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A WORKBOOK TO ASSESS RETIREMENT INVESTMENT ALTERNATIVES FOR FARMERS

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A WORKBOOK TO ASSESS RETIREMENT INVESTMENT

ALTERNATIVES FOR FARMERS

Introduction

This is a workbook that a farmer can use to assess the potential outcomes of alternative retirement investment options. The first part of the workbook briefly explains the types of retirement investment options most farmers generally consider. The second part of the workbook illustrates how a farmer can measure the possible outcomes of the investment plans using his own expected tax and investment return rates. The workbook contains tables of rates and outcomes which are used in the assessment. The workbook also contains programs for TI-58 or TI-59 calculators which may be used rather than the printed tables to assess retirement investment options.

Retirement Investments

Although many farmers do not recognize it as such, the fact that they are building and investing in a farm business means that they are also building an investment that can be used for retirement income. Many retired farm couples are currently enjoying retirement from the sale or rental income of their farm. Generally, farmers discover that during their early years of farming all farm earnings except for living needs must be reinvested back into the farm in order to build a business which can support the farm family. After a number of years farmers often discover that they have surplus funds to invest. They then need to decide whether to continue to invest in the farm business and use the total farm investment along with Social Security for retirement income, or to invest in alternative investments and use those investments, as well as the previous farm investment and Social Security, for retirement income.

Complicating the situation is the fact that there are usually children who wish to become involved in the farm business. This involvement may call for the use of business arrangements such as partnerships, corporations, and rental agreements, or the selling, willing, or gifting of the farm to the children. If a farmer wishes to transfer the largest farm business he possibly can to his children, he may want to continue to invest in the business. This strategy, however, may limit his ability to transfer the farm business to his children because the farm and Social Security are his only source of retirement income. If the farmer invests in some alternative retirement investments, the farm he transfers may not be as large, but because he has alternative sources of retirement income, he has more flexibility in his business transfer plans.

Influencing the retirement investment decision are the return rates of various retirement investments. Income taxes are also important because certain investment returns are not taxed as they are earned, or are given tax preference treatment. Tax-deferred retirement plans, for example, are not taxed until they are liquidated during retirement. Capital gain from some investments is only partially included in taxable income when the investment is sold.

Tax-Deferred Retirement Plans for Farmers

Farmers have two tax-deferred plans available to them. They are the self-employed retirement plan, commonly referred to as the Keogh or HR-10 plan, and the individual retirement account plan or IRA. As the title indicates, a self-employed retirement plan applies to self-employed individuals such as farmers. In contrast, an individual retirement account plan is available to any individual who is not an active participant in any other qualified retirement plan (Social Security is not considered a qualified plan). A farmer would generally be eligible for an individual retirement plan or a self-employed retirement plan.

Both tax-deferred retirement plans permit a farmer to place a portion of his current earnings into a retirement fund for retirement. The amount deposited is deducted from gross income the year the deposit is made and is not subject to income taxes that year. However, when the retirement fund is liquidated the entire amount of the fund would be subject to taxation, both the original principal and any accumulated earnings from the principal. The purpose of the plan is to provide an incentive for individuals to set up specific retirement plans. To induce the establishment of a plan, tax is deferred on the contributions and fund earnings to a later date and often to a period (retirement) when the fund would be taxed at a lower rate. There are a number of restrictions concerning the yearly contributions and use of the plans.

The Self-Employed Retirement Plan

A self-employed retirement or Keogh plan is for self-employed individuals and their full-time employees. Some of the important features of a self-employed retirement plan for farmers are as follows. The maximum annual contribution is the lesser of $7,500 or 15 percent of earned income. However, an annual contribution of at least $750 can always be made. No minimum annual contribution is required. Taxpayers are allowed to make contributions for a given tax year until the due date (and extensions) of the tax return. The plan, however, must be in existence before the end of the tax year. A partnership may also set up a Keogh plan. Individual partners deduct their individual contribution on their tax returns.

A full-time farm employee with three or more years of service must be included and covered by the plan. Any employee with 1,000 hours or more a year is considered full-time. All employees must be covered at the same percentage rate as the employer-owner. The amount set aside for employees is theirs or their beneficiaries (fully vested) even if they terminate employment, die, or the plan is terminated.

Individual Retirement Plan

A farmer may establish an IRA for himself or an IRA for himself and his nonworking spouse without having to cover employees. This is often the reason an IRA is selected rather than the Keogh Plan. The maximum annual contribution for an individual is the lesser of $1,500 or 15 percent of earned income. This is a lower limitation than with a Keogh plan. Contributions for a tax year can be made until the due date (and extensions) of the tax return. The IRA may be established on the date that the contribution is made.

If an IRA covers a nonworking spouse, the contributions are limited to the lesser of: (1) fifteen percent of the working spouse's earned income, (2) $1,750 ($875 for each spouse), or (3) twice the lowest amount contributed for either spouse. Contributions to a joint IRA are not allowed if the taxpayer's spouse has earned income during the year. In that case each taxpayer, if qualified, may have an IRA with annual contributions limited to the lesser of $1,500 or 15 percent of earnings.

Restrictions on Both Self-Employed and IRA Retirement Plans

Although differences do exist between self-employed and IRA retirement investment plans, in general, money placed in either plan can be invested in one of four basic ways: (1) individual account usually with a bank, savings and loan, or credit union as trustee, (2) individual retirement income policy or annuity with a life insurance company, (3) investment in U.S. retirement plan bonds, or (4) qualifying mutual funds.

There is a six percent annual penalty tax imposed on any excess annual contribution until the excess contribution is withdrawn or corrected in a later year. Retirement benefit payments can begin after age 59½ and must begin by age 70½. Retirement payment can be made as a lump sum payment or as an annuity. The full amount of the payment is included in taxable income the year the payment is received. At age 70½, payments, if distributed as an annuity, must not be distributed for a period longer than the life expectancy of either the participant or spouse. Any premature distribution before age 59½ is subject to a 10 percent penalty tax in addition to the normal income tax. However, this restriction does not apply in the event of death or disability. The funds in the plan may not be used to secure a loan without the 10 percent premature distribution tax applying. Lump sum payment at death is included in a taxable estate. Annuity payments to a decedent's beneficiaries are not included in a taxable estate. The beneficiaries pay income tax on the benefits as they are received.

The Advantages of Tax-Deferred Retirement Plans

The tax characteristics of a tax-deferred retirement plan can make it extremely attractive to some farmers. If a farmer expects to be in a lower tax bracket when he retires, a retirement plan will allow him to defer taxable

income from high to low tax years. Even if a lower tax bracket during the retirement years is not expected, just the ability to defer taxes may be beneficial. This will allow the money that would have been used to pay taxes to earn a return before taxes are paid. However, if funds can be invested in the farm business and earn a greater return than a retirement shelter, even after taxes are paid on those farm earnings, then a retirement plan may not be beneficial.

Although a retirement plan may be less profitable than investing in the farm business, it may allow diversification of an estate and the source of retirement income, and thus provide income stability. However, a retirement plan is not liquid since the funds cannot be used until age 59½ without penalty, unless a disability or death occurs.

A retirement plan can also provide a source of income to pay for estate settlement costs or for the support of dependents should a taxpayer die. Although a retirement shelter cannot provide the same degree of protection as life insurance when a farmer is young, it may be able to replace some life insurance as a farmer becomes older and at an age when term insurance rates become very large. An advantage of a retirement plan over a farm investment in an estate is that the value of the retirement plan is not included in the taxable estate if the plan is paid out as an annuity to a decedent's beneficiaries although they pay income tax on the annuity payments. The farm investment would be included in the taxable estate.

