department of Agriculture (USDA). While their data does not precisely agree with that of the Minnesota Department of Revenue, the estimates are consistent across states.

Effective Tax Rates. Table 8 shows USDA estimates of effective rates for taxes levied in various years from 1940 to 1981. Prior to 1970, farm taxes per $100 of full market value in Minnesota were substantially above the national average. For example, in 1960, the effective rate in Minnesota was 1.35 percent compared to the national average of 0.97 percent. In 1970, Minnesota's effective rate was 1.69 percent compared to 1.08 percent nationally. By 1975, however, Minnesota was only slightly above average (0.88% vs. 0.81% nationally), and in later years it was slightly below average (0.43% vs. 0.48% nationally in 1981). The effective tax rate on farm property decreased substantially across the nation in the 1970s, but it fell faster than average in Minnesota.

Excluding the Northeast, where relatively little farmland remains, only three states in 1970 -- Wisconsin,

TABLE 8
TAXES LEVIED ON FARM REAL ESTATE: AMOUNT PER $100 OF FULL MARKET VALUE, BY STATE, SELECTED YEARS

State	1940	1950	1960	1970	1975	1977	1978	1979	1980	1981
	Dollars									
Northeast:										
Maine	2.87	2.38	2.30	2.14	1.15	1.09	1.08	1.02	1.06	1.07
New Hampshire	2.41	1.90	2.04	2.07	1.13	1.05	1.02	.92	.96	.97
Vermont	1.76	1.55	1.76	1.81	1.21	1.18	1.13	1.05	1.10	1.15
Massachusetts	2.41	1.80	2.03	2.27	1.75	1.74	1.57	1.37	1.36	1.29
Rhode Island	1.38	1.06	1.61	2.03	1.34	1.32	1.26	1.19	1.21	1.25
Connecticut	1.30	1.29	1.33	1.52	1.06	1.01	.94	.83	.81	.79
New York	1.99	1.64	2.16	1.90	1.65	1.54	1.66	1.58	1.64	1.74
New Jersey	1.70	1.39	1.75	1.42	1.03	.82	.76	.69	.70	.73
Pennsylvania	1.65	1.25	1.27	1.21	.81	.80	.73	.65	.63	.68
Delaware	.51	.51	.44	.45	.18	.15	.17	.15	.13	.11
Maryland	1.20	.95	.80	.80	.58	.58	.40	.36	.30	.28
Lake States:										
Michigan	.90	.21	1.21	1.43	1.54	1.45	1.47	1.51	1.62	1.67
Wisconsin	1.54	1.78	1.88	2.03	1.61	1.45	1.33	1.28	1.28	1.31
Minnesota	1.49	1.54	1.35	1.69	.88	.55	.55	.51	.49	.43
Corn Belt:										
Ohio	1.01	.79	.89	1.06	.82	.67	.64	.56	.50	.48
Indiana	1.18	.99	.92	1.31	.70	.44	.39	.42	.41	.40
Illinois	1.18	1.19	1.28	1.44	1.10	.75	.72	.66	.65	.66
Iowa	1.26	1.20	1.19	1.50	.89	.64	.63	.58	.54	.53
Missouri	.98	.82	.95	.82	.59	.49	.44	.40	.33	.31
Northern Plains:										
North Dakota	1.79	1.45	1.18	1.21	.74	.62	.58	.51	.48	.46
South Dakota	1.98	1.32	1.22	1.38	1.04	.91	.84	.83	.84	.80
Nebraska	1.35	1.09	1.22	1.31	1.01	.76	.94	.83	.92	.82
Kansas	1.23	1.09	1.23	1.25	.80	.66	.64	.52	.47	.48
Appalachian:										
Virginia	.65	.56	.60	.54	.44	.43	.43	.37	.38	.38
West Virginia	.50	.38	.41	.41	.21	.17	.15	.13	.11	.12
North Carolina	.95	.52	.54	.53	.41	.37	.36	.33	.32	.31
Kentucky	.64	.75	.54	.55	.43	.33	.30	.25	.22	.22
Tennessee	1.03	.61	.50	.59	.45	.40	.35	.34	.31	.33
Southeast:										
South Carolina	.94	.55	.52	.46	.36	.31	.30	.26	.24	.25
Georgia	.66	.75	.43	.38	.53	.51	.46	.40	.38	.41
Florida	.82	.94	.66	.84	.70	.60	.53	.47	.46	.46
Alabama	.93	.52	.33	.25	.14	.12	.13	.14	.11	.10
Delta States:										
Mississippi	1.32	.67	.40	.44	.30	.29	.23	.20	.20	.16
Arkansas	1.07	.53	.64	.52	.39	.33	.33	.27	.23	.21
Louisiana	.36	.48	.39	.39	.24	.20	.20	.18	.14	.12
Southern Plains:										
Oklahoma	.98	.69	.53	.54	.42	.34	.31	.29	.25	.24
Texas	.71	.56	.55	.59	.46	.45	.41	.37	.33	.31
Mountain States:										
Montana	1.42	1.14	.82	1.03	.71	.54	.51	.52	.51	.46
Idaho	1.34	1.09	.96	.81	.62	.56	.50	.39	.37	.32
Wyoming	.94	.91	.72	.80	.50	.41	.35	.35	.35	.33
Colorado	1.53	1.02	1.06	.96	.61	.43	.44	.40	.36	.34
New Mexico	.70	.44	.48	.53	.30	.23	.20	.16	.10	.09
Arizona	1.11	.94	.55	1.00	.95	.74	.60	.50	.31	.29
Utah	1.31	.93	.86	1.00	.81	.56	.40	.31	.24	.24
Nevada	1.14	.86	.66	.79	.81	.55	.44	.29	.19	.11
Pacific States:										
Washington	.80	.58	.84	.91	.81	.62	.59	.53	.43	.37
Oregon	1.15	1.27	1.08	1.24	1.07	.83	.65	.51	.55	.55
California	1.15	1.16	1.04	1.76	1.63	1.56	.67	.53	.48	.40
Hawaii	--	--	.72	.56	.52	.34	.34	.31	.32	.35
Alaska	--	--	1.02	1.63	1.21	1.11	1.03	.83	.75	.54
50 States (average)	1.18	1.00	.97	1.08	.81	.68	.59	.53	.50	.48

-- = Data not available.

Source: Farm Real Estate Taxes in 1981 (U.S. Department of Agriculture).

farmland remains, only three states in 1970 -- Wisconsin, California, and Alaska -- had a higher effective tax rate on farm real estate than Minnesota. By 1981, 13 states had higher rates than Minnesota (outside the Northeast). In comparison to its neighbors, Wisconsin, South Dakota, and Nebraska, have significantly higher effective tax rates, and Iowa and North Dakota have slightly higher rates.

Property Taxes to Net Farm Income. A final way of comparing tax burdens across states is in terms of property taxes as a percentage of farm income. The USDA published such comparisons for taxes levied in 1979 and earlier years, but it has not done so recently due to concerns about the quality of the income data. Throughout the late 1970s, Minnesota farm property taxes were below average in relation to net farm income and about average when compared to gross farm income. For example, in 1979, they were 7 percent of net farm income compared to 8 percent nationally, and 2 percent of gross farm income compared to 2.1 percent nationally. These rates were considerably lower than those in surrounding states. In 1979, property taxes as a proportion of net farm income were 13.6 percent in Iowa, 9.6 percent in North Dakota, 12.4 percent in South Dakota, and 11.6 percent in Wisconsin.[30]

To summarize, this data indicates that Minnesota farm taxes are about average compared to property value, and slightly below average compared to net farm income (given available data). These results suggest that farm income per acre in Minnesota is above average. Prior to 1970, Minnesota's farm tax burdens were much higher in comparison with the national average than they are now, reflecting the fact that major steps were taken during the past decade to relieve farm property taxes.

As will next be discussed, Minnesota has followed a different path than most states in providing property tax relief to farmers.

B. FARM PROPERTY TAX RELIEF PROGRAMS

1. Farm Property Tax Relief: Goals

Today, virtually all states have enacted some type of property tax relief program for agricultural property. The reasons behind this movement relate to legislative concerns that farmers are carrying unduly heavy property tax burdens, and that prime agricultural lands are being lost to urban uses. Although diverse in their structure, most states' property tax relief programs are designed to address one or both of the following two goals:

(1) To ease the cash flow pinch of income poor, asset wealthy farmers.

A significant portion of the total return from agricultural land is in the form of unrealized capital gains rather than current income. Because property taxes are normally paid out of current income, they can impose a hardship on farmers whose property wealth is disproportionately large in relation to income. This cash flow problem may be aggravated by an inability to readily borrow (at least on reasonable terms) against the asset value of a farm, particularly in a period when land values are declining. Thus, permanent tax relief is often provided to ease the cash flow pinch that arises from disparities in income and real property wealth.

(2) To encourage the preservation of farmland.

Preserving farmland is a second motivation for providing property tax relief to farms. During the last fifteen years,

there has been a growing concern nationwide about the loss of agricultural land to urban uses. Because this loss is viewed as irretrievable, it is deemed that public intervention in the form of tax relief is needed to stem or slow such losses.

