

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.

SPI XOT SWOOM

UNIVERSITY OF CALIFORNIA

4//24

AUG 1 9 1982

Agricultural Economics Library

University of California, Davis Department of Agricultural Economics

TAX POLICY: IMPLICATIONS FOR PRODUCERS AND THE AGRICULTURAL SECTOR

bу

Michael Boehlje and Hoy Carman

Paper presented at the 1982 joint AAEA/WAEA Meeting in Logan, Utah, August 1-4, 1982.

TAX POLICY: IMPLICATIONS FOR PRODUCERS AND THE AGRICULTURAL SECTOR

Michael Boehlje and Hoy Carman*

Taxes and tax management appear to play a significant role in the choice among various production, marketing and financial strategies by farmers. Researchers often discover that they can better explain or predict agricultural producers' actions using after-tax rather than before-tax net income. Furthermore, policy makers clearly perceive that changes in tax rules will significantly alter savings and investment behavior as evidenced by the major changes in the U.S. tax code with passage of the Economic Recovery Tax Act of 1981. The purpose of this discussion is to evaluate the impact of tax policy on farm firm decision making, aggregate investment behavior and supply and prices of agricultural commodities. The discussion will review empirical and numerical studies of changes in tax laws to determine the expected impact of tax policy and the Economic Recovery Tax Act of 1981 in particular on farmers and the agricultural sector.

The Institutional Setting

The federal income and estate tax law is enormously complex with a myriad of deductions, exemptions, and credits. Furthermore, the law is frequently revised (witness the 1976 Tax Reform Act and 1981 Economic Recovery Tax Act) and new IRS regulations, revenue rulings, and court decisions continually update its application. Our focus in this section is not on the details of the specific provisions of the law, but instead

^{*}Professor of Economics, Iowa State University, Ames, Iowa and Professor of Agricultural Economics, University of California, Davis, California, respectively. Giannini Foundation Paper No. 653. Iowa State University Agriculture and Home Economics Experiment Station Journal Paper No.

on the conceptual base for taxation of income and wealth and the unique treatment of farm income and wealth by the U.S. tax code.

The Federal Income Tax

The individual federal income tax is designed to impose a progressive tax each year on the individual's net income. But if gross income and its related expenses can be reported in different tax years, the level of net income in each year can be distorted. Mismatching income and expenses in different tax years provides deferral of taxes, and it can distort the application of progressive tax rates. Thus, many complex rules have been developed and accrual accounting is required to properly match costs and receipts.

Long-term capital gains from the sale of capital assets are taxed at 40% of the rate applying to ordinary income. This preferential tax rate and the rules for allocating the costs of capital items over the life of the asset provide incentives for mismatching income and expenses. Such mismatching may permit a taxpayer to convert ordinary income to capital gains and reduce effective tax rates.

Special income tax rules applicable to agriculture permit taxpayers to mismatch income and costs thereby reducing tax liabilities. Such provisions include (a) the use of cash accounting, (b) the immediate deductability of some expenses of a capital nature, and (c) capital gains treatment for income from assets whose costs may have been deducted as a current expense. Cash accounting ignores inventories; thus, the farmer can deduct costs of inputs even though an inventory exists, and control the tax year in which income is realized through storage of crops and timing of sales.

Expenditures incurred in the development of certain farm assets, such as trees (other than citrus or almond trees), vines, and livestock herds used for draft, breeding, dairy, and sporting purposes are capital expenditures. However, farmers may deduct the full amount of such expenditures in the year in which they are incurred. These expenditures can be used to reduce ordinary income from other sources which would be taxed at regular rates. Then income from the sale of the assets is usually treated as long-term capital gains with only 40% of the income subject to tax. This is the mechanism for converting ordinary income to capital gains income.

The Estate Tax

The estate tax, also imposed with a progressively graduated tax structure, is a tax on wealth transferred because of death. Generally speaking, the tax is computed on the value of the property owned by the deceased, and the tax is due within nine months after death. Farmers have some relief from both of these rules.

