# Farm Tax Liability under Tax Reform

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## Abstract

The effects of the Tax Reform Act of 1986 on farm sole proprietors are examined in a tax accounting simulation model of over 15,000 farm tax returns. Tax reform should result in lower tax liability for most taxpayers with the exception of those engaged in dairy operations.

## INTRODUCTION

The Tax Reform Act of 1986 (TRA) made dramatic changes to the Federal income tax code by significantly lowering marginal tax rates and repealing and limiting several important tax preference items, among other modifications. Even before these changes become fully effective, proposals have been introduced in Congress which would restore many of the lost tax preferences. Some would permit farmers to use income averaging as well as reinstitute the preferential capital gains rate. These provisions were originally approved by Congress last year but were deleted by the Conference Committee. There appears to be some support for these proposals from farm state legislators.

Few empirical studies have comprehensively reviewed the potential effects of tax reform on farm taxpayers. This paper represents a major contribution to the agricultural taxation literature by providing an empirical assessment of the effects of the Tax Reform Act on farm tax liabilities.1 Tax liability for farm sole proprietorships is estimated using a tax simulation model for over 15,000 farm tax returns. Tax liability under TRA and pre-TRA provisions is compared for farm returns classified by six enterprise types. This paper first outlines major tax provisions affecting farmers followed by a discussion of the results from

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1The analysis in this paper is part of a more comprehensive analysis of tax reform considering tax equity issues and other stratifications of tax liability by amount of off-farm income, taxable income, and variations in farm income.

the tax simulation model.

## TAX REFORM AND THE FEDERAL INCOME TAX

### Marginal Tax Rates

Under pre-TRA provisions, over 14 income brackets existed for individuals with rates ranging from 11 to 50 percent. Tax reform provides tax rates of 15 and 28 percent beginning in 1988. In 1987 there will be rates of 11, 15, 28, 35, and 38.5 percent. As recomputed from a 1982 IRS database, the average marginal tax rate for farms was 18.9 percent under pre-TRA 1986 provisions, and under TRA, that rate dropped to approximately 17.3 percent.

### Standard Deduction & Personal Exemption

Pre-TRA law allowed for a standard deduction of $3,670 for married couples filing a joint return and $2,480 for individuals. TRA increases the standard deduction to $5,000 for a joint return and $3,000 for individuals.

The personal exemption under TRA is raised to $1,900 in 1987, $1,950 in 1988, and $2,000 in 1989. Under pre-TRA provisions the personal exemption was $1,080. These two provisions are expected to significantly lower the tax base for individuals with farm income.

### Itemized Deductions

Taxpayers were allowed to itemize personal deductions under

pre-TRA law if the total amount of these deductions was greater than the standard deduction. TRA restricts or eliminates deductions for nonbusiness interest, state and local sales taxes, and business expenses.

Spousal Deduction

Pre-TRA law permitted married couples filing joint tax returns a deduction equal to 10 percent of the income of the lower earning spouse. The maximum deduction is $3,000. TRA eliminates the spousal deduction. The spousal deduction represents only 1 percent of total taxable income for farmers, thus, repeal of this provision should have a negligible effect on farm tax liability.

Long-Term Capital Gains Exclusion

Pre-TRA law provided a 60 percent exclusion for long-term capital gains, thus only 40 percent of such gains are taxable. With a maximum personal tax rate of 50 percent, the maximum capital gains tax rate equaled 20 percent. Over $5.8 billion in long-term capital gains were excluded from taxation for farm sole proprietorships in 1982. About one-third of all farmers reported such gains, and the average exclusion was about $8,500. The Tax Reform Act repeals the capital gains exclusion, resulting in an increase in the top tax rate from 20 to 28 percent. Since few farmers are in the top tax bracket, the increase in the tax rate for capital gains will be even greater.

Investment Tax Credit

The investment tax credit (ITC), is perhaps the most important tax expenditure affecting agriculture. Under pre-TRA provisions, farm machinery, crop storage structures, and unitary livestock structures qualified for the full 10-percent credit, and farm vehicles qualified for a 6 percent credit. TRA repeals the ITC, but taxpayers are allowed to claim the unused tax credits that they have accumulated. In 1982, farmers were unable to utilize over $3 billion in tax credits.