Farm Investments for Farmers

Farm investment may occur as general investment in the farm business such as additional equipment, livestock, and supplies. Although investment in land or buildings may be viewed as a specific investment, it is usually accompanied by investment in machinery, livestock, and supplies. The returns from farm investments include a yearly income return that is taxed each year. After income tax is subtracted from that return the remainder can be spent or reinvested into the farm business. Farm investment, especially investment in land, also has an appreciation component. This is the increase in value that occurs each year. This appreciation is not taxed until the property is sold. Currently only 40 percent of the appreciation that is capital gain is subject to income tax.

Some types of farm investments qualify for investment tax credit. Machinery, storage facilities, some farm improvements, purchased breeding livestock, and single purpose livestock buildings qualify. The federal tax credit is equal to 10 percent of the investment and is taken the year the investment is made. In New York there is an additional investment credit of four percent for a combined federal and state investment credit of 14 percent.

A hindrance to farm investment for retirement is the relative lumpiness of investment and disinvestment. Most major farm investments require substantial amounts of debt financing when the investments are made. Many farmers are reluctant to assume a larger amount of debt as they near retirement age.

Most have already paid off at least one mortgage. Further, it is often difficult to sell only part of the farm investment without jeopardizing the profitability of the remaining farm business unit. What must be done is to sell the complete farm or rent out the farm business to keep the unit intact. Obviously, renting the farm would not provide the same amount of annual income as selling the farm but renting would provide income for life. Another possibility is part rental and part sale to the same party, in many cases a child. A complete sale in periods of inflation must be done cautiously because it places retired individuals in a situation where their purchasing power may quickly erode.

Other Retirement Investments

Other investments for retirement are available. Investments such as savings accounts, certificates of deposit, and money market certificates can be purchased at local banks and financial institutions. They generate a yearly taxable return. Often the interest earned is automatically reinvested. None of these saving investments experience capital gains.

Investment in corporate stocks exhibits many of the same characteristics as investments in farm businesses. Most stocks pay dividends each year which are fully subject to income tax (except for a $100 annual exclusion per taxpayer). A few companies also have a reinvestment option where the dividends are used to purchase additional stock. Stocks may also increase in value (or decrease) and the increase may be taxed as capital gain (loss) when the stocks are sold.

Assessing Retirement Investments

Farm and family goals, personal preferences and knowledge, and investment risk and liquidity are important elements to consider when selecting an investment for retirement. Also important is the financial return from the investments. This section discusses that factor.

The financial outcome of retirement investments depends upon future return and income tax rates. These rates are not the same for every farmer. Unfortunately, even for an individual farmer, future rates are not known with certainty, but must be estimated. Although past return and tax rates are no guarantee of future return and tax rates, they can be used as a starting point in estimating future rates. It is important to evaluate outcomes under alternative return and tax rates which might occur. The array of possible outcomes can be used to decide what investment to select. If the potential results are highly variable because of uncertain rates, it might be wise to diversify and invest in a number of different retirement options.

To aid farmers in making this assessment a computer program was written to measure the actual outcomes of investment plans under a range of selected tax and return rates. The results are printed in Tables 1 and 2. The values from these tables can be used by a farmer to assess retirement investments.

Programmable calculator programs were also written for farmers who have access to TI-58 or TI-59 calculators. The TI programs allow a farmer to assess investment outcomes under any tax and return rate combination. The TI programs were also written so that investment tax credit and capital gain taxation on sales before retirement can be included in the analysis. The TI programs are listed and explained in Appendices B and C. The investment formulas used in the programs are listed in Appendix A. Federal and New York State income tax rates are listed in Appendix D.

Assessing Tax-Deferred Investments

In assessing a tax-deferred retirement investment, it is assumed that a farmer will invest an identical amount each year until retirement. Although this may not actually be a farmer's plan the assumption simplifies computation and eliminates the need to project yearly investment amounts. In Table 1 the yearly investment is $1,000. If more or less than $1,000 is invested annually, the final outcome can be multiplied by any multiple or fraction of $1,000. If the TI program is used any yearly amount can be entered. In computing Table 1 a 10 year investment plan was used. With the TI program any time span can be used.

The tax rate before retirement will not affect the outcome of a tax-deferred retirement plan since the yearly investment and the accumulated return it earns are not taxed until the proceeds are withdrawn after retirement. The tax rate after retirement is listed in column two of Table 1. Any value can be used in the TI program. This tax rate is the composite of the federal and state income tax rates. For taxpayers who use the federal standard deduction the composite tax rate is simply the sum of the federal and state income tax rates. For taxpayers who itemize deductions the composite tax rate is computed as: composite tax = state tax + (1-state tax) x federal tax. Except at high tax brackets those taxpayers who itemize deductions can closely approximate the composite rate by just adding the federal and state tax rates. The return rate to the retirement plan is listed in column three of Table 1. The investment increases in value by this rate each year and by the additional new annual investment. If the TI program is used any return rate can be entered.

The retirement value of the tax-deferred retirement plan, column four of Table 1 is the value of the investment after taxes at the end of the investment period. (It is the after tax value of a lump sum payment.) If the investment plan is paid out as an annuity, then additional earnings will accrue to the investment as it is liquidated. However, since so many different types of annuities can be established, only the after tax value of the lump sum is listed. This value can be used as a reference point value when comparing tax-deferred investments to other investments.

Assessing Farm Investments

As stated previously, farm investments often occur in lumps (i.e., a building is constructed, land is purchased). Although these investments typically entail debt financing, and this involves paying for the investments over time, the returns from these lumpy investments occur immediately after they are made. These characteristics of farm investments are drastically different than a tax-deferred retirement plan. Hence, a comparison may be difficult. However, one type of comparison can be made. A farmer is allowed to place a specified annual amount of money into a tax-deferred retirement plan based upon his yearly income. If this amount is not invested into a tax-deferred retirement plan, then it is placed elsewhere. One possible location is back into the farm business. If it is placed back into the farm business, it will become part of the money pool that will not only be used to purchase buildings and land, but also machinery, livestock, and supplies. This is the farm investment that can be evaluated and compared to tax-deferred retirement and other investments.

The assessment of a farm investment under various tax and return rates can be made by using the outcomes printed in Table 2. Alternatively, the TI program listed in Appendix C can also be used. The TI program allows analyzing tax and return rates not listed in Table 2. The TI program also permits the inclusion of investment tax credit and capital gain taxation before retirement into the analysis. Table 2 and the TI program in Appendix C can also be used to assess the outcomes of other investments such as savings accounts or mutual funds.

The first column of Table 2 is the composite federal and state income tax rate before retirement. A close approximation to this composite is the sum of the federal and state tax rates. To simplify the computation of the outcomes, this tax rate is held constant for all years before retirement. For most farmers the tax rate will vary so it is necessary to estimate an average. This tax rate is applied to any yearly taxable return and to the yearly new investment. In Table 2 the yearly new investment is $1,000 (before taxes), and the investment length is 10 years. The $1,000 can be adjusted by multiplying the final outcome by any multiple or fraction of $1,000. With the TI program any annual investment and investment length can be entered. The second column of Table 2 is the tax rate after retirement. This should be the same tax rate used to assess tax-deferred or any other investments.

Column three of Table 2 is the current return rate for the farm investment. This return is earned yearly and is taxed at the preretirement tax rate. This return rate can be computed from previous years by dividing net cash income by total farm assets. (Farmers who file tax returns on the accrual basis should use net accrual income.) To maintain consistency with the tax-deferred retirement plan, the after tax amount is reinvested. If the TI program is used the current return rate can be broken into two components, an ordinary income return rate and a capital gain return rate. Ordinary income is completely taxed. Capital gain income is current income from the sale of products that qualify for capital gain tax treatment. In farming operations this would include breeding livestock and machinery. Past tax returns can be used to determine what fraction of yearly income is ordinary income and what fraction is capital gain income.