If farmland is a sufficiently large portion of a farmer's estate, the estate tax may be calculated by giving the farmland a special "use" value rather than its full market value. This special-use value is computed under a formula that is estimated to reduce values for estate tax purposes by 50% or more. In addition, farm and other business estates are entitled to an extended time over which to pay the estate tax. Payments need not start until nearly six years after death, and the tax can be paid in ten equal annual installments. During this time, interest on estate taxes due on the first \$1 million of estate value accrues at 4%, a rate well below market interest rates or interest charged on other tax liabilities.

Farm Investments as Tax Shelters

Investments taxed under preferential rules, such as the special income and estate tax rules for farmers, allow the creation of tax shelters. This tax-shelter characteristic has a significant impact on not only the total financial return from farm assets, but may also impact the pattern of ownership of such assets.

Because of the tax shelter potential, high income individuals with farm investments have significant incentive to report deductions as early as possible, delay reporting income as long as possible, and convert ordinary income to capital gains. The returns from actions taken to mismatch income and costs are a direct function of the tax bracket of the investor. A high-bracket taxpayer and a low-bracket taxpayer may earn the same commercial return from a tax sheltered farm investment, but the aftertax returns will be greater for the high-bracket taxpayer. Since ownership of assets slowly gravitates to those who obtain a greater return and thus can pay the most for them, over the long run, ownership of tax shelter assets will be concentrated in the hands of the high-bracket taxpayers. The tax shelter means the most to those with the highest taxable income, whether that income is produced on the farm or elsewhere.

Recognizing the distortions attributable to tax sheltering, tax reform efforts during the 1970's were primarily dedicated to closing "loopholes" and ending preferences enjoyed by particular groups. Tax motivated investments in citrus and almonds were effectively terminated by capitalization provisions. At the same time, the tax advantages of breeding livestock were reduced by increased holding periods to qualify for capital gains treatment and recapture of excess depreciation. However, investor interest

simply shifted to other agricultural enterprises. There were large increases in grape and walnut acreage, and cattle feeding syndicates flourished (Carman, 1981). The syndication of agricultural tax advantages for sale to nonfarm investors was curtailed by the Tax Reform Act of 1976, but individual high income investors continued to realize the tax advantages of agricultural investments.

The Economic Recovery Tax Act

Recent legislation based on the supply-side approach to macro-economic policy is dedicated to reducing tax rates to spur economic activity. The Economic Recovery Tax Act of 1981 (ERTA) does not have specific agricultural provisions, but the general provisions will have significant impacts on agriculture as well as other sectors. Producers' and investors' response to previous changes in income tax provisions offer a guide to the expected impacts of ERTA.

Income Tax Provisions

Durst, et al., summarized some 26 income tax provisions in the Economic Recovery Tax Act of 1981 which are significant to the agricultural sector. Of these, there are five which can be expected to have important short— and long—run production, price, and/or structural impacts. The five include revised investment tax credit rules, reduced individual tax rates, reduced small corporation tax rates, reduced capital gains tax rates, and an accelerated cost recovery system to replace depreciation provisions. The revised provisions will increase the after—tax return from many agricultural investments and will, thus, encourage some expansion of output.

The investment tax credit: ERTA includes three major changes in the investment tax credit. It (a) shortens the useful life needed to qualify for both full and partial credit, (b) increases the maximum credits for any tax year for both new and used property, and (c) liberalizes recapture of credit for premature disposal of the asset.

We do not expect the revised investment tax credit rules, taken alone, to have a dramatic impact on agricultural investments. The new rules do increase the incentive for investments in short-lived (3 or 4 year) assets. More liberal recapture provisions, allowing a 2% credit for each year the asset was held, favor early disposal of property. The \$100,000 limit on the investment tax credit for used property will be increased to \$125,000 in 1981 and to \$150,000 in 1985. This change together with an increase in the maximum credit for any one tax year and an extension of the carryover period for excess credit from 7 to 15 years will tend to favor large investments. Thus, the major beneficiaries of these revised rules will be the largest farm and nonfarm investors.