Acceptance of these goals by state policymakers is far from universal. First, some argue that the farmer's tight cash position is actually not a tax problem, but rather a problem of imperfect capital markets. When viewed in this light, the solution is not broad based permanent tax relief; but rather some type of intervention in the capital or loanable funds market. A state financed tax deferral mechanism that allows farmers to defer (with interest) payment of part or all of their property tax liability is one example. Second, the need to address farmland preservation varies considerably between and within states. For example, the total decrease in farm acreage in Minnesota since 1970 is only 1.6 percent, but the decrease in some parts of the Twin Cities metropolitan area is much greater (e.g., in 1974-1982, Anoka and Scott Counties' farm acreage decreased by 21 percent and 5 percent, respectively).[31] These statistics tend to argue for a property tax relief program of limited, rather than statewide, applicability.

Despite the arguments that can be raised for and against these two goals, it remains a fact that all states tax some or all agricultural property more favorably than other types of business property. A decision not to do so could make a state a tax outlier. Therefore, this report focuses on the various methods of providing property tax relief, their strengths and weaknesses, and their effectiveness with respect to tax policy goals.

2. Farm Propety Tax Relief: Methods

There are three primary methods used to grant tax relief

to farm property: use-value assessment, classification, and credits/refunds. A use-value assessment* program allows farm property to be assessed at its value for agricultural use rather than at its market value. Operationally, this requires farmland to be valued as if its only foreseeable use is for purposes of agricultural production. Most states' farm property tax relief programs are based on some form of use-value assessment. Minnesota has three such programs, but they are used only on a limited basis. Classification differs from use-value assessment in that it explicitly assigns a lower assessment ratio to farm property than to certain other types of property (this is accomplished implicitly under a use-value assessment program). Tax credits and refunds are used to lower the gross property tax bills of farmers either through the subtraction of a nonrefundable credit (Minnesota's homestead credit) or the subsequent receipt of a property tax refund (the circuit breaker).

Because the Tax Study Commission is already familiar with the use of classification and tax credits/refunds (see The Property Tax in Minnesota, dated September 26, 1984), this section focuses on use-value assessment. After presenting the conceptual and operational aspects of this tax relief device, it describes the major differences between the three methods of tax relief and how they are being used in different states and in Minnesota.

a. Use-Value Assessment

Use-value assessment is the practice of assessing property at its value in its current (agricultural) use rather than at its market value. Because market value is ignored, use-value assessment does not use

*Use value assessment is also commonly known as "preferential assessment" or "differential assessment". Since those terms can mean other things in other contexts, "use-value" or alternatively, "production value" is used here since it is more precise.

the comparable sales approach to value, which emphasizes the actions of willing buyers and sellers of comparable farms in a competitive market place. Instead, it is based on the income approach to value, which stresses the productivity and net earnings capacity of agricultural land. The income method uses soil quality, production, price, and expense data to arrive at net farm income, which is then capitalized to arrive at the value of farmland in agricultural use. Thus, use-value is a computed figure based on net farm income and a given rate of interest. The reliability of its results depends on the accuracy of net income estimates and the appropriateness and acceptability of the capitalization rate. The methodology for deriving use-value is briefly described below.

(1) Estimating Net Farm Income

For purposes of farm valuation, income may take the form of rental income or owner operator net income. Rental income represents the annual return received by a landlord for the use of agricultural land and buildings by tenants. Owner operator net income represents the amount an owner has left as a return on land and buildings after all expenses have been deducted. Generally, rental income is the preferred measure since both cash rents and crop-share rental contracts* are established by renters and landlords in a competitive market and therefore should accurately indicate the annual value of land for agricultural purposes. Either measure, however, can be used for valuation purposes regardless of how the farm is actually being managed. This is because actual records of landlord and owner operator net incomes are seldom used as determinants

*In a crop-share rental agreement, the tenant pays rent in the form of both crops and cash.

of farm value; instead, the income approach relies on numerous indicators of soil quality, production and prices that are collected at the state and sub-state levels and then used to determine the average net return per acre that can be expected from various types of farming enterprises.

For purposes of rent capitalization, rental income (whether cash or crop-share) is a function of landlord gross income less expenses. Gross income is a complex function of soil productivity (as indicated by soil surveys), cropping patterns (the allocation of acreage to its typical uses), cropping intensity, crop yields, crop prices, and management practices.* Once determined, a portion of gross income is then allocated to the landlord under a "most likely" or "typical" cash or crop-share lease agreement. Landlord expenses (such as real estate taxes, some share of seed and crop expenses, and building maintenance, repair, and depreciation) are then subtracted from landlord income to yield net income (per acre and in total). This then becomes an index for comparative purposes. Comparisons, of course, will have more significance in a state where rental arrangements are common. If farm tenancy is relatively uncommon (as is somewhat true in Minnesota), this method is less viable since it is more difficult to estimate average rental terms and the degree of variation in rental terms for farms of different qualities. This problem is even more troublesome if the majority of rental farmland is on a crop-share basis. Because share rents are stated in percentage terms (e.g., 60% cash, 40%

*Note that the rental approach to net income places a major emphasis on the use of farmland for crops, avoiding to a large extent livestock operations which to a large degree are carried independently of the land (i.e., the effect of livestock operations is felt chiefly through buildings and pasture).

crop) they vary in amount and cash equivalence according to the management skills of tenants, weather conditions, and short-term market factors, all of which lessens their reliability as an indicator of value.

Deriving farm value from owner operator net income is more difficult than from rental income. That is because the expense deductions of an owner operator are normally greater in number, higher in amount, and subject to greater variability than those of a landlord. To begin with, an owner operator's operating expenses (like a landlord's) include seed, other crop expenses, fertilizer, and real estate taxes. These types of expenses are relatively easy to estimate and vary within relatively narrow limits. Other expenses may include purchases of livestock, feed, and machinery, machinery maintenance and repair, inventory adjustments, and an allowance for unpaid family wages. These expenses tend to be highly variable and therefore more difficult to estimate over time.

Regardless of the type of income measure used, most use-value assessment programs use multi-year moving averages of production, price, and expense data in order to reduce the year-to-year variability in net farm income. If yields and prices vary significantly between counties or crop reporting districts, it is also necessary to adjust statewide averages to reflect intrastate market conditions. This averaging process smooths out fluctuations in net farm income, which adds greater stability to annual farmland values and local property tax collections.

(2) Selecting the Capitalization Rate

Once annual net income has been determined, it must be capitalized in order to determine use value. Capitalization, the process by which value is computed from income, is expressed by the following formula:

$$\text{Value} = \frac{\text{Annual Net Income}}{\text{Capitalization Rate}}$$

Thus, the value of agricultural property is determined by capitalizing (dividing) estimated net income per acre by the capitalization rate. For example:

$$\text{Use-Value of Farm X} = \frac{\$100 \text{ per acre}}{.08} = \$1{,}250 \text{ per acre}$$

Technically, the capitalization rate is the opportunity cost of capital for farmland purchases plus the effective farmland property tax rate.[32] In practice, the capitalization rate is often a legislatively determined rate that is either intended to achieve some pre-determined policy objective (e.g., maintain or lower current agricultural land market values), or is intended to recognize a market-determined rate of interest. Many states use the five-year average annual effective Federal Land Bank mortgage interest rates that are specific to the districts where their agricultural lands are located. Using a market-determined rate of interest is advantageous in that the rate charged by an institutional lender is recognizable, verifiable, and non-arbitrary.

Income capitalization does not yield a constant property value. Any fluctuation in either estimated net income or the capitalization rate produces

higher (lower) production values. For example, if the $100 per acre income of Farm X is capitalized at 8.5 percent instead of 8.0 percent, its per acre value changes from $1,250 to $1,176, a decline of 6.0 percent.* In order to bring some degree of stability to land values, it is advantageous to use a multi-year moving average for both estimated net income and the capitalization rate. Again, using an average farm mortgage rate is more desirable than using a fixed rate that is periodically adjusted by the legislature since the latter presents the clear opportunity to politically manipulate the farm valuation process.

At this point, the reader may find it useful to turn to Table 9 and Appendices A, B, and C. These references are instructional in that they illustrate the inherent complexity of the income capitalization method, and the myriad of factors that must be taken into account when deriving value from income. Table 9 displays a worksheet of how capitalized rental values are derived under Iowa's income capitalization method (which is based upon landlord earnings under a crop share lease agreement). Appendix A and B include excerpts from reports by the New York State Board of Equalization and Assessment and by the Iowa Department of Revenue describing how use-value is implemented in their states. Lastly, Appendix C describes how farm property is assessed in Minnesota's neighboring states. Illinois, Iowa, and North Dakota have use-value assessment programs; note that these are states where property classification is prohibited by their state constitutions.

*Under the capitalization of income formula, the higher the estimated net income and the lower the capitalization rate, the higher will be the computed use-value of the land. Likewise, the lower the estimated net income and the higher the capitalization rate, the lower will be the use-value of the land.