Tax Depreciation Deductions

Under the Accelerated Cost Recovery System (ACRS), most depreciable farm assets could be written off in just 5 years. Under pre-TRA provisions, taxpayers were allowed immediate tax deductions for up to $5,000 of investment per year. TRA replaces ACRS with a tax depreciation system which accelerates depreciation rates while lengthening recovery periods. Most farm assets are depreciated over a 7 year period. TRA permits taxpayers to expense immediately up to $10,000 per year. Under this provision, 33 percent of all farm investment would be expensed. According to computations using the IRS dataset, ninety percent of all farms could expense their total investment and would not be burdened by the complexities of tax depreciation.

Income Averaging

Under the existing progressive tax rate structure, individuals

with fluctuating incomes often pay higher taxes than those with steady but equal average incomes. Some taxpayers in the former group were allowed to compute their taxable incomes using a method of income averaging that reduced the extra tax paid. The TRA repeals the use of income averaging for all taxpayers including farmers.

Deduction for Health Insurance Costs

Beginning in 1987, farmers will be allowed to deduct 25 percent of health insurance costs for themselves, dependents, and spouse when determining adjusted gross income.

## THE TAX SIMULATION MODEL: METHODOLOGY, ASSUMPTIONS, AND DATA

Aggregate changes in tax liability due to TRA are computed for farm sole proprietors in each of the following six enterprises; field crops, fruits & vegetables, beef, dairy, general livestock, and hogs, sheep, and poultry.

### Methodology

The basic procedure for this analysis involved the regeneration of federal income tax liability for each farm sole proprietor in the random sample of 15,551 1982 IRS tax returns and aggregating tax impacts for each farm type. Computationally this involved construction of a set of tax accounting algorithms incorporating pre-TRA and TRA tax provisions. The analysis is based on a

cross-sectional data set described below. In order to capture the effects of individual tax provisions, each tax variable was examined statically in isolation to other tax changes. Full tax liability effects are recorded in a total change in tax liability computation. Enumerated below are the major provisions reviewed in this analytic framework:

1/ Changes in marginal tax rates.

2/ Repeal of the ITC.

3/ Repeal of the spousal deduction.

4/ Reductions in itemized deductions.

5/ Increased personal exemptions and standard deductions.

6/ Repeal of income averaging.

7/ Modified tax depreciation deductions.

8/ Deductibility of health insurance costs.

9/ Repeal of capital gains provisions.

Results from this analysis compute changes in taxes paid under pre-TRA provisions due to TRA. Taxable income reported on farm returns was used in examining the impact of rate reductions from TRA. Differences were computed between each tax provision under pre-TRA law using 1987 rates and TRA fully implemented rates.

About the Database

The analysis is based on income tax returns of 15,551 farm sole proprietors for 1982. This is the most recent data available on

personal income tax. It could be argued that the data are somewhat out of date. However, the relative proportions of the tax variables have remained stable during this period. Figures presented from this work represent approximations of the overall magnitude of tax reform provisions on tax liability and should not be construed as actual 1987 estimates of taxes paid.

## ASSESSING THE IMPACT OF TRA ON SOLE PROPRIETORS

Estimated 1986 tax liability under pre-TRA provisions was $10.77 billion. By comparison, tax liability under tax reform decreased 7.3 percent to $9.98 billion. The magnitude of change in taxes paid varies noticeably by farm type.

## IMPACTS BY FARM TYPE

Table 1 presents data on changes in tax liability between pre-TRA and TRA provisions computed for each farm type. With the exception of the dairy sector, tax reform results in overall tax reductions for all other farm types. Tax liability decreases the most for the field crops sector, by 9 percent. In contrast, the dairy sector experiences an average rise in taxes of almost 9 percent.

With the exception of the dairy and hogs, sheep and chickens sectors, marginal tax rates account for the majority of tax reductions for all other agricultural sectors. For the dairy, hogs, sheep and chickens sectors, depreciation and expensing and personal exemption provisions represent significant reductions in