Income tax rate reductions: ERTA includes across-the-board personal income tax rate reductions and also reduces small corporation tax rates. Personal tax rates are scheduled to be reduced in three steps, 5% on October 1, 1981, 10% on July 1, 1982, and another 10% on July 1, 1983. The highest marginal tax rate is reduced from 70% to 50% for 1982 and later years. Marginal tax rates for the two lowest corporate tax brackets will decrease in two steps. The tax rate for corporations with less than \$25,000 taxable income will be reduced from 17% to 16% in 1982 and to 15% in 1983, and the rate for corporations with \$25,000 to \$50,000 net income

will be reduced from 20% to 19% in 1982 and further to 18% in 1983. There is no change in rates for the remaining three corporate tax brackets.

Tax rate reductions in ERTA benefit all taxpayers, but the highest bracket taxpayers receive both the largest percentage and absolute tax savings. It is difficult to predict the response of farmers to tax rate reductions and increases in after-tax income. There will likely be some pressure to expand the average scale of operation. Budgeted examples illustrate that optimum farm size will increase with a reduction in marginal income tax rates (Carman, 1972). The impact of lower marginal tax rates on individual farm output is uncertain. A common hypothesis is that decreasing tax rates give producers an incentive to increase output. A case study of five large California farms found, however, that rate reductions occurring between 1962 and 1972 (a reduction of over 20% for the highest marginal tax brackets) provided little incentive to increase output (Lin, Carman, Moore, and Dean, p. 191).

The Revenue Act of 1978 established a new tax rate schedule for small corporations effective in 1979. Boehlje and Krause analyzed the effect of these changes on the incentives for farmers to incorporate. Their results, for tax rates effective prior to ERTA, indicate that incorporation can facilitate estate planning and transfer and reduce total taxes for farms with net income above \$25,000 to \$30,000. The differential reductions in marginal tax rates between individuals and corporations will increase this break-even point by almost \$5,000 after all scheduled rate reductions are effective in 1983. Incorporation, however, continues to be very attractive to large growth-oriented farms, and farm corporation numbers can be expected to increase.

Capital gains: Maximum capital gains tax rates are reduced from 28% to 20% by ERTA. The differential between ordinary income and capital gains tax rates will continue to encourage investments and operating methods which permit realization of long-term capital gains. Increased after-tax profits from breeding livestock will favor increased investment in these enterprises. Operating methods are also affected. After-tax returns from an all-gilt swine breeding operation, as analyzed by Duffy and Bitney, will continue to favor this production method for some producers. As shown by Musser, Martin, and Saunders, crop farms may also move toward livestock production because of the capital gains incentive. After-tax returns from land and orchard development will also be enhanced by the reduction in capital gains tax rates and these activities may be encouraged. Tax rate reductions will also tend to increase bid prices for appreciating agricultural land, as demonstrated by Boehlje (1981, p. 134).

Accelerated cost recovery system (ACRS): Traditional depreciation of assets has been replaced by ACRS for assets placed in service after 1980. ACRS permits more rapid capital cost recovery and involves supposed simplification of depreciation rules. ACRS provides a five class system with most agricultural assets fitting into three of the classes, 3-year, 5-year, and 15-year. The taxpayer determines the appropriate class for depreciable property and then applies a statuatory percentage to the unadjusted basis of the property. Salvage value no longer enters the calculation.

The majority of depreciable agricultural assets have a recovery period of five years. Recovery rates for property placed in service between 1981 and 1984 are 15% for the first year, 22% for the second year and 21% for each of the remaining three years. Note that the first year percentage is

applicable regardless of when during the year the asset is placed in service. Thus, year end purchases of assets as part of a tax planning strategy can be advantageous. The taxpayer has an option of using straight line depreciation over a longer life if rapid recovery of capital is not desired. With 5-year property one can elect to use straight line depreciation over a life of 5, 12, or 25 years.

ACRS substantially increases the present value of income tax deductions when compared to traditional straight line or accelerated methods of depreciation. This increase is due to (a) a significantly shorter tax life for most assets under ACRS, and (b) recovery of the total value of the asset under ACRS whereas salvage value was required under previous law. Comparison of previous midpoint tax lives under the Asset Depreciation Range System with recovery periods under ACRS shows the following reductions: cattle, 7 to 5 years; horses, 10 to 5 years; farm machinery and equipment, 10 to 5 years; and farm buildings, 25 to 15 years. There were some other dramatic reductions; the costs of trees and vines and drain tile formerly recovered over 20 to 40 years, are now recovered in 5 years while the costs of single-purpose structures, formerly recovered over 25 years, are also recovered in 5 years.