TABLE 9

WORKSHEET FOR DETERMINING FARM USE-VALUE, STATE OF IOWA
DETERMINING NET EARNINGS - 1969-1973 - 5 YEAR AVERAGE

	Acres	Yield /A.	Total Production	Price	Total Value	Landlords Income	Landlord Oper. Exp/A.	Total L.L. Operating Expense
				Example				County
Corn	136,099	108.4	14,753,132 bu.	$ 1.27	$18,736,477	$ 9,368,238	$13.84	$1,883,610
Soybeans	67,934	37.2	2,527,145 bu.	3.52	8,895,550	4,447,775	7.32	497,277
Oats	13,182	56.3	742,147 bu.	.71	526,924	263,462	3.66	48,246
Diverted	32,847	--	--	76.37	2,508,525	1,254,263	1.83	60,110
TOTAL OF SHARED CROPS					$30,667,476	$15,333,738	--	--
Hay	19,197	3.54	67,957 T.	$19.29 1/	--	370,310	4.45	85,427
Tillable pasture	31,758	--	--	19.29 1/	--	612,612	3.67	116,552
Non-tillable pasture	21,703	--	--	9.65 2/	--	209,434	--	--
Total enumerated	322,720	--	--	--	--	$16,526,094		$2,691,222
Other (unenumerated)	26,691							
TOTAL ACREAGE	349,411	--	--	--	--	--	--	--

LORD EXPENSE SUMMARY

1. Total landlord operating expense	$2,691,222
2. Fertilizer cost adjustment	
108.4 bu. -	
6.4 bu. x $0.16 x 136,099 acres	139,365
3. Facilities and handling cost	
18,022,424 bu. corn, oats	
soybeans @ $0.045	811,009
67,957 T hay @ $2.30	156,301
TOTAL EXPENSES (NO R.E. TAX)	$3,797,897

INCOME SUMMARY AND CAPITALIZATION

1. Landlords income - enumerated A.	$16,526,094
2. Total expense	3,797,897
3. Net income enumerated A	$12,728,197
4. Net income other acres 3/	526,347
5. Total net earnings before R.E. tax	$13,254,544
divided by total acres, 349,411 =	$ 37.93
less R.E. tax per acre	8.14
6. Net earnings per acre	$ 29.79
7. CAPITALIZED @ 6½% (29.79 ÷ .065) 4/	$ 458.31 val./

Hay yield 3.54 T x $21.80/T ave. price x .25 = $19.29 cash rent per acre

One half of cash rent per acre for hay and tillable pasture.

Net income enumerated acres $12,728,197 ÷ enumerated acres 322,720 = $39.44 per acre. $39.44 ÷ 2 = $19.72 x other acres 26,691 = $526,347 total net income from other acres.

The capitalization rate will be selected by the State Tax Review Board or will be specified by the Iowa Code.

b. Differences Between Tax Relief Methods

The distinguishing characteristics of use-value assessment versus classification and tax credits/refunds are presented below.

Distributing the Relief. Both use-value assessment and classification provide broad, class-wide tax relief, irrespective of the personal (income) attributes of the recipients. Classification, however, does allow some targeting of relief to owners of lower valued properties by increasing the assessment ratios as market value rises. Conversely, credits/refunds can be structured to provide targeted relief to the intended beneficiaries; additionally, the amount of relief can be linked to the personal income attributes of the intended recipients.

Administering the Tax Relief. The addition of use-value assessments to a property tax system is administratively cumbersome (at least initially) in that it requires assessors to determine the production value of farmland, a task that requires different skills and information than that required to determine market value. Specifically, detailed information on local soil quality, farm income and expenses, and economic trends in the commodity markets is needed. This type of information is best gathered and analyzed at the state level, such as by a state revenue agency or by an agricultural department of a university. The necessity of creating and maintaining an information management system adds considerable complexity to the property tax system. It also may change the role of the assessor by shifting in large part the responsibility of determining farmland values to a state agency.

Financing the Cost of Relief. Programs that reduce assessments (through use-value or classification) tend

to shift the cost of financing local services to other local properties, i.e., the reduction in assessed value is largely financed by other property taxpayers within the same taxing (service) jurisdiction. A tax credit program is usually financed by state taxpayers.

Quantifying the Benefit. The benefits from credits are easily quantifiable in that they are directly subtracted from the property tax bill. The benefits from lower assessments are difficult to measure because property tax rates are often raised to compensate for the lower assessments. An additional complication is that the relationship between assessment reductions and tax savings depends on the proportion of the tax base that is agricultural. If farms are a small proportion of a jurisdiction's total assessed value, a reduction in farm assessed value is not likely to greatly affect the farm tax rate; if farms are a large proportion of total assessed value (e.g., a predominantly rural county), then the increase in tax rate is likely to offset most of the benefit from lower farm assessments (i.e., there is less nonfarm property to which the tax burden can be shifted).

Interplay with State Aids. A final difference between credits and lower assessments is not inherent to their structure but is related to the operations of most state fiscal systems. State aid to school districts generally depends on the assessed valuation of property per pupil. Any program lowering assessments tends to increase state school aid. Thus, in a rural area where farms are a very large proportion of the tax base, an increase in state school aid that results from lowered property assessments may be the major benefit of a tax relief program.

3. Tax Relief Programs in Neighboring States

a. Use-Value Assessment

The first use-value assessment program was enacted in Maryland in 1956. Today, 49 states, including Minnesota, have laws prescribing that some or all farm property be assessed according to its use or "production" value rather than its market value. At their date of adoption (and most were adopted between 1960 and 1975), most of these programs did not result in reduced farm assessments. Rather, an existing pattern of de facto preferential assessment was ratified.[33] Later, these programs prevented large increases in assessments during the 1970s when farmland values soared.

Eligibility. State requirements for participating in use-value assessment programs vary considerably. In some states, all property that is in agricultural use (for several years or as of the most recent assessment date) automatically qualifies for use-value assessments; in others, owners of agricultural property must apply for use-value assessments; and in some states, only property in certain geographic areas (e.g., areas zoned exclusively for agricultural use) or meeting specific requirements (e.g., producing a minimum income or output per acre, or comprising a minimum percentage of the total personal income of the owner operator) may receive a use-value assessment. Most states do not apply their use-value assessment laws on a statewide or unrestricted basis.

Administration. In addition to their eligibility requirements, states differ widely in how they define and implement the standard of value to be used for use-value assessments. A few states provide that agricultural

lands be assessed on the basis of their current use, and then leave it to the discretion of local assessors to determine such value. Others establish detailed procedures for imputing use-value to farm property, and develop elaborate information systems for gathering the necessary soil quality, production, and price data. Once the valuation procedures and farm data systems are in place, it is the local assessor's job to either carry out the valuation process, or to apportion a state-determined aggregate county value to individual farm parcels.

Sanctions. The majority of use-value assessment programs include a penalty that must be paid if participating land is converted to nonfarm use. This penalty is usually based on the tax savings that accrued over the preceding two to ten years. Approximately half of the states also add an interest charge to their penalty. Generally, owners who convert their properties to nonfarm uses are expected to pay any penalties immediately, although some states allow longer terms. In addition to penalties, about five states require that restrictive use agreements be signed by landowners desiring use-value assessments[34]. Typically, land is restricted to agricultural use for a period of ten years and landowners are required to give several years' notice if they intend to change land use. If notice is given, a penalty is imposed and then the land reverts to the market value standard of taxation. Restrictive agreements are generally used in instances when the public purpose is to preserve farmland or open space.

b. Classification

As previously noted, classification differs from use-value assessment in that it explicity assigns a lower assessment ratio to farm property (use-value assess-

ment does this implicitly). Most states with classification systems assign a lower assessment ratio to residential and farm property than to business property, but farms are not usually favored over homes. In addition, classification categories for farms and other types of property are usually fixed, or at least infrequently changed.

Minnesota's classification system differs from those elsewhere in several respects. It changes its assessment ratios frequently, and it "fine tunes" its classification categories by setting different assessment ratios on properties with different market valuations. Finally, it treats agricultural property more favorably than residential property, and treats farm homestead property more favorably than other non-homestead farm property.

c. Credits/Refunds

Michigan, Wisconsin, and Iowa are the only states besides Minnesota to use credits as a tax relief tool for farm property. Wisconsin and Michigan both have circuit breakers* specifically for farm property in addition to their general circuit breakers, and both tie their farm circuit breakers to the preservation of farmland. In Wisconsin, only farms located within counties having adopted land use plans can participate in its farm circuit breaker program and the benefits of doing so are greater if the property is located within a district zoned for agriculture. In Michigan, the

*A circuit breaker is an income-based property tax relief program. In Minnesota, the benefits received through the program are based on the amount of property taxes or rent paid in relation to household income. Such benefits are disbursed in the form of a refund, i.e., credited against the state's individual income tax. Thus, in Minnesota, the circuit breaker is identified as a refund program. In most states, it is referred to as a property tax credit.

landowner must sign an agreement to maintain his property as a farm for at least ten years.

Benefits in both these states have grown rapidly. In Wisconsin, the cost of the farm circuit breaker in 1984 was $22.6 million, several times higher than in 1978. The Michigan farm circuit breaker (which refunds property taxes in excess of seven percent of household income) had benefits of about $51.6 million in 1982, more than triple its level three years earlier.

