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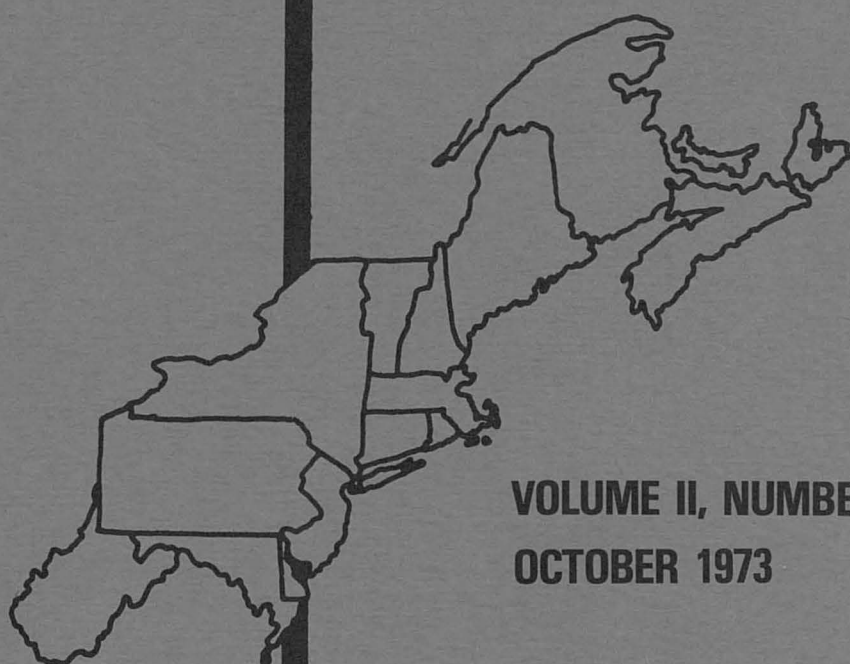
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THE EFFECT OF TAX REFORM ON THE DAIRY FARMER

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Recent Congressional testimony [4,8] has focused on the desirability of eliminating certain income tax "preferences" that are important in agriculture. Specifically, separate proposals have urged that capital gains treatment pertaining to livestock, vineyards and orchards be eliminated and that the cash method of tax accounting no longer be permitted. The justification for these proposals is based on the continued activity of wealthy individuals in tax loss or tax sheltered farming [1,3,6], despite provisions of the Tax Reform Act of 1969 [14] to limit such ventures. Furthermore, it is argued that these tax preferences result in a greater subsidy to the high tax bracket individual than low tax bracket individual and thus place low income bonafide farmers at a competitive disadvantage which could force them out of business.

Cattlemen [10, 12] have countered that the 1969 Act largely eliminated the tax benefits of nonfarm agricultural investments and that more radical changes in the tax law, such as those now proposed, would be both unwise and unnecessary. They argue that cash accounting procedures are simple, less costly and adequate for the needs of the rancher, and that capital gains treatment on livestock encourages orderly expansion of beef cow herds, a goal that is in the best interest of the consuming public. Revoking either of these preferential tax provisions, they believe, would adversely effect the bonafide beef cattle rancher and impede the flow of needed outside risk capital [9] into the beef cattle industry.

It is not the intent of this paper to either support or reject the above arguments on tax reform but rather to show that elimination of capital gains on raised 1231 livestock^{1/} and/or a compulsory switch to accrual accounting would have a direct effect on another group of livestock farmers, namely dairy farmers. Although the data presented applies only to dairy farm businesses, the results imply that other groups of farmers may be similarly affected.

^{1/} Livestock used in the trade or business for draft, breeding, or dairy purposes which meet certain holding period requirements are designated as 1231 livestock.

The Study

The effect of the elimination of capital gains on dairy cattle and mandatory use of accrual accounting was analyzed using a total dairy farm business simulator [9]. Annual tax liabilities and net worth positions for typical farm businesses of varying size operating under present Federal income tax provisions with cash accounting were compared with operation of the same businesses with capital gains on dairy animals taxed as ordinary income and with accrual accounting. Comparisons were made for both stationary firms maintaining a constant herd size and for firms experiencing growth. Stationary firms were simulated for five years and growing firms were simulated over a 20 year period under a predetermined set of management criteria and investment decisions.^{2/}

Elimination of Capital Gains

Loss of capital gains treatment on income from the sale of raised livestock would increase annual taxes on most dairy farm operations. Simulated data for a 40 cow farm indicate an annual increase in taxes of over \$200 (Table 1). Although this appears to be a rather modest sum, it represents a 16 percent increase in taxes and is a direct reduction in the discretionary income of this firm's owner-operator.