# Table 1

Distribution of Tax Liability by Tax Provision By Farm Type

| Provisions | Field Crops | | Beef | | Fruits, Nuts and Vegetables | | Dairy | | Hogs, Sheep and Chickens | | General | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Change in Tax Liability (bil $) | Percent Distribution | Change in Tax Liability (bil $) | Percent Distribution | Change in Tax Liability (bil $) | Percent Distribution | Change in Tax Liability (bil $) | Percent Distribution | Change in Tax Liability (bil $) | Percent Distribution | Change in Tax Liability (bil $) | Percent Distribution |
| Reductions | | | | | | | | | | | | |
| Marginal Tax Rates | -.9000 | 49.3 | -.5895 | 53.3 | -.1739 | 59.8 | -.0196 | 12.2 | -.0375 | 16.6 | -.2187 | 63.2 |
| Depreciation and Expensing | -.3027 | 16.6 | -.1523 | 13.7 | -.0398 | 13.7 | -.0601 | 37.3 | .0597 | 26.4 | -.0361 | 10.5 |
| Personal Exemptions | -.4505 | 24.7 | -.2652 | 24.0 | -.0580 | 20.0 | -.0487 | 30.2 | -.0875 | 38.7 | -.0709 | 20.2 |
| Standard Deductions | -.1189 | 6.5 | -.0749 | 6.7 | -.0118 | 4.1 | -.0153 | 9.5 | -.0265 | 11.7 | -.0149 | 4.3 |
| Medical Expenses | -.0378 | 2.1 | -.0218 | 2.0 | -.0049 | 1.7 | -.0036 | 2.2 | -.0056 | 2.9 | -.0059 | 1.7 |
| Self Employment Taxes | -.0147 | .8 | -.0031 | .3 | -.0023 | .8 | -.0138 | 8.6 | -.0096 | 3.7 | -.0003 | .1 |
| Total | -1.8246 | 100.0 | -1.1068 | 100.0 | -.2907 | 100.0 | -.1611 | 100.0 | -.2264 | 100.0 | -.3459 | 100.0 |
| Additions | | | | | | | | | | | | |
| Spousal Deductions | .0440 | 3.1 | .0273 | 2.9 | .0069 | 2.7 | .0017 | .9 | .0071 | 4.8 | .0084 | 2.6 |
| Income Averaging | .0460 | 3.3 | .0361 | 3.9 | .0071 | 2.7 | .0050 | 2.6 | .0078 | 4.2 | .0031 | 1.1 |
| Capital Gains | .6758 | 48.2 | .5361 | 57.6 | .1438 | 55.5 | .0912 | 49.1 | .0597 | 31.2 | .1689 | 60.5 |
| Land Clearing | .0041 | .3 | .0027 | .3 | .0012 | .5 | .0006 | .4 | .0005 | .3 | .0008 | .3 |
| Itemized Deductions | .0492 | 3.5 | .0208 | 2.2 | .0099 | 3.8 | .0029 | 1.6 | .0049 | 2.6 | .0118 | 4.2 |
| Charitable Contributions | .0008 | .1 | .0006 | .1 | .0001 | <.1 | .0001 | .1 | .0001 | .1 | .0001 | .1 |
| Rate Adjustments | .0440 | 6.7 | .0585 | 6.3 | .0157 | 6.1 | .0051 | 2.8 | .0043 | 2.3 | .0200 | 7.1 |
| ITC | .4878 | 34.8 | .2486 | 26.7 | .0745 | 28.7 | .0789 | 42.5 | .1009 | 54.5 | .0675 | 24.1 |
| Total | 1.3517 | 100.0 | .9307 | 100.0 | .2592 | 100.0 | .1857 | 100.0 | .1853 | 100.0 | .2806 | 100.0 |

tax liability. TRA provisions for medical expense deductions and self-employment taxes have a minor impact on reducing tax liability for all farm types. The increase in the standard deduction results in a moderate reduction in tax liability overall for farms.

For all sectors the repeal of the capital gains preference contributes significantly toward increasing taxes. The loss of the ITC is also a major factor in increasing taxes. According to USDA farm finance data, the large negative impact of the repeal of the ITC on the dairy, and hogs, sheep, and chickens sectors reflects the above average capital investments made in these sectors relative to other sectors. For all sectors, the repeal of the spousal deduction, income averaging, land clearing deductions and limitations on charitable and itemized deductions and rate adjustments combined have only a moderate impact on increasing tax liability as a proportion of total tax liability increases.

## IMPACTS BY FARM BUSINESS RECEIPTS

An analysis of the effects of tax reform on taxpayers by size of farm business receipts was conducted. Table 2 presents some summary figures. From that table, about two-thirds of tax liability is attributed to taxpayers with less than $15,000 in farm business receipts under pre-TRA conditions. Taxpayers between $60,000 and $500,000 have the next largest share of tax expenditures (17.7