Both Michigan and Wisconsin also permit farms to participate in their general circuit breakers. Many Michigan farms receive the maximum $1,200 benefit from its general circuit breaker. In Wisconsin, farmers receive over twelve percent of the benefits from its general circuit breaker, although they account for fewer than eight percent of the participants in that program. Benefits from Wisconsin's general circuit breaker are limited because only $1,200 of property taxes are considered in calculating the benefits, which is a more important constraint than the fact that only buildings and 1,200 acres are eligible for the program.[35]

Other types of credits, such as Minnesota's state school agricultural credit and Iowa's agricultural land tax credit, are not related to income. Iowa's credit is less targeted than Minnesota's because it does not set a maximum benefit, nor does it differentiate between homestead and non-homestead farm property. Another difference is that Iowa's credit has a fixed total appropriation ($43.5 million since 1980), while Minnesota's is open-ended (increasing from $29.5 million in 1977 to about $95.7 million in 1983). These numbers also illustrate that the cost of Minnesota's agricultural credit is significantly higher than Iowa's.

4. Tax Relief Programs in Minnesota

Minnesota has three use-value assessment programs (and a fourth that was recently repealed), a classification system, and four major credit/refund programs. Following are brief descriptions of these property tax relief devices.

a. Use-Value Assessment: The Green Acres Program (M.S. 273.11)

Enacted in 1967, this program was Minnesota's first use-value assessment program. Known as the "Green Acres" statute, this law provides that qualifying real estate be assessed "solely with reference to its appropriate agricultural classification and value" and that "the assessor shall not consider any added values resulting from nonagricultural factors". Beyond this guidance, the law is silent with respect to how farm values should be determined (such decisions are left to local assessors).

To qualify for the program, farm real estate must be held in parcels of at least ten acres, and be "actively and exclusively devoted to agricultural use". Such land must be the homestead of the owner (or have been possessed by the present owner for at least seven years) and it must produce an annual gross farm income of at least $300 plus $10 per tillable acre (or provide one-third of the total family income of the owner). Income from the rental of farm real estate for agricultural use is sufficient to meet this income test. Once qualified, farmland owners are taxed on the basis of the agricultural use value of their property. If the property is subsequently sold, converted to a nonfarm use, or otherwise becomes ineligible, the amount of taxes that were deferred over the previous three years (i.e., the

difference between use and market value) becomes due and payable as of the next property tax payment date. Note that this penalty provision necessitates that assessors record both the market and agricultural use value of all properties in the program.

Although the Green Acres program has been criticized as being overly liberal in its definition of a farm (minimum ten acres, $400 annual farm income), its use is not widespread. As of 1984, only 23 counties had any land in the program. Fifteen of those counties are in or contiguous with the Twin Cities metropolitan area. This is as would be expected since it is in the metropolitan counties that urban development pressure causes the widest divergence between the market and use value of farmland. In 11 of these 15 counties, more than half of the farmland is enrolled in the program, and in two counties -- Kanabec and Wright -- the participation rate is 90 percent. The other eight counties with land in the program are located outside the Twin Cities metropolitan area and have very low rates of participation. In each of these rural counties, less than one percent of the farmland is in "Green Acres", and in six of these counties, the proportion is 0.2 percent or less. Statewide, 1.75 million acres are in the "Green Acres" program representing about 21 percent of the farmland in the 23 counties. Overall, the program lowered the total market value of "Green Acres" land in payable 1984 by twelve percent (from $5.8 billion to $5.1 billion). In Kanabec and Wright counties (the two counties with the most land in the program), the aggregate farm assessment was reduced by 36 percent and 29 percent, respectively.

The limited use of the Green Acres program suggests that in most of Minnesota there is not a large difference

between the market value of land for agricultural production and the market value determined by assessors. In other words, in most of the state urban development pressure does not significantly inflate the value of farmland.

b. Use-Value Assessment: Metropolitan Agricultural Preserves (M.S. Chapter 473H)

Enacted in 1980, this program goes beyond the Green Acres law in relieving farm property taxes. It not only provides that participating land will be assessed solely on the basis of its value for agricultural use, but also that the tax rate may not be more than five percent above the previous year's statewide average mill rate levied on property located within townships. The state reimburses local governments for taxes in excess of this five percent figure. In addition to the tax advantages, participating farms receive other benefits, such as protection from unreasonably restrictive local and state regulation of normal farm practices, imposition of unnecessary special assessments, and indiscriminate and disruptive eminent domain actions.

The eligibility requirements of this program are somewhat more restrictive than the Green Acres program. To qualify, land must be located within the seven-county metropolitan area, and in areas designated for long-term agricultural use by local planning and zoning authorities. Eligible parcels must be at least 40 acres in size, although some exceptions are allowed. The property owner must agree to keep the land in farm use and to give notice of eight years before the use is changed.

Participation in this program has been significant although it represents only a small proportion of farmland

in the Twin Cities metropolitan area. As of February 1983, the deadline for the second year of tax benefits, 88,358 acres were enrolled in the program, or 15 percent of the land certified eligible for preservation. This was a 46 percent increase over the first year. In addition, many local communities have designated more land as long-term agricultural areas than planners had previously identified. More than 1,700 parcels of land are in the program, receiving an average tax credit of $200; thus, the total credits paid for taxes payable in 1984 were $340,000.

c. Use-Value Assessment: State Foundation Aid (M.S. 124.2131, Subd. 1(b))

For purposes of determining adjusted assessed values for school aids (EARC), farmland has been valued at the average of its market and use-value since 1977. Farm use-value is determined by capitalizing the average cash rent for all grades of land within each county by nine percent. This results in a reduction in EARC values (equalized values used for school aid purposes) and a concomitant reduction in local school property taxes and increase in state school aids. For example, in Brown County, the market value of farmland is $826 million and the preferential value is $543 million or 34 percent lower. As a result, this county's school aid is increased by 22 percent. Statewide, this provision increased state school aids to rural areas by about $40 million in 1983.

d. Use-Value Assessment: Rent Capitalization (M.S. 273.11, Subd. 7)

In an attempt to find a standard for measuring the value of farmland that would not be so susceptible

to the influences of the land market (particularly the influence of speculative investment in farmland), the 1981 Legislature enacted a law requiring that beginning in 1983 farm assessments would be based on the lesser of current market value or gross annual cash rent capitalized at 5.6 percent. The 5.6 percent rate was selected as the rate that would minimize the change in market values statewide, i.e., it was the estimated statewide average ratio between cash rents and assessors' estimated market values. An initial simulation of the law's effect on farmland property taxes led to its suspension in 1983 and its repeal in 1984.

If implemented, it would have produced varied results in different counties. Forty-nine of Minnesota's 87 counties would have realized minimal to substantial declines in farmland values. Without the limitation of current market value, 38 counties would have experienced increases in farmland values. Overall, the estimated changes in value ranged from a 41 percent reduction in Morrison County to a 51 percent increase in nearby Kannabec County (although in no case would values have actually increased due to the "lesser of" language in the law).

In the end, this program was repealed for several reasons, including the lack of a consistent relationship between rents and value, the large changes in farmland values that it would have caused in certain counties (and the subsequent shift of the local tax burden to nonfarm properties), and the arbitrariness of the capitalization rate.

e. Classification

Minnesota has two major classification categories for farm real estate: Class 3 - agricultural non-home-

stead, and Class 3b - agricultural homestead. The definition of Class 3b (homestead) is quite broad - owner-occupied; unlimited acreage; noncontiguous property within two townships; and farmed by owner-occupant or rented for farm use. Through its classification system, Minnesota provides farm homesteads with more favorable tax treatment than non-homestead farms. The latter are assessed at 19 percent of market value. Farm homesteads are also assessed at 19 percent of market value, but the first $60,0000 of market value($62,000 in 1985)* is assessed at only 14 percent of market value. The tax reduction resulting from the 14 percent rate on the first $60,000 of market value is roughly equivalent to providing an exemption of $3,000 of market value ($3,060 in 1985; these estimates assume that mill rates do not increase in response to lowered valuations). Assuming a statewide farm millage rate of 70 mills, this reduction in value is equivalent to a tax savings of slightly over $200 per farm (again, if a local government raised its millage rate to offset the reduction in the tax base, the actual tax savings would be somewhat less).

The classification percentages for farms (and many other kinds of property) have been lowered considerably over time. For example, for taxes payable in 1972, agricultural property was assessed at 33 1/3 percent of market value, except that the first $12,000 of market value for farm homesteads was assessed at 20 percent. In each year since 1978, the classification percentages have been lowered (or alternatively, the first increment of market value has been raised), with major changes occurring in 1981 (the classification percentages were narrowed from 12% and 25% in 1980 to 14% and 19% in

*The amount of homestead value assessed at 14% has been indexed to the estimated annual percentage increase in the statewide average residential homestead value. Thus, in 1985, the 14% rate will apply to the first $62,000 of market value.

TABLE 10

FARM PROPERTY CLASSIFICATION PERCENTAGES
1972 - 1985

1972	20% of 1st $12,000 market value; 33.3% of remaining value
1977	20% of 1st $13,000 value; 33.3% remaining value
1978	18% of 1st $15,000 value; 31% of remaining value
1979	16% of 1st $17,000 value; 30% of remaining value
1980	12% of 1st $21,000 value; 25% of remaining value
1981	14% of 1st $50,000 value; 19% of remaining value
1982	14% of 1st $54,000 value; 19% of remaining value
1984	14% of 1st $60,000 value; 19% of remaining value
1985	14% of 1st $62,000 value; 19% of remaining value

1981, and the first bracket was increased from $21,000 to $50,000; see Table 10). Over time, the total decrease in the classification percentages for agricultural property have been greater than those for most of the other major classes of property.