Table 1
Farm Proprietorship Annual Tax Liabilities
Constant Herd Size, Five Year Average

Herd Size (cows)	Tax Liability		Difference	
	With Capital Gains	Without Capital Gains	Annual Average	Per Cow
40	\$1,326	\$1,541	\$ 215	\$ 5.38
80	2,114	2,769	655	8.19
120	4,291	5,461	1,170	9.75
160	9,448	11,647	2,199	13.74

As the size of farm increases, the tax liability increases on both an absolute and a per cow basis. This results from the effect of higher

^{2/}For a complete discussion of procedure and assumptions, see [2].

tax brackets and the level of livestock sales. Larger farm businesses tend to be more profitable and thus their owners are in higher tax brackets. Under these conditions an absolute increase in income results in a larger tax increase for the larger farm. These larger businesses also sell more cull (and breeding) dairy livestock which presently qualifies for capital gains.

Although the other predominate forms of business organization operate under alternative tax statutes, the impact of eliminating capital gains is similar to that found for the proprietorship (Table 2).^{3/} The tax liability for partnerships and Subchapter S corporations was increased by amounts similar to that found for the proprietorship. For each of these types of organization, the tax increase results solely from eliminating the 50 percent income deduction on 1231 livestock.

Regular corporations were not as adversely affected by elimination of capital gains. The smaller corporate firms experienced little or no tax increase since there was essentially no change in the effective capital tax rate. (If income never exceeds \$25,000, the rate is 22 percent both with and without capital gains. Tax increases occur when the tax rate on capital gains increases from 30 percent to 48 percent.) Although the large farms experienced increases, these increases were smaller than those of the Subchapter S corporation and partnership. The effective tax rate on the gain from raised dairy animals when capital gains are eliminated is at least twice the present rate for the proprietorship, partnership and Subchapter S corporation but a maximum of 18 percent higher for the regular corporation.

Compulsory Accrual Accounting

Accrual accounting would necessitate a record system that reflected the magnitude and value of inventories on hand. For the dairy farmer reporting his income by the calendar year, this would require a December inventory count of livestock, unsold crops and supplies. This count should not be an insurmountable undertaking. It should be much easier for the dairy farmer to count cattle confined in a barn than it is for the rancher to count cattle on the range.

Inventory valuation may be a somewhat more difficult procedure for the dairyman than the inventory count. There are four methods [11] available to the farmer for determining the value of inventories at the

^{3/}Data in Tables 1 and 2 are not directly comparable in that hired labor for the proprietorship was paid a lower wage than that drawn by the second partner or owner for the other forms of organization.

Table 2
Increase in Tax Liability with Elimination of Capital Gains
on 1231 Livestock by Form of Business Organization,
Constant Size Firms, Five Year Average

Herd Size (cows)	Per Farm Increase in Tax Liability				Per Cow Increase in Tax Liability			
	Reg. Corp. ^{a/} Low Salary	Reg. Corp. ^{b/} High Salary	Sub S. Corp.	Partner- ship	Reg. Corp. Low Salary	Reg. Corp. High Salary	Sub. S. Corp.	Partner- ship
	-----Dollars-----				-----Dollars-----			
80	0	0	+ 659	+ 595	0	0	+ 8.24	+ 7.44
120	+ 110	0	+ 930	+1,070	+ .92	0	+ 7.75	+ 8.92
160	+1,845	0	+1,709	+1,772	+11.53	0	+10.68	+11.08
200	+2,553	+1,036	+2,716	+2,817	+12.77	+ 5.18	+13.58	+14.09
240	+2,851	+2,529	+3,564	+3,679	+11.88	+10.54	+14.85	+15.33

^{a/} Taxes for the regular corporation include personal taxes paid by owner-operators.

^{b/} High salaries were \$4,000, \$6,000, \$9,000, \$12,000 and \$15,000 higher than low salaries for 80, 120, 160, 200 and 240 cow farms, respectively.

end of the year. Some judgement will be needed in using production costs and market prices to establish inventory values which can be substantiated if questioned by the Internal Revenue Service.

For the constant size firm, mandatory use of accrual accounting would have practically the same effect on the annual tax liability as elimination of capital gains on 1231 livestock (Tables 1 and 2). Increased taxes result primarily because accrual accounting inventory procedures accomplish indirectly what capital gains elimination does directly; changing the taxable gain realized on the sale of raised dairy animals from capital gain to ordinary gain.^{4/}

The sale of dairy breeding stock represents the primary case when annual tax increases from accrual accounting would be less than those from elimination of capital gains. Some of the gain on livestock sold for breeding purposes at favorable prices may be taxed as capital gains when accrual accounting is used. This would lower taxes resulting from use of accrual accounting relative to those resulting with elimination of capital gains.