The fourth column of Table 2 is the annual appreciation rate. The farm investment increases in value each year by this rate. This gain is not subject to tax until the investment is sold after retirement. It is taxed as capital gain at the retirement tax rate. To estimate the appreciation rate, past net worth statements can be used. However, care should be taken to subtract new investments from net worth statements when computing an appreciation rate.

With the TI program, the fraction of investment and reinvestment that qualifies for the 14 percent combined federal and state investment tax credit can also be entered. New investments from past net worth statements and past tax returns can be used to estimate this fraction.

The retirement value of the farm investment after taxes is listed under column five of Table 2. Like the tax-deferred retirement plan, this is the value of the farm investment after taxes at the end of the investment period.

The last column of Table 1 and 2 is the estate value of the farm investment and the tax-deferred retirement plan should the farmer die at the end of the tenth year. Estate or income taxes have not been computed on these amounts. The farm investment would be subject to estate tax. The retirement plan could be excluded if paid out as an annuity. However, with a stepped up tax basis through the taxable estate the farm investment could be sold by the heirs at its estate value without paying income tax. In contrast, the full amount of the retirement plan would be subject to income tax at the heirs' individual rates as they receive the income.

Examples

To illustrate how the data from the tables may be used to assess the outcome of various retirement investment alternatives, some examples follow.

Readers who have access to a TI-58 or TI-59 calculator may wish to use the programs in Appendices B and C instead of using Tables 1 and 2.

EXAMPLE 1.

Decision: To Invest in a Tax-Deferred Retirement Plan or Farm Investment

A farmer has been reinvesting all available farm earnings back into the farm business but is considering a tax-deferred retirement plan.

	Case 1	Case 2	Yours			
Tax rate before retirement	.30	.40				
Tax rate after retirement	.20	.50				
Return rate farm investment	.08	.12				
Rate of appreciation	.04	.08				
Return rate retirement plan	.09	.09				
Retirement value farm investment	$11828	$13311				
Retirement value retirement plan	$13248	$ 8280				
Conclusion	Select retirement plan	Select farm investment				

EXAMPLE 2.

Decision: To Invest in a Tax-Deferred Retirement Plan or Savings Plan

A farmer has been placing some money each year into various forms of savings but is considering a tax-deferred retirement plan.

	Case 1	Case 2	Yours			
Tax rate before retirement	.40	.40				
Tax rate after retirement	.40	.50				
Return rate savings plan	.08	.08				
Rate of appreciation	XX	XX	XX	XX	XX	XX
Return rate retirement plan	.08	.08				
Retirement value savings plan	$ 7835	$ 7835				
Retirement value retirement plan	$ 9387	$ 7823				
Conclusion	Select retirement plan	Select savings plan				

EXAMPLE 3.

Decision: To Invest in Farm Investment or Savings Plan

A farmer has been reinvesting all available farm earnings back into the farm business but would like to build up a cash reserve for financial protection.

	Case 1	Case 2	Yours			
Tax rate before retirement	.20	.30				
Tax rate after retirement	.20	.30				
Return rate farm investment	.04	.04				
Rate of appreciation	.04	.12				
Return rate savings plan	.12	.08				
Rate of appreciation	XX	XX	XX	XX	XX	XX
Retirement value farm investment	$11785	$15266				
Retirement value savings plan	$13709	$ 9562				
Conclusion	Select savings plan	Select farm investment				

EXAMPLE 4.

Decision: To Invest in a Tax-Deferred Retirement Plan or Stock Purchase Plan

A farmer who has been investing in the stock market is interested in placing some funds into a tax-deferred retirement plan.

	Case 1	Case 2	Yours			
Tax rate before retirement	.70	.70				
Tax rate after retirement	.70	.70				
Return rate stock investment	.08	.08				
Rate of appreciation	.04	.16				
Return rate retirement plan	.09	.12				
Retirement value stock investment	$4062	$7177				
Retirement value retirement plan	$4968	$5896				
Conclusion	Select retirement plan	Select stock purchase				

Conclusion

The profitability of investments for retirement depends not only upon their return rates and any appreciation, but also upon the income tax rates before and after retirement. A lower income tax rate after retirement than before retirement will mean that a tax-deferred retirement plan is relatively profitable. Investment plans that experience large amounts of capital gain or have high return rates are also relatively profitable. However, since so many variables are involved in making an investment decision, it is difficult to generalize concerning the advantages of retirement investment plans. This workbook presents some of the important facts about various retirement investment alternatives and provides a format for a farmer to financially assess the plans he is considering.

Table 1.

RETIREMENT AND ESTATE VALUE OF TAX-DEFERRED RETIREMENT PLAN AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT RETIREMT PLAN	RETIREMENT VALUE RETIRE-MENT PLAN	ESTATE VALUE RETIREMENT PLAN
ANY	0.20	0.060	11177.	13971.
ANY	0.20	0.065	11497.	14371.
ANY	0.20	0.070	11827.	14783.
ANY	0.20	0.075	12166.	15208.
ANY	0.20	0.080	12516.	15645.
ANY	0.20	0.085	12877.	16096.
ANY	0.20	0.090	13248.	16560.
ANY	0.20	0.095	13631.	17038.
ANY	0.20	0.100	14025.	17531.
ANY	0.20	0.105	14431.	18038.
ANY	0.20	0.110	14849.	18561.
ANY	0.20	0.115	15280.	19100.
ANY	0.20	0.120	15724.	19654.
ANY	0.20	0.125	16180.	20226.
ANY	0.20	0.130	16651.	20814.
ANY	0.20	0.135	17136.	21420.
ANY	0.20	0.140	17635.	22044.
ANY	0.30	0.060	9780.	13971.
ANY	0.30	0.065	10060.	14371.
ANY	0.30	0.070	10348.	14783.
ANY	0.30	0.075	10646.	15208.
ANY	0.30	0.080	10952.	15645.
ANY	0.30	0.085	11267.	16096.
ANY	0.30	0.090	11592.	16560.
ANY	0.30	0.095	11927.	17038.
ANY	0.30	0.100	12272.	17531.
ANY	0.30	0.105	12627.	18038.
ANY	0.30	0.110	12993.	18561.
ANY	0.30	0.115	13370.	19100.
ANY	0.30	0.120	13758.	19654.
ANY	0.30	0.125	14158.	20226.
ANY	0.30	0.130	14570.	20814.
ANY	0.30	0.135	14994.	21420.
ANY	0.30	0.140	15431.	22044.
ANY	0.40	0.060	8383.	13971.
ANY	0.40	0.065	8623.	14371.
ANY	0.40	0.070	8870.	14783.
ANY	0.40	0.075	9125.	15208.
ANY	0.40	0.080	9387.	15645.
ANY	0.40	0.085	9657.	16096.
ANY	0.40	0.090	9936.	16560.
ANY	0.40	0.095	10223.	17038.
ANY	0.40	0.100	10519.	17531.
ANY	0.40	0.105	10823.	18038.
ANY	0.40	0.110	11137.	18561.
ANY	0.40	0.115	11460.	19100.
ANY	0.40	0.120	11793.	19654.
ANY	0.40	0.125	12135.	20226.
ANY	0.40	0.130	12488.	20814.
ANY	0.40	0.135	12852.	21420.
ANY	0.40	0.140	13227.	22044.

Table 1 (continued).