The farm classification percentages make agriculture the most favored class of property in the Minnesota property tax system. For example, a $100,000 commercial-industrial property is assessed at 43 percent of market value (34% on the first $50,000 of market value); a $100,000 homestead residential is assessed at a net 22.8 percent of market value (17% on the first $30,000 of value; 19% on second $30,000 of value; and 30% on the remaining $40,000 of value) and a $100,000 farm is assessed at 19 percent of market value (or a net of 16% of value if such farm is a homestead).

For taxes payable in 1983, the actual assessment ratios for farms were even more favorable. According to the Minnesota Department of Revenue's assessment/sales ratio data, the assessed valuation of farms was 12.7 percent of equalized market value compared to 17.7 percent for residential property. The latter ratios reflect both the effect of classification and of actual assessment practices.

f. Credit/Refund Programs

Minnesota has four major tax credits that provide benefits to farm property - the state school agricultural credit, the homestead credit, the circuit breaker, and the targeted refund. Of these four, the agricultural credit is the only credit that is solely for agriculture;[36] it is also the only credit for which non-homestead farms are eligible. The homestead credit is paid to all farms that are homesteads, and the circuit

breaker and targeted refunds are only paid to certain homestead farms. The circuit breaker depends on household income, and the targeted refund is limited to properties with relatively large annual tax increases. (In addition to these credits, certain farmers are eligible to receive the wetlands, native prairie, and power line credits. These credits are not discussed in this report; however, such credits are discussed in the September 26 report on Minnesota's Property Tax).

(1) Credits: State School Agricultural Credit

The state school agricultural credit is designed to lower school property taxes for owners of homestead and non-homestead agricultural properties, timberlands, and seasonal cabins, with farms receiving greater relief than the other two classes of property. The rationale for the credit is that these properties would otherwise pay taxes that are disproportionate to the burden they impose on local schools (i.e., this "benefits received" argument also applies to other types of property such as forests and commercial-industrial). Although enacted in 1971, the history of this program is traceable to a mill rate differential on agricultural property for school maintenance levies that was established in 1933. Prior to 1971, the cost of the differential was borne through a tax burden shift to local nonfarm properties. Effective 1972, the state assumed the responsibility of financing the mill rate differential. It pays the credit to school districts to reimburse them for the reduction of taxes on the three classes of property.

The credit has recently undergone a major change in its structure. Prior to 1984, the credit was

calculated by applying specified mill rates to the assessed value of given acreages. For example, for taxes payable in 1983 and for farm homesteads, the credit equaled the sum of 18 mills times the assessed value of the first 320 acres, 10 mills times the assessed value of the next 320 acres, and 8 mills times the assessed value of any acreage over 640 acres. Non-homestead farm property taxes were reduced by a lesser amount, i.e., by the sum of 10 mills times the assessed value of the first 320 acres, and 8 mills times the assessed value of any remaining acreage (see Table 11).

For taxes payable in 1984 and 1985, the credit is expressed as a graduated percentage of the total tax bill (the relevant tax bill being that due before the homestead credit and circuit breaker are subtracted). In addition, the credit is now limited to a maximum amount of $4,000 (it was originally to be limited to $2,000 in 1984, but the Legislature raised the maximum to $4,000, effective payable 1984).

As shown in Table 12, the structure of the agricultural credit strongly reinforces the more favorable tax treatment that is given to homestead farms (as opposed to non-homestead farms) by Minnesota's classification system. It also provides more generous tax relief to smaller farms since it pays a higher percentage of the tax bill on the first 320 acres than on the remaining acreage. Placing a maximum on the credit also tends to concentrate benefits on smaller farms and those of lower value; however, raising the maximum from $2,000 to $4,000 had the opposite effect of increasing the benefit to relatively larger and higher valued farms.

TABLE 11

STATE SCHOOL AGRICULTURAL CREDIT

Agricultural Homesteads:

1972 -- 8.33 mills times assessed value

1976 -- 12 mills on first 80 acres; 10 mills on the remainder

1978 -- 15 mills on first 120 acres; 10 mills on the remainder

1981 -- 17 mills on first 240 acres; 10 mills on the remainder

1982 -- 18 mills on first 320 acres; 10 mills on next 320 acres and 8 mills on the remainder

1984 -- 29% of gross tax on first 320 acres; 13% on next 320 acres; and 10% on the remainder. Limited to a $4,000 maximum.

1985 -- 33% of gross tax on first 320 acres; 15% on next 320 acres; and 10% on the remainder. Limited to a $4,000 maximum.

Agricultural Non-Homesteads:

1972 -- 8.33 mills times assessed value

1976 -- 10 mills

1982 -- 10 mills on first 320 acres; 8 mills on the remainder

1984 -- 13% of gross tax on first 320 acres; 10% on the remainder. Limited to a $4,000 maximum.

1985 -- 15% of gross tax on first 320 acres; 10% on the remainder. Limited to a $4,000 maximum.

Overall, the cost of this credit to the state government has grown substantially in recent years. For taxes payable in 1983, it was $96.9 million, with $91.3 million (94%) paid to farm proprietors. Of the latter amount, $72.2 million (79%) went to homestead farm properties and $19.1 million (21%) went to the non-homestead farm properties. In total, the cost of the agricultural credit is about six times its cost in 1972 (unadjusted for inflation). As recently as 1979, its cost was only $41.6 million. Although its cost has increased at a somewhat greater rate than that of the homestead credit, it is still a more modest program (i.e, 19 percent of the total cost of the homestead credit program in 1983).[37]

(2) Credits: Homestead

The homestead credit for farm homesteads is the same as that for residential homesteads, i.e, 54 percent of the tax bill, with a maximum of $650. (The relevant tax bill is that derived after subtracting the state school agricultural credit and any other credits -- with the exception of the taconite homestead credit -- that the farm property may be eligible for.) The credit applies to the farm residence and the entire farm acreage. Since 1980, the acreage need not be contiguous, although it must be located within two townships. In addition, a farm owner who lives on his/her property and rents the land to others for farming purposes is also eligible to receive the homestead credit.

Many states have homestead credits, but they are usually restricted to the home and perhaps one acre of land; it is very unusual for the entire acreage of farms to be eligible for the homestead

TABLE 12

EFFECT OF CLASSIFICATION AND STATE SCHOOL
AGRICULTURAL CREDIT ON HOMESTEAD & NON-HOMESTEAD FARMS

Assume: Minnesota "Average Farm" (based on 1982 Census) 294 Acres: $340,000 Market Value.

	Clas 3b Farm Homestead	Clas 3 Farm Nonhomestead
14% of $62,000	$ 8,680	NA
19% of remainder	52,820	$64,600
Assessed Value	$61,500	$64,600
Gross Tax @ 100 mills	$ 6,150	$ 6,460
AG School Credit (payable 1985)	-$2,030 (33% of tax on 1st 320 acres)	-$ 969 (15% of tax on 1st 320 acres)
Net Tax Before Homestead or Other Credits	$ 4,120	$ 5,491
Homestead Credit (54% of net tax; $650 maximum)	-$ 650	NA
NET TAX DUE (before circuit breaker)	$ 3,470	$ 5,491

Source: MN Food Association, Technical Report #2, September 1984.

credit. Again, Table 12 illustrates how this credit reinforces the more favorable tax treatment that is given to homestead, rather than non-homestead farms.

Farm homestead credits cost the state $59.2 million in 1983, 11.8 percent of the total cost of homestead credits. Their cost nearly doubled between 1979 and 1983, primarily due to legislative changes. The cost of nonfarm homestead credits rose slightly faster than the cost of farm homestead credits during that period.

A somewhat larger proportion of farm homesteads receive the $650 maximum credit than is true for non-agricultural homesteads. For taxes payable in 1983, 57,579 farm homesteads were at the maximum, representing 47.6 percent of total farm homesteads. Only 42 percent of nonfarm homesteads were at the maximum that year. The average farm and nonfarm homestead credits were virtually equal, both in the $488 to $490 range. If it were not for the state school agricultural credit, farms would derive relatively more benefit from the homestead credit than does nonfarm property; because the agricultural credit is subtracted first from the gross tax bill, the homestead credit affords relatively even benefits to both categories of homesteads.

(3) Refunds: Circuit Breaker

The benefits of the circuit breaker depend on household income as well as the property tax bill. As income increases, circuit breaker benefits are reduced, with no benefits for those with annual incomes exceeding $36,000. In addition, only the

first 320 acres of a farm are eligible for purposes of calculating the circuit breaker refund. In 1984, farms received approximately $11.7 million in property tax relief from the circuit breaker.

Minnesota's circuit breaker differs from those employed in most other states. In terms of per capita benefits and the proportion of the population receiving such benefits, it is among the three largest circuit breaker programs in the nation. Only Michigan and Oregon have programs on the same order of magnitude. Additionally, most other circuit breaker programs are restricted to residential property (including both homeowners and renters). Michigan and Wisconsin are among the few states where farms receive a substantial benefit from a general circuit breaker.