Increased fluctuation in annual tax liabilities may result with accrual accounting. Weather induced variation in forage and grain inventories will produce irregularity in year to year taxable gains or losses. In addition, whenever market value methods of valuation are used, fluctuating prices will result in variation in the amount of annual gain.

Three other aspects of accrual accounting may also influence the dairy farm operation. First, inventorying would eliminate the possibility of unsold livestock, crops and supplies receiving a tax free stepped up basis upon passing through an estate. When cash accounting is used, a large tax benefit may be gained if a herd of raised dairy cows with a zero tax basis receives a new higher tax basis upon estate settlement.

Second, the farmer's ability to benefit from year end tax management would be greatly reduced with accrual accounting. Inventorying procedures prevent the farm operator from shifting certain receipts and expenses between tax years to minimize taxes. Thus, the operator would be expected to pay less attention to the tax consequences of a transaction and more attention to farm firm and market conditions.

Finally, an adjustment period would be required for all farmers making the change from cash to accrual accounting. Specifically, the

^{4/} Simulated data for proprietorships with accrual accounting was similar to the results presented in Tables 1 and 2 and thus are not presented separately.

purpose of this adjustment is to tax all previously untaxed farm wealth except the appreciation in value of real estate [7]. The techniques^{5/} allowed for making the conversion will determine the additional tax burden on the farmer and possibly the short run effectiveness of the law.

Taxes with Growth

During periods of growth most farm businesses experience increases in feed, crop and livestock inventories. Although the magnitude of the tax liability will be increased with either of the tax revisions being analyzed, accrual accounting would have a more detrimental effect on the dairy farmer with a growing farm business than would the loss of capital gains. Cash accounting enables the farmer to delay taxes on the increase in value of business inventories during expansionary periods. These increases in inventory, however, are taxed on a current basis as ordinary income when accrual accounting is used. The deferral of tax payments allowed by the cash method of accounting thus provides a source of growth capital for the farm business which accrual accounting does not permit.

Higher taxes resulting from the elimination of capital gains (Table 3) would significantly reduce the net worth position of a farm's owner-operators at the end of a 20 year growth period. Both cumulative annual taxes and liquidation taxes would be sharply higher when there is no preferential treatment on income from 1231 property. Most of the increase, however, occurred in liquidation at the end of the growth period.

With mandatory accrual accounting, all of the increased tax burden occurred during growth as livestock, crop and supply inventories increased. This is only partially offset by lower liquidation taxes at the time the firm is sold. Since higher taxes during the expansionary period decreased the farmer's internal source of growth capital, he was forced to increase his borrowing from external sources. The compound effect of the resulting interest payments accounted for an important share of the lower net worth with accrual accounting.

Elimination of both capital gains and cash accounting resulted in higher taxes and lower net worth than did either of the reform measures separately. However, the magnitude of the difference between elimination of both tax preferences and mandatory use of accrual accounting alone was small. Accrual accounting itself converts most capital gain to ordinary gain.

^{5/} Although current law provides rules for making the switch, it is probable that a new procedure will be needed for a mass changeover.

Table 3
Tax Liability and Net Worth with Elimination
of Capital Gains on 1231 Livestock
and/or Use of Accrual Accounting
Partnership, 20 Year Growth Period^{a/}

Tax Assumptions	Cumulative ^{b/} Annual Taxes	Net Worth Before Liquidation	Liqui- dation ^{c/} Taxes	Net Worth After Liquidation
1. Cash Accounting With Capital Gains	\$44,302	\$285,046	\$39,932	\$245,114
2. Cash Accounting Without Capital Gains	56,355	263,289	58,568	204,721
3. Accrual Accounting With Capital Gains	88,624	194,248	28,804	165,444
4. Accrual Accounting Without Capital Gains	90,836	191,053	33,392	157,661

^{a/} Herd size increased from 40 to 160 cows and crop acres increased from 100 to 400 acres. Prices levels and production rates were held constant over the growth period.

^{b/} Total taxes paid over the growth period.

^{c/} Assuming a cash sale of all farm assets at the end of the twenty year period, use of income averaging and capital gains treatment of gain on real estate.