Table 2

Comparison of Tax Liability between Pre-TRA and TRA Provisions by Farm Business Receipts

| Farm Business Receipts | Tax Liability Pre-TRA (bil $) | Percent Distribution | TRA (bil $) | Percent Distribution | Percent Change | Number of taxpayers | Percent of total |
|---|---|---|---|---|---|---|---|
| ($) | | | | | | | |
| <15,000 | 6.77 | 62.9 | 5.98 | 59.9 | -11.7 | 1,719,461 | 63.9 |
| 15,001 — 30,000 | .90 | 8.4 | .82 | 8.2 | -8.9 | 269,807 | 10.0 |
| 30,001 — 45,000 | .54 | 5.0 | .52 | 5.2 | -3.7 | 161,413 | 6.0 |
| 45,001 — 60,000 | .39 | 3.6 | .36 | 3.6 | -7.7 | 121,193 | 4.5 |
| 60,001 — 500,000 | 1.31 | 17.7 | 1.97 | 19.7 | 3.1 | 404,434 | 15.0 |
| +500,000 | .26 | 2.4 | .33 | 3.3 | 26.9 | 15,410 | .6 |
| Total | 10.77 | 100.0 | 9.98 | 100.0 | -7.3 | 2,691,718 | 100.0 |

Table 3

Distribution of Farm Taxpayers by Change in Tax Liability

| Increases in Tax Liability | Number of Taxpayers | Percent of Distribution | Average Tax Liability TRA Law | Average Tax Liability Pre-TRA Law | Average Change in Tax Liability |
|---|---|---|---|---|---|
| $0- $100 | 284,135 | (10.6) | $ 453 | $ 434 | $ 19 |
| $101- $500 | 316,368 | (11.8) | 967 | 745 | 222 |
| $501-$1,000 | 69,481 | (2.6) | 3,036 | 2,315 | 721 |
| $1,001 + | 154,596 | (5.7) | 18,888 | 10,064 | 8,824 |
| Total | 824,580 | (30.7) | | | |
| Decrease in Tax Liability | | | | | |
| $0- $100 | 154,529 | (5.7) | $ 889 | $ 935 | -46 |
| $101- $500 | 762,394 | (28.3 | 1,225 | 1,527 | - 302 |
| $501-$1,000 | 472,529 | (17.6) | 2,141 | 2,847 | - 706 |
| $1,001 + | 477,690 | (17.7) | 9,072 | 12,650 | -3,577 |
| Total | 1,867,142 | (69.3) | | | |
| Total | 2,691,722 | | | | |

percent). Taxpayers under $15,000 in farm receipts experience an 11.7 percent drop in tax liability; the largest decrease among all classes of farm receipts. Tax liability for those with farm business receipts between $60,000 and $500,000 increases by 3.1 percent. Tax liability decreases by 8.9, 3.7, and 7.7 percent for the $15,000-30,000, $30,001-45,000, and $45,001-60,000 farm receipts classes, respectively. Taxpayers with receipts in excess of $500,000 experience a 26.9 percent increase in tax expenditures due to tax reform. For that group marginal tax rate reductions do not compensate for large tax increases due to the repeal of the ITC and capital gains provisions. The percentage distribution of tax expenditures does not change much with tax reform. Table 2 indicates some shift from lower to higher receipt classes in terms of tax burdens.

## TAX DISTRIBUTION UNDER TAX REFORM

Table 3 highlights taxpayer distributions by dollar increments of change in tax liability. Almost 18 percent of taxpayers received an extra $1,000 or more under tax reform provisions than under pre-TRA law. About one-third of taxpayers had decreases between $100 and $500 due to tax reform. Over two-thirds of all taxpayers had a tax reduction. Less than 6 percent had to pay $1,000 or more extra in taxes due to TRA. Taxpayers in that group experienced large tax increases, averaging almost $9,000. That represents an 88 percent increase in tax expenditures for those taxpayers. By contrast, those receiving tax reductions over $1,000 averaged

reductions of $3,577, a 28.3 percent decrease.

Summary and Conclusions

According to the simulation results, tax reform will result overall in lower tax liability for the agricultural sector. The reductions in tax expenditures are most likely to be from lower marginal tax rates, greater depreciation and expensing deductions, and increased personal exemptions. These tax reductions offset in general losses from the repeal of the ITC and capital gains tax preferences.

In terms of net winners and losers from tax reform, taxpayers engaged in field crop activities and general livestock farms will benefit most from the new tax laws while the dairy sector should experience a net increase in taxes. Taxpayers with farm business receipts over $60,000 should experience increases in their tax liabilities. At these levels of farm receipts, the large gains resulting from lower marginal tax rates do not offset the large losses in capital gains preferences and the ITC these taxpayers carry. Over two-thirds of taxpayers should receive a reduction in their tax liability.

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