(4) Refund: Targeted Aid

Effective 1982, the targeted refund program was enacted to provide temporary relief to owners of homestead property (farm and nonfarm) who experienced unusually large tax increases in a single year. Although intended as a one-year, one-time only program of tax relief, it has since been extended and structurally modified. For taxes payable in 1984, the credit provides relief when: (a) household income is under $50,000; and (b) the net tax payable (i.e., that amount net of all credits and the circuit breaker) is more than 20 percent that payable in 1983. In such cases, the state refunds the amount of tax in excess of 120 percent of the 1983 tax bill. For taxes payable in 1985, the state will pay one-half of the tax increase above 12.5 percent, up to a maximum of $400 relief. For 1985, there

is no income restriction. In 1984, farms are expected to receive $6 million of the total $7 million in benefits from this credit.

In combination, Minnesota's system of tax credit and refund programs have a major impact on farm tax liability, as indicated by these estimates for taxes payable in 1984:

Gross Tax Liability	**$467.1 Million**
State School Agriculture Credit	-91.3 Million
Homestead Credit	-61.4 Million
Circuit Breaker	-11.7 Million
Targeted Refund	-6.0 Million
Other Credits	-1.8 Million
Net Tax Liability	**$294.9 Million**

As shown above, the credits reduce total farm property tax liability by 37 percent.

C. HOW SHOULD AGRICULTURAL LAND BE VALUED?

The method of valuing farms for property tax purposes has been a recurrent issue in Minnesota. At present, farmland is valued at a percentage of market value as indicated by comparable sales. As an improvement to this conventional method of valuation, the Minnesota Association of Assessing Officers (MAAO) proposed in 1980 that sales price data be augmented with rental and production data in establishing farmland values.[38] Some agricultural interests favor another alternative, i.e, valuing the land at its productive value for farming (use-value assessment).

In 1984, the Minnesota Legislature approved a finding that "the method of valuing farm property on the basis of

sales of comparable properties overstates the value of farm property", and therefore, market values should be adjusted by some percentage to reflect farm production value.[39] It directed the Department of Revenue to consider alternative methods of determining production value and to recommend by January 1985 a percentage of market value to be used in setting 1985 assessments.*

In reality, the question of how farmland should be valued is actually one of whether farm assessments should be lowered. Lowering the taxable value of land is controversial since it tends to redistribute the total local property tax burden within taxing jurisdictions, i.e., shifting a portion of the farm tax burden to nonfarm property. Therefore, in evaluating this issue, several interrelated questions should be considered:

- What is the comparable sales (market) approach to value, and what are the problems arising from its use? Do these problems justify a departure from this approach to value?

- What is the income capitalization approach to value (use-value assessments), and how should it be implemented? What are the likely effects on farm and nonfarm properties? Who benefits? Who pays?

The next section addresses those important questions.

1. Comparable Sales Approach to Value

Valuation Method. The comparable sales or market approach is the most commonly used method of property valuation. It involves a comparison of the property being appraised with the sales prices of comparable properties that have

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*Note that the Legislature's directive requires the use of classification to adjust values rather than going to a system of use-value assessments. As of October 1984, the Department had not submitted its response to the Legislature. If forthcoming prior to December 1984, such information will be forwarded to the Tax Study Commission.

recently been sold. Such sales must be at "arms length", i.e., an exchange between a willing buyer and willing seller who are unrelated. Because no two properties are alike, comparable sales prices must be adjusted (up or down) to reflect their differences (e.g., the date of sale, terms of financing, location, land use, acreage, number of tillage acres, the investment in buildings and improvements, etc.). After adjusting the comparables, the final value figure of the subject property should reflect what the property would bring in the market place if sold.

Criticisms. Disatisfaction with this method comes from several sources. Probably the most frequent criticism is the lack of enough sales to establish reliable sales value estimates. In its 1980 report, th MAAO Agricultural Committee emphasized that "assessors are required to utilize ... a sliver of transactions in a 'thin' market" in determining values. It also noted that when there are relatively few "free market" transactions (i.e., when transactions at less or more than full value are common), it is possible for one unusual transaction to have a dramatic impact on the apparent level of market values.[40]

Another drawback to the use of sales values is the lack of standardization in the land market. For example, a large proportion of farm sales are seller-financed on a contract-for-deed basis.[41] Because such sales are often structured with lower interest rates and higher sales prices, they can result in an overstatement of value. Likewise, the number of "distress sales" can also reduce the accuracy of the comparable sales approach.[42] If such sales are a large proportion of total sales, they can result in market value determinations that are higher(lower) than sales prices might indicate.

Under certain conditions, it is possible for comparable sales to introduce a systematic bias into market valuations.

For example, a recent survey by the University of Minnesota indicated that expansion buyers (farmers who are expanding their existing farm operations) accounted for 78 percent of total farm transactions in 1983. Because expansion buyers are often willing to pay a higher price for land than sole-tract buyers,[43] their purchases can introduce an upward bias into sales-determined values.

In addition to these market problems, there are several other popular criticisms of the comparable sales approach to valuation. First is the belief that the appraisal process is subjective and thereby can result in the same type of land being valued differently between and sometimes within counties. Second is the lag in assessments that stems from the unavoidable logistics of adjusting assessed values after market values have changed. In the 1970s, when land values were rising sharply, this adjustment lag operated to the advantage of farmers. Now, with land values decreasing, it operates to their disadvantage. Perhaps most frequently mentioned, however, is the argument that market value taxation of agricultural land is inappropriate since it gives recognition to development potential and speculative value as well as to the expected income from agricultural use. By recognizing these non-farm related anticipated increases in value, the property tax system assigns values to farmland that are generally higher than if valuations were based on income capitalization. This criticism is usually raised during periods of rising land values (such as the late 1970s when inflationary pressures were great). Even in non-inflationary periods, however, the value of land relative to current income can seem high due to higher expected values of future farm income or of realizing capital gains. If land values and therefore property tax liabilities rise to "unsupportable" levels, the tax system may excessively burden farming operations or force farmland owners to develop their land or sell it prematurely.

Improving the Valuation Process. While the use of market value has its drawbacks, it does not necessarily imply that it should be abandoned as the standard for valuation. Its greatest handicap - the paucity of comparable sales and the subsequent inadequacy of sales data - can be substantially overcome by expanding the market area and market data used to value subject properties. For example, in its 1980 report, the MAAO Agricultural Committee found that "sales alone are an inadequate source of data from which to glean a consistent concept of value" and therefore recommended that "...sales data, rental, and production data be used in concert with appraisals of benchmark farms...in establishing farmland values". Because the use of contract-for-deeds and other types of financial arrangements can affect sales prices and therefore value, the MAAO also recommended that "...sales be carefully scrutinized for their terms".[44] Another improvement to the sales data problem would be to broaden the geographic scope (multi-county) over which comparable sales are selected, again using market data to take into account any differences in the character of the land and improvements.

By bringing more refined market data to bear on the valuation of agricultural property, a significant degree of subjectivity (real or perceived) can be removed, and any systematic bias in the comparable sales approach can be eliminated. Moreover, it allows an assessor to better substantiate (and a landowner to better evaluate) their analysis of the market.

Cash Flow. No matter how improved the valuation process, though, it still does not relieve the cash flow problem that arises from disparities in income and real property wealth. When increases in farm income are not commensurate with rising farmland values, the resulting cash flow pinch is commonly viewed as a tax problem that requires the provi-

sion of permanent tax relief. However, this situation can also be viewed as a credit market problem, i.e. landowners are unwilling or unable to convert part of their capital gains into cash to meet current tax liabilities. When viewed in this light, it suggests that the solution is not broad-based permanent tax relief but some type of lending instrument. Specifically, assistance could be provided to farmers in tight cash positions by allowing them to defer (with interest) payment of part or all of their current property tax liability. In effect, by providing a tax deferral and placing an interest bearing lien on the property, government (state or local) would act as a lender of last resort. As long as the government unit itself is able to borrow whatever is needed to cover the resulting liens, a case can be made for allowing farm taxpayers fairly generous access to a tax deferral option.

2. Income Capitalization Approach to Value

The second set of questions at the beginning of this subsection dealt with the commonly used alternative to comparable sales, namely the income capitalization approach to valuation. As previously described, this method uses soil quality, production, price, and expense data to arrive at net farm income, which is then capitalized to yield the current use-value of farmland. Advocates usually list the following advantages of this method:

- Since it is based on income and not wealth, it strikes at the heart of the farmer's cash flow problem -- large increases in land values and taxes that outpace income;
- It provides "fairer" tax treatment since it links property tax liability to current (agricultural) use income;
- By relieving high (with respect to farm income) tax burdens, it provides serious farmers with the opportunity to maintain their land in agricultural use;
- It protects farmers from future increases in assessments due to rising land values; and,

- It contributes to the overall retention of agricultural land.

In evaluating the merits of the above points, the following questions need to be explored:

#1. How should the current use value of agricultural land be determined?

In theory, the capitalization of net farm income yields a land value that approximates observed market prices, barring nonfarm influences on prices. However, as actually implemented, it usually produces a value substantially below market prices. This result is generally due to the inconsistent treatment of future net farm income and inflation in the valuation formula.