RETIREMENT AND ESTATE VALUE OF TAX-DEFERRED RETIREMENT PLAN AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT RETIREMT PLAN	RETIREMENT VALUE RETIRE-MENT PLAN	ESTATE VALUE RETIREMENT PLAN
ANY	0.50	0.060	6986.	13971.
ANY	0.50	0.065	7186.	14371.
ANY	0.50	0.070	7392.	14783.
ANY	0.50	0.075	7604.	15208.
ANY	0.50	0.080	7823.	15645.
ANY	0.50	0.085	8048.	16096.
ANY	0.50	0.090	8280.	16560.
ANY	0.50	0.095	8519.	17038.
ANY	0.50	0.100	8765.	17531.
ANY	0.50	0.105	9019.	18038.
ANY	0.50	0.110	9281.	18561.
ANY	0.50	0.115	9550.	19100.
ANY	0.50	0.120	9827.	19654.
ANY	0.50	0.125	10113.	20226.
ANY	0.50	0.130	10407.	20814.
ANY	0.50	0.135	10710.	21420.
ANY	0.50	0.140	11022.	22044.
ANY	0.60	0.060	5589.	13971.
ANY	0.60	0.065	5749.	14371.
ANY	0.60	0.070	5913.	14783.
ANY	0.60	0.075	6083.	15208.
ANY	0.60	0.080	6258.	15645.
ANY	0.60	0.085	6438.	16096.
ANY	0.60	0.090	6624.	16560.
ANY	0.60	0.095	6815.	17038.
ANY	0.60	0.100	7012.	17531.
ANY	0.60	0.105	7215.	18038.
ANY	0.60	0.110	7424.	18561.
ANY	0.60	0.115	7640.	19100.
ANY	0.60	0.120	7862.	19654.
ANY	0.60	0.125	8090.	20226.
ANY	0.60	0.130	8326.	20814.
ANY	0.60	0.135	8568.	21420.
ANY	0.60	0.140	8818.	22044.
ANY	0.70	0.060	4191.	13971.
ANY	0.70	0.065	4311.	14371.
ANY	0.70	0.070	4435.	14783.
ANY	0.70	0.075	4562.	15208.
ANY	0.70	0.080	4694.	15645.
ANY	0.70	0.085	4829.	16096.
ANY	0.70	0.090	4968.	16560.
ANY	0.70	0.095	5111.	17038.
ANY	0.70	0.100	5259.	17531.
ANY	0.70	0.105	5412.	18038.
ANY	0.70	0.110	5568.	18561.
ANY	0.70	0.115	5730.	19100.
ANY	0.70	0.120	5896.	19654.
ANY	0.70	0.125	6068.	20226.
ANY	0.70	0.130	6244.	20814.
ANY	0.70	0.135	6426.	21420.
ANY	0.70	0.140	6613.	22044.

Table 2.

RETIREMENT AND ESTATE VALUE OF FARM INVESTMENT AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT FARM INVESTMT	APPREC RATE FARM INVESTMENT	RETIREMENT VALUE FARM INVESTMENT	ESTATE VALUE FARM INVESTMENT
0.20	0.20	0.04	0.0	9552.	9552.
0.20	0.20	0.04	0.04	11785.	11961.
0.20	0.20	0.04	0.08	14619.	15023.
0.20	0.20	0.04	0.12	18207.	18895.
0.20	0.20	0.04	0.16	22743.	23796.
0.20	0.20	0.08	0.0	11432.	11432.
0.20	0.20	0.08	0.04	14153.	14349.
0.20	0.20	0.08	0.08	17539.	18046.
0.20	0.20	0.08	0.12	21954.	22722.
0.20	0.20	0.08	0.16	27444.	28622.
0.20	0.20	0.12	0.0	13709.	13709.
0.20	0.20	0.12	0.04	17018.	17235.
0.20	0.20	0.12	0.08	21199.	21698.
0.20	0.20	0.12	0.12	26472.	27331.
0.20	0.20	0.12	0.16	33181.	34422.
0.20	0.20	0.16	0.0	16461.	16461.
0.20	0.20	0.16	0.04	20477.	20719.
0.20	0.20	0.16	0.08	25541.	26098.
0.20	0.20	0.16	0.12	31909.	32872.
0.20	0.20	0.16	0.16	39893.	41376.
0.20	0.20	0.20	0.0	19786.	19786.
0.20	0.20	0.20	0.04	24649.	24920.
0.20	0.20	0.20	0.08	30766.	31398.
0.20	0.20	0.20	0.12	38438.	39519.
0.20	0.20	0.20	0.16	48029.	49697.
0.20	0.30	0.04	0.0	9552.	9552.
0.20	0.30	0.04	0.04	11697.	11961.
0.20	0.30	0.04	0.08	14418.	15023.
0.20	0.30	0.04	0.12	17863.	18895.
0.20	0.30	0.04	0.16	22216.	23796.
0.20	0.30	0.08	0.0	11432.	11432.
0.20	0.30	0.08	0.04	14056.	14349.
0.20	0.30	0.08	0.08	17376.	18046.
0.20	0.30	0.08	0.12	21570.	22722.
0.20	0.30	0.08	0.16	26855.	28622.
0.20	0.30	0.12	0.0	13709.	13709.
0.20	0.30	0.12	0.04	16909.	17235.
0.20	0.30	0.12	0.08	20950.	21698.
0.20	0.30	0.12	0.12	26042.	27331.
0.20	0.30	0.12	0.16	32441.	34422.
0.20	0.30	0.16	0.0	16461.	16461.
0.20	0.30	0.16	0.04	20356.	20719.
0.20	0.30	0.16	0.08	25262.	26098.
0.20	0.30	0.16	0.12	31427.	32872.
0.20	0.30	0.16	0.16	39151.	41376.
0.20	0.30	0.20	0.0	19786.	19786.
0.20	0.30	0.20	0.04	24514.	24920.
0.20	0.30	0.20	0.08	30454.	31398.
0.20	0.30	0.20	0.12	37898.	39519.
0.20	0.30	0.20	0.16	47195.	49697.

Table 2 (continued).

RETIREMENT AND ESTATE VALUE OF FARM INVESTMENT AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT FARM INVESTMT	APPREC RATE FARM INVESTMENT	RETIREMENT VALUE FARM INVESTMENT	ESTATE VALUE FARM INVESTMENT
0.30	0.20	0.04	0.0	8174.	8174.
0.30	0.20	0.04	0.04	10080.	10232.
0.30	0.20	0.04	0.08	12499.	12845.
0.30	0.20	0.04	0.12	15563.	16157.
0.30	0.20	0.04	0.16	19437.	20346.
0.30	0.20	0.08	0.0	9562.	9562.
0.30	0.20	0.08	0.04	11828.	11995.
0.30	0.20	0.08	0.08	14700.	15080.
0.30	0.20	0.08	0.12	18332.	18985.
0.30	0.20	0.08	0.16	22912.	23915.
0.30	0.20	0.12	0.0	11203.	11203.
0.30	0.20	0.12	0.04	13894.	14077.
0.30	0.20	0.12	0.08	17298.	17716.
0.30	0.20	0.12	0.12	21594.	22314.
0.30	0.20	0.12	0.16	27000.	28107.
0.30	0.20	0.16	0.0	13142.	13142.
0.30	0.20	0.16	0.04	16333.	16534.
0.30	0.20	0.16	0.08	20361.	20821.
0.30	0.20	0.16	0.12	25432.	26228.
0.30	0.20	0.16	0.16	31800.	33025.
0.30	0.20	0.20	0.0	15431.	15431.
0.30	0.20	0.20	0.04	19207.	19428.
0.30	0.20	0.20	0.08	23965.	24473.
0.30	0.20	0.20	0.12	29942.	30821.
0.30	0.20	0.20	0.16	37427.	38783.
0.30	0.30	0.04	0.0	8174.	8174.
0.30	0.30	0.04	0.04	10004.	10232.
0.30	0.30	0.04	0.08	12326.	12845.
0.30	0.30	0.04	0.12	15266.	16157.
0.30	0.30	0.04	0.16	18983.	20346.
0.30	0.30	0.08	0.0	9562.	9562.
0.30	0.30	0.08	0.04	11745.	11995.
0.30	0.30	0.08	0.08	14510.	15080.
0.30	0.30	0.08	0.12	18005.	18985.
0.30	0.30	0.08	0.16	22411.	23915.
0.30	0.30	0.12	0.0	11203.	11203.
0.30	0.30	0.12	0.04	13803.	14077.
0.30	0.30	0.12	0.08	17089.	17716.
0.30	0.30	0.12	0.12	21233.	22314.
0.30	0.30	0.12	0.16	26446.	28107.
0.30	0.30	0.16	0.0	13142.	13142.
0.30	0.30	0.16	0.04	16232.	16534.
0.30	0.30	0.16	0.08	20130.	20821.
0.30	0.30	0.16	0.12	25034.	26228.
0.30	0.30	0.16	0.16	31188.	33025.
0.30	0.30	0.20	0.0	15431.	15431.
0.30	0.30	0.20	0.04	19097.	19428.
0.30	0.30	0.20	0.08	23711.	24473.
0.30	0.30	0.20	0.12	29502.	30821.
0.30	0.30	0.20	0.16	36749.	38783.