These changes will encourage investment in the affected assets, particularly when combined with the investment tax credit. This investment may also affect asset prices, and ultimately, farm product prices as output responds.

Estate Tax Provisions

Changes in the estate and gift tax provisions implemented by ERTA are almost as numerous and complex as the changes in income tax provisions.

Our discussion will focus on the impact of seven of the major changes: the increase in the unified gift and estate tax credit, and 100 percent marital deduction, the larger gift tax exclusion, the reduced tax rates, the changes in joint tenancy rules, and the liberalized rules concerning special use valuation and installment payment of tax.

The unified credit: In 1976 the lifetime exemption of \$60,000, which had been in effect since 1954, was replaced with a unified credit which is a direct credit against both estate and gift taxes; once the tenative tax is calculated the credit is used to offset all or part of this tax. The unified gift and estate tax credit was \$47,000 for deaths in 1981; this credit would offset the tax on an estate of \$175,625. The credit will be increased according to the following schedule:

Year	Unified credit	Deduction equivalent
1982	\$ 62,800	\$225,000
1983	79,300	275,000
1984	96,300	325,000
1985	121,800	400,000
1986	155,800	500,000
1987	192,800	600,000

In a 1981 study of possible changes in estate tax law, Boehlje concluded that the benefits of an increased credit as measured by an increase in the percent of the estate transferred to the heirs are larger for modest size estates (estates of \$500,000 to \$1,000,000) than larger estates. However, for estates that are very small and would incur no tax under the current law, an increase in the credit would result in no benefits.

Marital deduction: The gift and estate tax law has allowed a partial deduction for property transferred to a surviving spouse during life or at death. With passage of ERTA this deduction was increased to

100%; thus all qualified transfers to a spouse during life or at death are exempt from taxation. In addition, the executor is given the flexibility to elect as to whether certain property in which the surviving spouse is given a life-time interest (a life estate) is to qualify for the marital deduction. This provision gives the executor substantial flexibility in post-death tax planning.

Boehlje also evaluated the potential impact of an unlimited marital deduction. His results (assuming 1981 tax rates) indicate that the unlimited marital deduction may result in higher total taxes because of the concentration of the property in the surviving spouse's estate, and consequently less property transferred to the heirs after both parents are deceased. Furthermore, the availability of the unlimited marital deduction may encourage the transfer of the entire farm to the surviving spouse rather than part of it being devised to the children at the death of the first parent to die; this may result in serious business continuity problems if the children are planning to take over the farm business after the parents death.

Gift tax exclusion: Annual gifts that do not exceed a specified amount have been exempt from income, estate or gift taxation. The annual gift tax exclusion was increased by ERTA from \$3,000 per recipient per year (\$6,000 if a spouse consents in the gift) to \$10,000 per recipient per year (\$20,000 if a spouse consents).

The expected result of this change is to increase the incentive to transfer property by gift. For example, parents with married children could transfer \$400,000 to each child and spouse over a 10 year period of time. In the case of a farm operation where the children anticipate

operating the farm after the parents' death, the increased gift tax exclusion should facilitate such business continuity. The larger exclusion should also result in more wealth being transferred between generations free of tax.

Tax rates: The estate and gift tax rates prior to ERTA ranged from 18% on the first \$10,000 of transfers to 70% on transfers in excess of \$5,000,000. The new provisions reduce the highest gift and estate tax rates from 70% for transfers in 1981 to 65% for transfers in 1982, 60% for transfers in 1983, 55% for transfers in 1984 and 50% for transfers in 1985. When rate reductions are completely phased in by 1985, the maximum 50% rate will be applicable to transfers in excess of \$2.5 million.

This reduction in rates will benefit exclusively those with estates in excess of \$2.5 million; the result will be that farmers and others with larger estates will find the estate tax less burdensome than in the past, and will consequently be able to transfer more property to their heirs. Furthermore, once the unified credit is fully phased-in by 1987, it will offset the tax due on taxable estates of \$600,000 or less. The marginal tax bracket for the \$600,000 estate is 37%; consequently in 1987 the effective estate and gift tax rates will range from 37% for \$600,000 to 50% for \$2.5 million or more of property transferred. This truncated effective rate structure is much less progressive than the rate structure that existed in the past.