In most states' capitalization formulas, net farm income is an annual figure that is based upon moving averages of past production, price, and expense data. It therefore does not recognize prospective farm income that is part of the total return from farmland ownership (specifically, the present value of anticipated future farm income). Conversely, the capitalization rate is often based upon market mortgage interest rates which reflect the expected future rate of inflation. This inconsistent treatment of future value tends to produce use values that are far below market value, even in areas where the only forseeable use of the land is for agricultural purposes.[45]

#2. What are the difficulties in designing and implementing a use-value assessment problem?

There are several difficulties inherent in the use-value method, as summarized by the following quotations:

- It "politicizes" farm account and record-keeping systems. Determining prices received for farmland

that is sold is not free from error, but it is a reasonably objective process. Determining net farm income involves many more subjective decisions (treatment of depreciation, treatment of inventories, cash vs. accrual basis of accounting, separation of farm and household expenditures, etc.). An income-capitalization approach greatly increases the opportunity to question judgments exercised in determining net farm income, and creates incentives to distort its estimation.[46]

- Production value based on a capitalization of estimated net income would need to be varied to account for the widely different levels and variability in income in the different type of farming areas. It works best when income flows are relatively stable (e.g., dairying) and where climactic risks are relatively low (e.g., south-central corn-soybean land). An income capitalization approach would yield capricious results in the Red River Valley (potatoes, sunflowers, wheat) and in the high-risk west central Minnesota counties.[47]

- If the estimates of net income are computed for farms over a rather large area, the averaging effect will result in an understatement of land values for the better lands. This is undoubtedly why much of the pressure for a shift to an income-capitalization approach has come from farmers on the better lands, especially in South Central Minnesota. An income capitalization approach is likely to become a disguised subsidy to land owners on above average lands.[48]

- Minnesota has had a long tradition of having the value of its farmland estimated by local officials. But the determination of the value of farmland according to the (income capitalization) method requires different skills and different information than that possessed by assessors in Minnesota. Principally, what is needed to make an estimate of land's value in each state is detailed information on local soil quality, on farm income and expenses, and on economic trends in the market for agricultural products. In fact, this kind of information is best gathered and studied by large agencies of state government or at universities. And these are the agencies which are responsible for measuring the value of farmland. The role of the assessor is reduced to apportioning the values of farmland assigned to each county by

the revenue department or the agriculture department of a university through the method adopted by legislators.[49]

#3. What are the likely effects of a use-value assessment program? Who benefits?

The major impact of a use-value assessment program is that it redistributes property tax burdens among property owners within a taxing jurisdiction (service area).* Because the aggregate value of agricultural lands is lowered, the resulting loss in tax revenue must be made up by increasing the tax rate (assuming that tax revenues are to remain constant). The higher tax rate is applied to all properties within the jurisdiction. Consequently, the property tax liability of all nonfarm property increases, and the decreased assessment on farm property is offset to some degree by the higher tax rate.

In general, the extent to which farm property tax burdens are shifted to other property types depends on: (a) the size of the reduction in farmland values; and (b) the proportion of the total tax base represented by farmland. For example, in areas with strong demand for urban development, the difference between farmland market and use values is likely to be large and the corresponding difference in assessments is likely to be significant. If such land comprises a relatively small portion of the total tax base, then the tax savings are likely to be proportional to the reduction in valuation (i.e., the farm tax burden is largely shifted to other property types). In jurisdictions where undeveloped rural land is predominant, there may be little difference between market and use value (especially if already taxed at a low percentage of market value). If the agricultural tax base comprises the bulk of the total tax base, then

*The impact of use-value assessment on Minnesota's state school agricultural credit is not addressed.

the increased tax rate necessitated by the somewhat lower tax base may result in little if any reduction in tax bills; in fact, it may even raise them.

Other things being equal, use-value assessment tends to confer the greatest benefits to areas where land values are appreciating rapidly and where only a moderate amount of farmland is left within the taxing jurisdiction. This may or may not include the areas where farmers are most burdened by the property tax. This illustrates why use-value assessments have been called a "blunt policy instrument", i.e., it provides tax relief to all parcels of agricultural property regardless of an individual owner's income/wealth situation.[50]

#4. What are the costs of relief? Who pays?

If use-value taxation of agriculture is viewed as a "tax expenditure" (i.e., the difference between the revenue yield when agricultural property is valued at market value and at use-value), it is appropriate to ask what level of government should bear the cost of financing it. The choice between state and local financing is important because it affects the net benefits received by agricultural landowners.

With local government financing, the local property tax rate must be increased to offset the decrease in the valuation of agricultural land. The higher tax rate, in turn, increases the taxes that farmers must pay on their now lowered land values, thus, reducing the overall benefit of the program. In contrast, if use-value assessment is implemented with full state financing, local property tax rates need not be higher since state government would reimburse local taxing jurisdictions for revenue lost due to lowered valuations. While this might necessitate additional state sales or income taxes, it is likely that farmers would

bear a smaller portion of such additional taxes than of additional local property taxes if locally financed.

In a normative sense, the appropriate government level for financing use-value assessment is dependent upon program goals. If the major objective of a state's use-value legislation is to redistribute income toward farmers, then the cost of such redistribution should be borne by taxpayers statewide. Similarly, if relieving farmers' tax burden is a state goal, then use-value assessment yields benefits to a state as a whole and should be financed by all state taxpayers. Conversely, if it is deemed desirable that financing areas coincide closely with spending or benefit areas, local financing would be more appropriate. This assumes, however, that the beneficiaries of use-value assessment are purely local, which may not be true if the program goal is farmland preservation. Irrespective of the theoretical constructs of these arguments, most states have adopted locally-financed use-value assessment programs.

#5. Is use-value assessment successful in achieving its goals of "fairer" tax treatment of farmers and/or agricultural land preservation?

Despite the long-standing existence of many use-value assessment programs in other states, there is scant empirical evidence as to whether this valuation method achieves its goals, i.e., does it produce a fairer tax distribution than taxation at market value? and, is it an effective deterrant to development? In order to quantitatively answer these questions, it would be necessary to analyze how a use-value program redistributes tax burdens and benefits among property types, and how much farmland would have been converted to nonfarm uses absence the program.

What evidence exists does suggest that use-value assessment is generally successful in reducing the property taxes

of farmers. However, it does so by providing tax relief to all agricultural landowners regardless of their ability to pay. Moreover, unless carefully structured, it provides relief to both "bona fide" farmers (those who hold farmland primarily to earn current income from it) and investors (those who hold farmland primarily for value appreciation). In order to limit the benefits going to "speculators", many states have added (or strengthened) recapture provisions to their laws, such that those individuals who receive preferential tax treatment and then convert their land to nonfarm uses are required to pay all or part of the taxes that otherwise would have been payable (and at a market rate of interest). While this does provide an incentive to maintain land in agricultural use, its effectiveness is diminished if the recaptured tax liability is dwarfed by the realizable capital gains associated with sale and/or development. It also requires that both market and use-values be recorded for all properties receiving use-value assessments.

With respect to the second goal - agricultural land preservation - it is generally agreed that use-value assessment alone is an ineffective tool for influencing land use. While it may forestall development in the short-term, basic market factors and opportunities for capital gains through sale or development remain unaffected. Therefore, it is unlikely to have an appreciable influence on long-term land use patterns. Some states have somewhat increased its effectiveness by linking their preferential tax treatment to land use and zoning plans, or by making it part of an overall preservation program.

D. CONCLUSION

In summary, the case for switching from the comparable sales to the income capitalization method of valuation for farm property is weak for a number of reasons:

1. Use-value assessment is a blunt policy instrument for addressing the problem of farmers whose property wealth is disproportionately large in relation to income. It provides broad-based relief to all owners of agricultural land instead of targeting relief to the intended beneficiaries - presumably, those farmers whose property taxes exceed some proportion of their incomes. This suggests that an income-based mechanism, such as the circuit breaker, is particularly well-suited to providing property tax relief.

2. The income capitalization method introduces a new set of tax policy and administrative problems that are just as serious, if not more so, than those associated with the comparable sales approach to value. This method would additionally add a new layer of complexity to a tax system that is already regarded as overly complex.

3. The tax relief provided by a use-value assessment program has the apparent political advantage of minimizing the visibility of its costs (assuming such program is locally financed by increased tax rates).

4. If Minnesota maintains the market value standard of property taxation, there are several steps it could take to better target the tax relief provided through its classification and credit system. For instance, the definition of a farm could be tightened and related to income; and the various credit/refunds could be collapsed into one income-based tax relief mechanism. In short, increased targeting would force the state to explicitly define what types of farms/farmers in what economic circumstances are eligible for property tax relief and then enable it to deliver greater relief to such beneficiaries.

5. In addition, Minnesota could adopt a tax deferral mechanism to help overcome the related problems of adverse cash flows and imperfect capital markets. Tax deferral is helpful not only to farmers with large income/wealth disparities, but also to those who are periodically caught in tight cash positions due to the substantial year-to-year fluctuations in farm income.