Table 2 (continued).

RETIREMENT AND ESTATE VALUE OF FARM INVESTMENT AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT FARM INVESTMT	APPREC RATE FARM INVESTMENT	RETIREMENT VALUE FARM INVESTMENT	ESTATE VALUE FARM INVESTMENT
0.30	0.40	0.04	0.0	8174.	8174.
0.30	0.40	0.04	0.04	9928.	10232.
0.30	0.40	0.04	0.08	12152.	12845.
0.30	0.40	0.04	0.12	14969.	16157.
0.30	0.40	0.04	0.16	18529.	20346.
0.30	0.40	0.08	0.0	9562.	9562.
0.30	0.40	0.08	0.04	11662.	11995.
0.30	0.40	0.08	0.08	14320.	15080.
0.30	0.40	0.08	0.12	17678.	18985.
0.30	0.40	0.08	0.16	21910.	23915.
0.30	0.40	0.12	0.0	11203.	11203.
0.30	0.40	0.12	0.04	13712.	14077.
0.30	0.40	0.12	0.08	16880.	17716.
0.30	0.40	0.12	0.12	20873.	22314.
0.30	0.40	0.12	0.16	25893.	28107.
0.30	0.40	0.16	0.0	13142.	13142.
0.30	0.40	0.16	0.04	16132.	16534.
0.30	0.40	0.16	0.08	19909.	20821.
0.30	0.40	0.16	0.12	24637.	26228.
0.30	0.40	0.16	0.16	30575.	33025.
0.30	0.40	0.20	0.0	15431.	15431.
0.30	0.40	0.20	0.04	18986.	19428.
0.30	0.40	0.20	0.08	23457.	24473.
0.30	0.40	0.20	0.12	29062.	30821.
0.30	0.40	0.20	0.16	36071.	38783.
0.40	0.30	0.04	0.0	6851.	6851.
0.40	0.30	0.04	0.04	8381.	8574.
0.40	0.30	0.04	0.08	10322.	10761.
0.40	0.30	0.04	0.12	12781.	13534.
0.40	0.30	0.04	0.16	15889.	17042.
0.40	0.30	0.08	0.0	7835.	7835.
0.40	0.30	0.08	0.04	9615.	9824.
0.40	0.30	0.08	0.08	11870.	12346.
0.40	0.30	0.08	0.12	14722.	15540.
0.40	0.30	0.08	0.16	18320.	19573.
0.40	0.30	0.12	0.0	8971.	8971.
0.40	0.30	0.12	0.04	11039.	11265.
0.40	0.30	0.12	0.08	13656.	14172.
0.40	0.30	0.12	0.12	16958.	17847.
0.40	0.30	0.12	0.16	21117.	22481.
0.40	0.30	0.16	0.0	10281.	10281.
0.40	0.30	0.16	0.04	12682.	12926.
0.40	0.30	0.16	0.08	15713.	16273.
0.40	0.30	0.16	0.12	19532.	20498.
0.40	0.30	0.16	0.16	24330.	25817.
0.40	0.30	0.20	0.0	11793.	11793.
0.40	0.30	0.20	0.04	14574.	14840.
0.40	0.30	0.20	0.08	18081.	18690.
0.40	0.30	0.20	0.12	22490.	23543.
0.40	0.30	0.20	0.16	28018.	29639.

Table 2 (continued).

RETIREMENT AND ESTATE VALUE OF FARM INVESTMENT AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT FARM INVESTMT	APPREC RATE FARM INVESTMENT	RETIREMENT VALUE FARM INVESTMENT	ESTATE VALUE FARM INVESTMENT
0.40	0.40	0.04	0.0	6851.	6851.
0.40	0.40	0.04	0.04	8317.	8574.
0.40	0.40	0.04	0.08	10175.	10761.
0.40	0.40	0.04	0.12	12530.	13534.
0.40	0.40	0.04	0.16	15505.	17042.
0.40	0.40	0.08	0.0	7835.	7835.
0.40	0.40	0.08	0.04	9546.	9824.
0.40	0.40	0.08	0.08	11711.	12346.
0.40	0.40	0.08	0.12	14449.	15540.
0.40	0.40	0.08	0.16	17903.	19573.
0.40	0.40	0.12	0.0	8971.	8971.
0.40	0.40	0.12	0.04	10964.	11265.
0.40	0.40	0.12	0.08	13483.	14172.
0.40	0.40	0.12	0.12	16662.	17847.
0.40	0.40	0.12	0.16	20662.	22481.
0.40	0.40	0.16	0.0	10281.	10281.
0.40	0.40	0.16	0.04	12600.	12926.
0.40	0.40	0.16	0.08	15526.	16273.
0.40	0.40	0.16	0.12	19210.	20498.
0.40	0.40	0.16	0.16	23835.	25817.
0.40	0.40	0.20	0.0	11793.	11793.
0.40	0.40	0.20	0.04	14486.	14840.
0.40	0.40	0.20	0.08	17878.	18690.
0.40	0.40	0.20	0.12	22139.	23543.
0.40	0.40	0.20	0.16	27478.	29639.
0.40	0.50	0.04	0.0	6851.	6851.
0.40	0.50	0.04	0.04	8252.	8574.
0.40	0.50	0.04	0.08	10029.	10761.
0.40	0.50	0.04	0.12	12278.	13534.
0.40	0.50	0.04	0.16	15121.	17042.
0.40	0.50	0.08	0.0	7835.	7835.
0.40	0.50	0.08	0.04	9476.	9824.
0.40	0.50	0.08	0.08	11553.	12346.
0.40	0.50	0.08	0.12	14177.	15540.
0.40	0.50	0.08	0.16	17485.	19573.
0.40	0.50	0.12	0.0	8971.	8971.
0.40	0.50	0.12	0.04	10889.	11265.
0.40	0.50	0.12	0.08	13311.	14172.
0.40	0.50	0.12	0.12	16366.	17847.
0.40	0.50	0.12	0.16	20208.	22481.
0.40	0.50	0.16	0.0	10281.	10281.
0.40	0.50	0.16	0.04	12519.	12926.
0.40	0.50	0.16	0.08	15339.	16273.
0.40	0.50	0.16	0.12	18887.	20498.
0.40	0.50	0.16	0.16	23340.	25817.
0.40	0.50	0.20	0.0	11793.	11793.
0.40	0.50	0.20	0.04	14398.	14840.
0.40	0.50	0.20	0.08	17675.	18690.
0.40	0.50	0.20	0.12	21788.	23543.
0.40	0.50	0.20	0.16	26937.	29639.