Joint tenancy: Prior to 1982, joint tenancy ownership of property between husband and wife incurred the risk of double taxation particularly for farm families where the husband died first. At the husband's death joint tenancy property was presumed to be owned by him unless the surviving

spouse could prove contribution, and the property was transferred by the right of survivorship to the surviving spouse where it was taxed a second time at her subsequent death.

With passage of the ERTA, one-half of the value of jointly owned property will be presumed to be owned by each spouse for federal estate tax purposes. For joint tenancies other than those between husband and wife, the traditional rules whereby the entire value of joint tenancy property is taxed in the estate of the first joint tenant to die, unless the surviving joint tenant can prove contribution to the property, still apply.

This provision will reduce the potential tax burden at the death of the first spouse for those who own property in joint tenancy. However, joint tenancy ownership may still result in burdensome tax liabilities, not at the first death, but at the second death. Since joint tenancy carries with it the right of survivorship, all joint tenancy property is automatically transferred to the survivor. Consequently, joint tenancies result in the same potential tax problem as noted earlier with the unlimited marital deduction; the tax burden may be minimal at the death of the first spouse, but all the property (that originally owned by both spouses) is "stacked" in the estate of the surviving spouse and at his or her death, this larger estate will be subject to tax at higher rates and without the benefit of the marital deduction.

Special use valuation: Special use valuation, which allows farmers to value real estate for estate tax purposes based on its value in use rather than fair market value, was implemented with passage of the Tax Reform Act of 1976. This provision has the potential to reduce estate taxes dramatically for those who qualify to use it. A number of technical

changes were made in the special use valuation provisions by ERTA. In general, these changes will make it easier for farmers and their heirs to qualify for and avoid recapture of the substantial tax benefits from this provision. Furthermore, the maximum reduction in estate value allowed using this provision is increased from \$500,000 to \$600,000 for deaths in 1981, \$700,000 in 1982 and \$750,000 in 1983.

These changes will increase the tax savings available from the special use provision and make it available to a broader spectrum of landowners—not necessarily farmers in all cases. In an analyses of the pre-1982 use valuation provisions, Boehlje found that the tax savings increase in absolute magnitude but decline relative to estate size as estate size increases. Furthermore, he argued that:

The tax savings (percent reduction in taxes) are larger for those farms where land comprises a larger proportion of the estate. In addition, higher valued land appears to receive a larger discount from using special use valuation, resulting in more tax savings, compared to lower valued land. . . . The relative and absolute tax savings from special use valuation are substantially larger when the farm includes more assets and more debt but the same net worth (assuming qualification for this provision).

The 1981 revisions will magnify the effects of this provision.

Installment payment of tax: The installment payment of tax provision that was included in the tax code in 1976 was also revised with passage of ERTA. The requirement that a closely held business must comprise 65% of the adjusted gross estate to qualify for the 15 year installment payment of tax provision has been reduced to 35%. The installment payment acceleration rules have also been changed. Whereas the law prior to 1981 required acceleration of installment payments if one-third or more of the closely held business property was sold or disposed of, the new

rules require acceleration if one-half or more is sold or disposed of. The 10-year installment payment option has been repealed.

In his study of the 1976 law, Boehlje argued that:

. . . the option to pay taxes in installments allows the heirs to use the earnings from the farm and other sources of income during the 15year period following death to pay the taxes. . . .

The tax savings from installment payment of tax remain approximately proportional with increases in farm size until the estate reaches the size where the interest rate increases from 4% to the regular rate on unpaid tax (\$1 million of taxable property); beyond this the relative size of the tax savings decline. . . . Since it will reduce the need for liquid funds to pay taxes, the installment payment of tax provision may have a greater effect on the continuity of the firm and help to maintain the size of the farm after the parent's death than special use valuation.

The 1981 revisions will make this provision available to a broader spectrum of farmers, and will reduce the possibility of acceleration of payments if part of the farm is sold.