The taxes indicated in Table 3 are calculated under the assumption that capital gains are eliminated only on 1231 livestock. Liquidation taxes would be significantly higher if capital gains were also eliminated on real estate. Specifically, liquidation taxes would be \$17,800 higher (\$76,448) with cash accounting and \$16,900 higher (\$50,292) with accrual accounting. Under these conditions, elimination of both tax preferences would have a much greater growth inhibiting effect than use of accrual accounting alone. The net effect of eliminating cash accounting and all capital gains treatment for a typical partnership was a \$104,353 or 43 percent reduction in after tax net worth at the end of a 20 year period.

A basic assumption of this analysis is that milk price is independent of type or degree of taxation. It can be argued that in a perfectly competitive market, product prices will increase as input costs (taxes) increase, and therefore, in the long run, farmers will be equally well off regardless of tax levels. However, a short run depression of farm

income and firm growth will precede the milk production decrease necessary to increase prices. Thus, the burden of transition will be borne by farmers. The magnitude of this burden will depend upon the time period required for prices to increase sufficiently to fully offset the increased taxes.

Conclusions

Mandatory use of accrual accounting and elimination of capital gains on 1231 livestock would increase the dairy farmer's annual income taxes by a similar amount if crop and supply inventories are constant. Accrual accounting inventorying procedures accomplish indirectly what capital gains elimination does directly; changing the taxable gain realized on the sale of raised dairy animals from capital gain to ordinary gain.

Tax increases would be more for firms organized as proprietorships, partnerships, and Subchapter S corporations than for those organized as regular corporations. Whereas the effective tax rate on the gain from the sale of raised dairy animals when capital gains are eliminated would be a maximum of 18 percent for the regular corporation, it would be at least twice the present rate for the other three forms of business organization.

Eliminating cash accounting and/or capital gains on 1231 livestock would increase taxes more for large farms than small farms. These increased taxes, however, would represent an important reduction in discretionary income for all farm operators.

If accrual accounting were made compulsory and/or capital gains treatment revoked, dairy farm businesses experiencing growth would be more severely effected than those maintaining constant firm size. The ability of accrual accounting to force taxation of annual inventory increases as well as to convert most capital gain to ordinary gain makes it a more severe deterrent to growth than loss of capital gains treatment on 1231 livestock. Loss of preferential tax treatment on real estate appreciation at the time of farm divestiture would further inhibit realized growth by increasing liquidation taxes and reducing net worth.

Bibliography

1. Axelrad, Irving L., "Farming As a Tax Shelter: Citrus Groves and Breeding Herds," Taxes, Vol. 46, December 1968.
2. Bryant, William Russell, "Implications of Present Income Tax Provisions and Potential Effects of Reform on Northeast Dairy Farms," Unpublished M.S. Thesis, Department of Agricultural Economics, Cornell University, May 1973, 164 pp.
3. Carman, Hoy F., "Tax Loss Agricultural Investments After Tax Reform," American Journal of Agricultural Economics, November 1972.
4. Davenport, Charles, "The Taxation of Farm Operations," Before the House Committee on Ways and Means, February 20, 1973.
5. Forker, Olan D., "A Comparison of the Cash and Accrual Methods of Reporting Income: The Macro Impact on Egg Production," Staff Paper No. 73-8, Department of Agricultural Economics, Cornell University, January 1973.
6. Harrison, Virden L. and W. Fred Woods, "Farm and Nonfarm Investment in Commercial Beef Breeding Herds: Incentives and Consequences of the Tax Law," ERS-497, April 1972.
7. Harrison, Virden L., "Accounting Methods Allowed Farmers: Tax Incentives and Consequences," ERS-505, January 1973.
8. Hjorth, Roland L., "Tax Problems of Investments in Farm Operations," Before the House Committee on Ways and Means, February 20, 1973.
9. LaDue, Eddy Lorain, "A Computerized Farm Business Simulator for Research and Farm Planning," Unpublished Ph.D. Thesis, Department of Agricultural Economics, Michigan State University, 1971, 492 pp.
10. Maer, Claude, M., Jr., "Taxation of Livestock Operations," Before the House Committee on Ways and Means, February 20, 1973.
11. O'Byrne, John C., Farm Income Tax Manual, The Allen Smith Company, Indianapolis, Indiana, 1970, 1014 pp.
12. "Statement by the American National Cattlemen's Association With Respect to the Taxation of Farm Operations," Before the House Committee on Ways and Means, February 19, 1973.
13. Scofield, William H., "Nonfarm Equity Capital in Agriculture," Agricultural Finance Review, Vol. 23, July 1972.
14. Woods, W. Fred, "The Tax Reform Act of 1969 - Provisions of Significance to Farmers," ERS-441, April 1970.