Table 2 (continued).

RETIREMENT AND ESTATE VALUE OF FARM INVESTMENT AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT FARM INVESTMT	APPREC RATE FARM INVESTMENT	RETIREMENT VALUE FARM INVESTMENT	ESTATE VALUE FARM INVESTMENT
0.50	0.40	0.04	0.0	5584.	5584.
0.50	0.40	0.04	0.04	6774.	6986.
0.50	0.40	0.04	0.08	8283.	8765.
0.50	0.40	0.04	0.12	10196.	11022.
0.50	0.40	0.04	0.16	12615.	13877.
0.50	0.40	0.08	0.0	6243.	6243.
0.50	0.40	0.08	0.04	7597.	7823.
0.50	0.40	0.08	0.08	9312.	9827.
0.50	0.40	0.08	0.12	11482.	12366.
0.50	0.40	0.08	0.16	14221.	15575.
0.50	0.40	0.12	0.0	6986.	6986.
0.50	0.40	0.12	0.04	8524.	8765.
0.50	0.40	0.12	0.08	10471.	11022.
0.50	0.40	0.12	0.12	12930.	13877.
0.50	0.40	0.12	0.16	16029.	17481.
0.50	0.40	0.16	0.0	7823.	7823.
0.50	0.40	0.16	0.04	9570.	9827.
0.50	0.40	0.16	0.08	11777.	12366.
0.50	0.40	0.16	0.12	14560.	15575.
0.50	0.40	0.16	0.16	18059.	19619.
0.50	0.40	0.20	0.0	8765.	8765.
0.50	0.40	0.20	0.04	10747.	11022.
0.50	0.40	0.20	0.08	13246.	13877.
0.50	0.40	0.20	0.12	16392.	17481.
0.50	0.40	0.20	0.16	20340.	22015.
0.50	0.50	0.04	0.0	5584.	5584.
0.50	0.50	0.04	0.04	6721.	6986.
0.50	0.50	0.04	0.08	8163.	8765.
0.50	0.50	0.04	0.12	9990.	11022.
0.50	0.50	0.04	0.16	12299.	13877.
0.50	0.50	0.08	0.0	6243.	6243.
0.50	0.50	0.08	0.04	7540.	7823.
0.50	0.50	0.08	0.08	9184.	9827.
0.50	0.50	0.08	0.12	11261.	12366.
0.50	0.50	0.08	0.16	13883.	15575.
0.50	0.50	0.12	0.0	6986.	6986.
0.50	0.50	0.12	0.04	8464.	8765.
0.50	0.50	0.12	0.08	10334.	11022.
0.50	0.50	0.12	0.12	12694.	13877.
0.50	0.50	0.12	0.16	15665.	17481.
0.50	0.50	0.16	0.0	7823.	7823.
0.50	0.50	0.16	0.04	9505.	9827.
0.50	0.50	0.16	0.08	11630.	12366.
0.50	0.50	0.16	0.12	14306.	15575.
0.50	0.50	0.16	0.16	17670.	19619.
0.50	0.50	0.20	0.0	8765.	8765.
0.50	0.50	0.20	0.04	10678.	11022.
0.50	0.50	0.20	0.08	13088.	13877.
0.50	0.50	0.20	0.12	16119.	17481.
0.50	0.50	0.20	0.16	19921.	22015.

Table 2 (continued).

RETIREMENT AND ESTATE VALUE OF FARM INVESTMENT AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT FARM INVESTMT	APPREC RATE FARM INVESTMENT	RETIREMENT VALUE FARM INVESTMENT	ESTATE VALUE FARM INVESTMENT
0.50	0.60	0.04	0.0	5584.	5584.
0.50	0.60	0.04	0.04	6668.	6986.
0.50	0.60	0.04	0.08	8042.	8765.
0.50	0.60	0.04	0.12	9783.	11022.
0.50	0.60	0.04	0.16	11984.	13877.
0.50	0.60	0.08	0.0	6243.	6243.
0.50	0.60	0.08	0.04	7484.	7823.
0.50	0.60	0.08	0.08	9055.	9827.
0.50	0.60	0.08	0.12	11040.	12366.
0.50	0.60	0.08	0.16	13545.	15575.
0.50	0.60	0.12	0.0	6986.	6986.
0.50	0.60	0.12	0.04	8404.	8765.
0.50	0.60	0.12	0.08	10196.	11022.
0.50	0.60	0.12	0.12	12457.	13877.
0.50	0.60	0.12	0.16	15302.	17481.
0.50	0.60	0.16	0.0	7823.	7823.
0.50	0.60	0.16	0.04	9441.	9827.
0.50	0.60	0.16	0.08	11482.	12366.
0.50	0.60	0.16	0.12	14052.	15575.
0.50	0.60	0.16	0.16	17280.	19619.
0.50	0.60	0.20	0.0	8765.	8765.
0.50	0.60	0.20	0.04	10609.	11022.
0.50	0.60	0.20	0.08	12930.	13877.
0.50	0.60	0.20	0.12	15847.	17481.
0.50	0.60	0.20	0.16	19502.	22015.
0.60	0.50	0.04	0.0	4369.	4369.
0.60	0.50	0.04	0.04	5255.	5464.
0.60	0.50	0.04	0.08	6379.	6854.
0.60	0.50	0.04	0.12	7803.	8617.
0.60	0.50	0.04	0.16	9604.	10849.
0.60	0.50	0.08	0.0	4776.	4776.
0.60	0.50	0.08	0.04	5761.	5981.
0.60	0.50	0.08	0.08	7008.	7510.
0.60	0.50	0.08	0.12	8588.	9448.
0.60	0.50	0.08	0.16	10582.	11898.
0.60	0.50	0.12	0.0	5224.	5224.
0.60	0.50	0.12	0.04	6317.	6549.
0.60	0.50	0.12	0.08	7702.	8231.
0.60	0.50	0.12	0.12	9451.	10360.
0.60	0.50	0.12	0.16	11657.	13049.
0.60	0.50	0.16	0.0	5716.	5716.
0.60	0.50	0.16	0.04	6930.	7174.
0.60	0.50	0.16	0.08	8465.	9023.
0.60	0.50	0.16	0.12	10401.	11361.
0.60	0.50	0.16	0.16	12838.	14311.
0.60	0.50	0.20	0.0	6258.	6258.
0.60	0.50	0.20	0.04	7604.	7862.
0.60	0.50	0.20	0.08	9304.	9893.
0.60	0.50	0.20	0.12	11445.	12460.
0.60	0.50	0.20	0.16	14136.	15695.

Table 2 (continued).