In conclusion, it is possible to provide any amount of property tax relief to farms without embroiling the state in the policy-laden mathematics of determining agricultural use value and the complexities of its administration. Through its present system of classification and credits, Minnesota has already done a great deal to provide property tax relief for owners of farmland. The question remains, however, has Minnesota done enough? Are farm property taxes too high? And, perhaps of greater importance is the question of whether the "farm problem" is primarily one that can be addressed by property tax policy. As of July 1984, the Minnesota Department of Finance has estimated that farm proprietors income will decline 54 percent in 1984, increase 46 percent in 1985, and then fall by 80 percent in 1986 and 32 percent in 1987. While such projections are admittedly subject to error, the downward trend is clear. Such a trend is indicative of the complex problems created for U.S. agriculture by high interest rates, unfavorable exchange rates, large thrid-world debts, the depressed economic condition of many developing nations and perhaps, the rising tide of protectionism around the world.

Given this context, it is highly likely that the income situations of many Minnesota farmers will deteriorate in the years ahead, and their ability to remain in farming may become untenable. While property tax relief does reduce what amounts to a significant operating expense for many farmers, it is usually not enough to assure the economic

viability of many family farms. Thus, this discussion calls into question how the state should meet its long-standing commitment to maintaining the family farm. Such policy is perhaps best stated in the preamble to Minnesota's 1973 Corporate Farm Act which states, "the legislature finds that it is the interests of the state to encourage and protect the family farm as a basic economic unit, to insure it as the most socially desirable mode of agricultural production..." A serious and extensive state commitment to this goal will require more than just the local redistribution of property tax burdens and state expenditures for property tax relief. Specifically, it may require direct state assistance to economically vulnerable farmers, or conversely, a recasting of the state's overall policy toward agriculture.

ENDNOTES

1 President's Council of Economic Advisors, Annual Report, February 1984, page 112.

2 Minnesota Department of Revenue, Property Taxes Levied in Minnesota: 1982 Assessments, Taxes Payable in 1983, page 196; U.S. Census Bureau, 1982 Census of Agriculture, Volume 1, Geographic Area Series, Part 23, Minnesota State and County Data, Table 11; MInnesota Agricultural Statistics Service, Fact Sheet on Minnesota Agriculture: 1984, page 1.

3 Much of this section is based on data from the Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce.

4 Report of the Governor's Advisory Commission on Agriprocessing, February 14, 1983, page 1.

5 Earnings consist of wage and salary disbursements, other labor income, and proprietorial income. Farm earnings includes that of farm proprietors and farm wage and salary workers.

6 State personal income includes all income received by persons currently residing or working within Minnesota. It equals the sum of earnings, investment income, and government transfer payments minus personal contributions for social security.

7 See Endnote 1, page 114.

8 Wilbur R. Maki, Agriculture: Essential to Minnesota's Economy and Its Regions and Communities -- An Update, Saint Paul: University of Minnesota, Institute of Agriculture, Forestry and Home Economics, December 1982.

9 Minnesota Agricultural Statistics Service, Fact Sheet, page 4. The Service notes, "These exports are derived from each state's contribution to U.S. production and/or sales. They are not actual values but reflect each state's important stake in the national export market". National export data from the President's Council of Economic Advisors, Annual Report, February 1984, page 121.

10 Data on the number of farms and acreage are from Minnesota Agricultural Statistics Serive, Fact Sheet on Minnesota Agriculture: 1984.

11 See Endnote 1, page 114.

12 Minnesota State Planning Agency, "Minnesota Has Nation's Second Largest Farm Population Despite 21 Percent Decline", Population Notes, August 1984.

13 Minnesota Agricultural Statistics Service, Minnesota Agricultural Statistics 1983, page 8.

14 See Endnote 12.

15 Downs, Donna, Smith, Matthew G., Raup, Philip M., "The Minnesota Rural Real Estate Market in 1983", Minnesota Agriculturist Economist, No. 645, January 1984.

16 Melichan, Emanuel, "A Financial Perspective on Agriculture," Federal Reserve Bulletin, January 1984, page 1.

17 See Endnote 15.

18 Ibid. This study considered estimated market values and reported sales prices through July 1983. Some commentators suggest that these figures understate the extent of the decrease in land value because 51% of the reported sales in the survey were financed by contracts for deeds. Deed sales are seller-financed under terms that frequently feature a land price that is above the commercial value and an interest rate that is below that available from farm lending institutions. See Lee Egerstrom, "Land Values Squeeze Farmers," Pioneer Press and Dispatch, February 26, 1984.

19 U.S. Department of Agriculture, Economic Indicators of the Farm Sector: State Income and Balance Sheet Statistics, 1981 and 1982 editions.

20 See Endnote 1, pages 123-126.

21 See Endnote 16, page 7.

22 The Minnesota Farmer Financial Survey, August 1984, was conducted for the Minnesota Department of Agriculture by Mid-Continent Research, Minneapolis, Minnesota. Survey results are based on data from 601 respondents (318 respondents with respect to the question on farm assets and liabilities) to a questionnaire mailed to 1,497 randomly selected state farmers.

23 See Endnote 1, page 143.

24 According to the Minnesota Department of Revenue, farmers are estimated to have received $11.7 million from the circuit breaker and $6 million from the targeted refund in 1984. These amounts have been subtracted from the $311.9 million in net taxes shown in Table 6.

25 This projection is from the House Research Department's Property Tax Model.

26 Bowman, John, "Direct Property Tax Relief: An Analysis," The Property Tax in Minnesota, September 1984, Table 11.

27 Ibid, Table 9.

28 Minnesota Taxpayers Association, Newsletter, January 1984, pages 4-5.

29 Note that several simplifying assumptions are made in Table 7, the most important being that the tax rate has been held constant at 70 mills and that the circuit breaker and targeted refunds are not included. For example, in a county where the average land value is $2,000 per acre, the tax rate would be considerably less than a county with an equal amount of farm acreage valued at $500 per acre. If this factor were taken into account, it would narrow the gap between the effective tax rates on homestead farms of varying value. Additionally, if the circuit breaker and targeted refunds were taken into account, the difference between homestead and non-homestead farm effective tax rates would be even greater.

30 Farm Real Estate Taxes in 1979, U.S. Department of Agriculture, pages 20-21.

31 Other counties in the Twin Cities area lost smaller amounts of farm acreage; these figures are from the U.S. Census of Agriculture.

32 Giertz, Fred J., and Chicoine, David L., "Tax Valuation of Farm Land: Non-Neutrality with Respect to Inflation", National Tax Journal, Volume 37, No. 2, June 1984, page 254.

33 Gloudemans, Robert J., Use-Value Farmland Assessments: Theory, Practice and Impact, Chicago: International Association of Assessing Officers, 1974, pages 29-30.

34 Coughlin, Robert E., and Keene, John C., ed., National Agricultural Lands Study: The Protection of Farmland: A Reference Guidebook for State and Local Governments, Amherst, MA: Regional Science Research Institute, undated, pages 56-59.

35 Information on Michigan was provided by Bob Cline and Rick Willets of the Department of Management and Budget, and information on Wisconsin was provided by Monica Jaehnig of the Legislative Fiscal Bureau.

36 Timberland and seasonal recreational residential property receive a very small proportion of the agricultural aid credit. More than 80 percent of the credit's benefits will go to farms in 1984.

37 Minnesota Department of Revenue, Property Taxes Levied in Minnesota: 1982 Assessments, Taxes Payable in 1983, page 38.

38 Minnesota Association of Assessing Officers (MAAO), Report of MAAO Agricultural Committee, July 1980.

39 Minnesota House of Representatives, Research Department, H.F. 2016 Conference Committee Report on Omnibus Tax Bill, Saint Paul: House Research Department, processed April 19, 1984.

40 See Endnote 38.

41 Tiffany, Douglas G., "Evaluating Contract for Deed Transfers,"

Minnesota Department of Revenue, March 1982. Downs, Smith, and Raup report that in 1983, 51 percent of sales used contracts for deed, 26 percent used mortgage financing, and 23 percent of transfers were for cash. The proportion of contract sales was higher in the several previous years.

42 Carlson, Keith E., and Frey, Dana W., "The Valuation of Farm Real Estate for Property Tax Purposes," March 1984, page 12.

43 According to the MAAO, expansion buyers are often willing to pay a higher price for farmland than sole-tract buyers or agricultural investors because farmers tend "to value additions to their resource base only with respect to their average total cost of land after acquisition, instead of considering the marginal cost for each additional acre added" (see Endnote 38 for source). A recent legislative report offers a different explanation. It states that many farmers have underutilized capital and labor resources that allow them to take advantage of economies of scale as they expand. As a result, they are able to obtain a greater net income per acre than the start-up farmer (see Endnote 42 for source).

44 See Endnote 38.

45 "A common element of most state farmland property tax programs ... is that taxable values are well below market value, and, in addition, below actual use value based upon the productivity of land in agriculture. In practice, the statutory procedures most commonly used to determine legally specified use values actually value such land at only a fraction of its economic use value in farming. Such practices bestow implicit subsidies on the owners of farmland taxed on these values." See Endnote 32, page 253.

46 Letter of September 2, 1984 to Executive Director, Minnesota Tax Study Commission, from Dr. Philip Raup, agricultural economist, University of Minnesota.

47 Ibid.

48 Ibid.

49 Statement from Minnesota Department of Revenue, dated November 4, 1983.

50 Ladd, Helen F., "Tax Policy Considerations Underlying Preferential Tax Treatment of Open Space and Agricultural Land", Discussion Paper D78-20, Department of City and Regional Planning, Harvard University, September 1978.