RETIREMENT AND ESTATE VALUE OF FARM INVESTMENT AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT FARM INVESTMT	APPREC RATE FARM INVESTMENT	RETIREMENT VALUE FARM INVESTMENT	ESTATE VALUE FARM INVESTMENT
0.60	0.60	0.04	0.0	4369.	4369.
0.60	0.60	0.04	0.04	5213.	5464.
0.60	0.60	0.04	0.08	6283.	6854.
0.60	0.60	0.04	0.12	7640.	8617.
0.60	0.60	0.04	0.16	9355.	10849.
0.60	0.60	0.08	0.0	4776.	4776.
0.60	0.60	0.08	0.04	5717.	5981.
0.60	0.60	0.08	0.08	6908.	7510.
0.60	0.60	0.08	0.12	8416.	9448.
0.60	0.60	0.08	0.16	10318.	11898.
0.60	0.60	0.12	0.0	5224.	5224.
0.60	0.60	0.12	0.04	6271.	6549.
0.60	0.60	0.12	0.08	7596.	8231.
0.60	0.60	0.12	0.12	9269.	10360.
0.60	0.60	0.12	0.16	11378.	13049.
0.60	0.60	0.16	0.0	5716.	5716.
0.60	0.60	0.16	0.04	6881.	7174.
0.60	0.60	0.16	0.08	8353.	9023.
0.60	0.60	0.16	0.12	10209.	11361.
0.60	0.60	0.16	0.16	12544.	14311.
0.60	0.60	0.20	0.0	6258.	6258.
0.60	0.60	0.20	0.04	7553.	7862.
0.60	0.60	0.20	0.08	9186.	9893.
0.60	0.60	0.20	0.12	11242.	12460.
0.60	0.60	0.20	0.16	13824.	15695.
0.60	0.70	0.04	0.0	4369.	4369.
0.60	0.70	0.04	0.04	5171.	5464.
0.60	0.70	0.04	0.08	6188.	6854.
0.60	0.70	0.04	0.12	7477.	8617.
0.60	0.70	0.04	0.16	9105.	10849.
0.60	0.70	0.08	0.0	4776.	4776.
0.60	0.70	0.08	0.04	5673.	5981.
0.60	0.70	0.08	0.08	6808.	7510.
0.60	0.70	0.08	0.12	8243.	9448.
0.60	0.70	0.08	0.16	10055.	11898.
0.60	0.70	0.12	0.0	5224.	5224.
0.60	0.70	0.12	0.04	6225.	6549.
0.60	0.70	0.12	0.08	7490.	8231.
0.60	0.70	0.12	0.12	9088.	10360.
0.60	0.70	0.12	0.16	11100.	13049.
0.60	0.70	0.16	0.0	5716.	5716.
0.60	0.70	0.16	0.04	6832.	7174.
0.60	0.70	0.16	0.08	8241.	9023.
0.60	0.70	0.16	0.12	10017.	11361.
0.60	0.70	0.16	0.16	12249.	14311.
0.60	0.70	0.20	0.0	6258.	6258.
0.60	0.70	0.20	0.04	7501.	7862.
0.60	0.70	0.20	0.08	9068.	9893.
0.60	0.70	0.20	0.12	11039.	12460.
0.60	0.70	0.20	0.16	13512.	15695.

Table 2 (continued).

RETIREMENT AND ESTATE VALUE OF FARM INVESTMENT AFTER 10 YEARS
$1000 AND RETURNS INVESTED EACH YEAR FOR 10 YEARS

TAX RATE BEFORE RETIREMT	TAX RATE AFTER RETIREMT	RETURN RT FARM INVESTMT	APPREC RATE FARM INVESTMENT	RETIREMENT VALUE FARM INVESTMENT	ESTATE VALUE FARM INVESTMENT
0.70	0.60	0.04	0.0	3205.	3205.
0.70	0.60	0.04	0.04	3821.	4007.
0.70	0.60	0.04	0.08	4602.	5025.
0.70	0.60	0.04	0.12	5593.	6316.
0.70	0.60	0.04	0.16	6846.	7951.
0.70	0.60	0.08	0.0	3426.	3426.
0.70	0.60	0.08	0.04	4094.	4287.
0.70	0.60	0.08	0.08	4941.	5381.
0.70	0.60	0.08	0.12	6014.	6767.
0.70	0.60	0.08	0.16	7369.	8521.
0.70	0.60	0.12	0.0	3663.	3663.
0.70	0.60	0.12	0.04	4388.	4588.
0.70	0.60	0.12	0.08	5305.	5763.
0.70	0.60	0.12	0.12	6466.	7251.
0.70	0.60	0.12	0.16	7930.	9132.
0.70	0.60	0.16	0.0	3918.	3918.
0.70	0.60	0.16	0.04	4703.	4912.
0.70	0.60	0.16	0.08	5697.	6173.
0.70	0.60	0.16	0.12	6952.	7770.
0.70	0.60	0.16	0.16	8534.	9787.
0.70	0.60	0.20	0.0	4191.	4191.
0.70	0.60	0.20	0.04	5042.	5259.
0.70	0.60	0.20	0.08	6118.	6613.
0.70	0.60	0.20	0.12	7474.	8326.
0.70	0.60	0.20	0.16	9181.	10489.
0.70	0.70	0.04	0.0	3205.	3205.
0.70	0.70	0.04	0.04	3790.	4007.
0.70	0.70	0.04	0.08	4532.	5025.
0.70	0.70	0.04	0.12	5472.	6316.
0.70	0.70	0.04	0.16	6661.	7951.
0.70	0.70	0.08	0.0	3426.	3426.
0.70	0.70	0.08	0.04	4062.	4287.
0.70	0.70	0.08	0.08	4868.	5381.
0.70	0.70	0.08	0.12	5888.	6767.
0.70	0.70	0.08	0.16	7177.	8521.
0.70	0.70	0.12	0.0	3663.	3663.
0.70	0.70	0.12	0.04	4354.	4588.
0.70	0.70	0.12	0.08	5229.	5763.
0.70	0.70	0.12	0.12	6335.	7251.
0.70	0.70	0.12	0.16	7730.	9132.
0.70	0.70	0.16	0.0	3918.	3918.
0.70	0.70	0.16	0.04	4668.	4912.
0.70	0.70	0.16	0.08	5618.	6173.
0.70	0.70	0.16	0.12	6816.	7770.
0.70	0.70	0.16	0.16	8325.	9787.
0.70	0.70	0.20	0.0	4191.	4191.
0.70	0.70	0.20	0.04	5006.	5259.
0.70	0.70	0.20	0.08	6035.	6613.
0.70	0.70	0.20	0.12	7332.	8326.
0.70	0.70	0.20	0.16	8964.	10489.

Appendix A. INVESTMENT FORMULAS

Tax-Deferred Retirement Plan

A tax-deferred retirement plan is an investment annuity. If the amount invested and the return rate is constant each year, then the value of the plan before taxes after n years is:

$$(1) \quad R = \frac{A[(1+r)^{n+1}-(1+r)]}{r}$$

where R = Value after n years

A = Annual contribution

r = Annual return rate.

Neither the annual contribution A, nor the annual return r, is subject to income tax until the plan is liquidated. When the plan is liquidated the aftertax value at year n is:

$$(2) \quad V = (1-s)R$$

where V = Aftertax value at year n

s = Composite federal and state income tax rate at year of liquidation.

Farm Investment

Investment in the farm business will generate three different types of return: ordinary income, capital gain income, and capital appreciation. Ordinary income and capital gain income are current income which is taxed each year it is earned. Capital gain income, however, is given tax preference treatment. An appreciation return also accumulates each year and increases the value of the investment. This gain is not taxed until the farm investment is sold at retirement, when it usually receives capital gain taxation treatment. The annual amount invested each year, unlike an investment in a tax-deferred retirement plan, is not deducted from taxable income before it is invested. Therefore, less is available for investment each year.

If the amount invested and the return and tax rates are constant each year, the value of a farm investment plan after n years is:

$$(3) \quad F = \frac{(1-t+.14c)A[(1+p)^{n+1}-(1+p)]}{p}$$

where $p = i(1+t+.14c)+Z(1-.4t+.14c)+g$

F = Value after n years

A = Annual contribution before tax reduction

t = Composite federal and state income tax rate before retirement

i = Current ordinary income return rate

z = Current capital gain return rate

g = Appreciation rate

c = Fraction of before tax investment qualifying for 14 percent combined federal and state investment tax credit

n = Years of investment.

When the farm investment is sold, only the capital appreciation is subject to income taxation. The annual contributions and the yearly current ordinary and capital gain income from the investment were taxed when they were earned and are not taxed again. The amount taxed is:

$$(4) \quad T = .4s(F-n(1-t+.14c)A)\frac{g}{p}$$

where T = Amount of income tax

s = Composite federal and state income tax rate the year of liquidation.

The terms within the outer most parentheses of equation 4 measures the increase in value of the farm investment over the original annual after-tax contributions. Of that increase, the fraction g/p has not been previously taxed and is now taxed as capital gain income at the retirement tax rate.

The value of the farm investment after taxes at year n is then:

$$(5) \quad M = F-T.$$

Appendix B. Programmable Calculator Program for Assessing Tax-Deferred Retirement Plans

The following program was written for the TI-58 and TI-59 programmable calculators to assess the outcome of a tax-deferred retirement plan. The program was written using equations (1) and (2) from Appendix A. It allows the farmer to quickly assess the outcomes of tax-deferred retirement plans under numerous tax and return rates. If desired the program may be stored on magnetic card with the TI-59.

Program

000	LBL	019	R/S	038	RCL
001	A	020	LBL	039	03
002	STO	021	E	040	)
003	01	022	(	041	x
004	R/S	023	RCL	042	RCL
005	LBL	024	03	043	02
006	B	025	+	044	÷
007	STO	026	1	045	RCL
008	02	027	=	046	03
009	R/S	028	Y^X	047	x
010	LBL	029	(	048	(
011	C	030	RCL	049	1
012	STO	031	04	050	−
013	03	032	+	051	RCL
014	R/S	033	1	052	01
015	LBL	034	)	053	)
016	D	035	−	054	=
017	STO	036	1	055	R/S
018	04	037	−		

User Instructions

Step	Procedure	Enter	Press	Example
1	Enter program manually or from previously recorded magnetic card.			
2	Enter composite federal and state income tax rate after retirement.	s value	A	.30
3	Enter annual contribution.	A value	B	$1000
4	Enter return rate.	r value	C	.085
5	Enter number of years of plan.	n value	D	10
6	Compute future after-tax value at year n.		E	$11267

Revised analyses may be obtained by changing desired variables and pressing E. There is no need to reenter variables that do not change for new runs.

Appendix C. Programmable Calculator Program for Assessing Farm and Other Investments

The following program was written for the TI-58 and TI-59 programmable calculators to assess the outcomes of farm and other investments. The program was written using equations (3) through (5) from Appendix A. It allows a farmer to quickly assess the outcomes of farm and other investments under numerous tax and return rates. The program permits the inclusion of investment credit and capital gain on sales before retirement in the assessment. The program may be stored on magnetic card with the TI-59.

Program

000	LBL	038	08	076	x	114	=
001	A	039	R/S	077	RCL	115	STO
002	STO	040	LBL	078	07	116	11
003	01	041	E	079	)	117	RCL
004	R/S	042	RCL	080	+	118	02
005	LBL	043	07	081	RCL	119	x
006	B	044	x	082	06	120	.
007	STO	045	.	083	=	121	4
008	02	046	1	084	STO	122	x
009	R/S	047	4	085	10	123	RCL
010	LBL	048	-	086	(	124	06
011	C	049	RCL	087	1	125	x
012	STO	050	01	088	+	126	(
013	03	051	+	089	RCL	127	RCL
014	R/S	052	1	090	10	128	11
015	LBL	053	=	091	=	129	-
016	D	054	STO	092	Y^x	130	RCL
017	STO	055	09	093	(	131	08
018	04	056	RCL	094	RCL	132	x
019	R/S	057	09	095	08	133	RCL
020	LBL	058	x	096	+	134	09
021	A'	059	RCL	097	1	135	x
022	STO	060	04	098	)	136	RCL
023	05	061	+	099	-	137	03
024	R/S	062	RCL	100	1	138	)
025	LBL	063	05	101	-	139	÷.
026	B'	064	x	102	RCL	140	RCL
027	STO	065	(	103	10	141	10
028	06	066	1	104	)	142	=
029	R/S	067	-	105	x	143	STO
030	LBL	068	.	106	RCL	144	12
031	C'	069	4	107	03	145	RCL
032	STO	070	x	108	x	146	11
033	07	071	RCL	109	RCL	147	-
034	R/S	072	01	110	09	148	RCL
035	LBL	073	+	111	÷	149	12
036	D'	074	.	112	RCL	150	=
037	STO	075	1	113	10	151	R/S

User Instructions

Step	Procedure	Enter	Press	Example
1	Enter program manually or from previously recorded magnetic card.			
2	Enter composite federal and state income tax rate before retirement.	t value	A	.40
3	Enter composite federal and state income tax rate after retirement.	s value	B	.30
4	Enter annual investment before tax reduction.	A value	C	$1000
5	Enter annual ordinary income return rate.	i value	D	.06
6	Enter annual capital gain return rate.	z value	A'	.01
7	Enter capital appreciation rate.	g value	B'	.04
8	Enter percent of investment and reinvestment qualifying for investment credit (before tax reduction).	c value	C'	.20
9	Enter number of years of investment plan.	n value	D'	15
10	Compute future after tax value at year n.		E	$18895

Revised analyses may be obtained by changing desired variables and pressing E. There is no need to reenter variables that do not change for new runs.

Appendix D. Federal and New York State Income Tax Rates

Table D1. 1979 IRS Schedule Y -

Married Taxpayers Filing Joint Returns

If Taxable Income With The Zero Bracket Amount Is* Over -	But Not Over -	The Tax Is -	Plus -	Of The Amount Over -
$ 0	$ 3,400		0	
3,400	5,500		14%	$ 3,400
5,500	7,600	$ 294	+ 16%	5,500
7,600	11,900	630	+ 18%	7,600
11,900	16,000	1,404	+ 21%	11,900
16,000	20,200	2,265	+ 24%	16,000
20,200	24,600	3,273	+ 28%	20,200
24,600	29,900	4,505	+ 32%	24,600
29,900	35,200	6,201	+ 37%	29,900
35,200	45,800	8,162	+ 43%	35,200
45,800	60,000	12,720	+ 49%	45,800
60,000	85,600	19,678	+ 54%	60,000
85,000	109,400	33,502	+ 59%	85,600
109,400	162,400	47,544	+ 64%	109,400
162,400	215,400	81,464	+ 68%	162,400
215,400	-------	117,504	+ 70%	215,400

* The zero bracket amount of $3,400 (standard deduction) is incorporated into this table and is not subtracted from taxable income before this table is used. Only the amount of itemized deductions in excess of the ZBA is subtracted if deductions are itemized.

Table D2. New York Personal Income Tax

For Taxable Years Ending on or After January 1, 1979

If Taxable Income is Over -	But Not Over -	The Tax Is	-	Plus	-	Of The Amount Over
0	$ 1,000	$ 0	+	2%		$ 0
1,000	3,000	20	+	3%		1,000
3,000	5,000	80	+	4%		3,000
5,000	7,000	160	+	5%		5,000
7,000	9,000	260	+	6%		7,000
9,000	11,000	380	+	7%		9,000
11,000	13,000	520	+	8%		11,000
13,000	15,000	680	+	9%		13,000
15,000	17,000	860	+	10%		15,000
17,000	19,000	1,060	+	11%		17,000
19,000	21,000	1,280	+	12%		19,000
21,000	23,000	1,520	+	13%		21,000
23,000	------	1,780	+	14%		23,000