In a recent study comparing provisions of the pre-1981 and post-1981 estate tax, Johnson concluded that:

The increase in the unified credit decreases the federal tax liabilities for all estate sizes. Correspondingly, the liquidity losses associated with the estate transfers also decline under the new law. These benefits translate into an increase in the percent of the parents' property which is ultimately received by the heirs. . . . When farm estates qualify for special use valuation, the larger estates receive a greater absolute benefit from the new law than smaller estates. Furthermore, the results in this analysis suggest that the 1981 tax law magnifies the effect of use valuation as quantified by Boehlje (1981) by further counteracting the progressive nature of the tax rate schedule.

Aggregate Impacts of Tax Policy

The aggregate impacts on agriculture of changes in tax provisions are difficult to ascertain. Agricultural producers respond to many factors in their investment and production decisions and their responses often involve significant time lags. The short- and long-run implications of tax law

changes may differ as may the individual and aggregate impacts. Davenport, Boehlje, and Martin, in their study of the effects of tax policy on American agriculture prior to 1981, concluded that:

Generally, tax policy has led to upward pressure on farmland prices, larger farm sizes, incentives for farm incorporation, altered management practices, and increased use of farmland as a tax shelter by both farmers and nonfarmers.

While substantial future research will be required to document the impacts of the Economic Recovery Tax Act of 1981, past work provides a basis for forecasting the nature of some aggregate effects.

Agricultural Vs. Other Industries

The new Accelerated Cost Recovery System (ACRS) and revised investment tax credits can be expected to have a differential effect on assets because of different relative changes in tax lives. There will also be a differential impact on industries because of different mixes of capital stock. Gravelle has completed a study of the effects of ACRS on effective tax rates by asset type and industry under two annual inflation rates. analysis, which considered only equipment and structures, estimates that effective tax rates on a marginal increment of investment in agriculture will decrease from 29.5% to 16.7% (assuming 6% inflation) or from 34.5% to 22.5% (assuming 9% inflation) (p. 14). Her ranking of 11 broad industries from highest to lowest in terms of effective tax rates places agriculture 5th prior to and 4th after passage of ERTA. Eight of the other 10 industries fared better than agriculture when considering relative decreases in effective tax rates. Gravelle did not consider inventories and land, factors which if included would have increased agriculture's relative effective tax rate (p. 15). She also omitted breeding livestock and

perennial crops, assets which if included would decrease agriculture's effective tax rate. Despite these omissions and her failure to consider some special tax rules, her results indicate that ERTA does tend to favor capital investment in industries other than agriculture.

Differential Impacts Within Agriculture

The Accelerated Cost Recovery System substantially increases the present value of income tax deductions when compared to existing methods of depreciation; the increase is primarily a function of the decrease in tax life of various assets due to ACRS. Examples noted earlier include the dramatic changes for trees and vines, tile, and single purpose structures. Thus, the ACRS provisions in ERTA can be expected to initially have a differential impact on after-tax returns from farm enterprises because of variations in the mix of depreciable assets. Since farm types and enterprise mixes vary by state and area within the United States, ERTA can have significant regional impacts on effective tax rates and after-tax rates of return and capital investment. Research will be necessary to determine the nature and extent of regional differentials.

Individual Vs. Aggregate Impacts

Farm income tax provisions can yield short-term tax savings to the individual producer which are more than offset by long-term product price decreases due to supply response. The supply response induced by tax incentives may require several years to be completed. Tax law changes terminating the tax advantages for citrus and almond orchard development resulted in decreased plantings, acreage, and production for these crops with accompanying increases in product prices (Carman, 1981). In the study simulation, changes in acreage and production continued for over 15 years

after the tax law changes occurred. These long-term adjustments can affect many groups in addition to producers. A budgeted example for selected orchard crops demonstrated that middlemen and consumers could realize significant benefits from tax provisions encouraging orchard development (Carman and Youde).

The dramatic decrease in tax lives for trees and vines included in ERTA will have significant impacts through time. In the short-run, investor interest will shift from developing orchards to purchasing bearing orchards. Budgeted examples indicate that capital recovery over five years from bearing orchards provides more after-tax income than orchard development, even when development costs are deducted from other income as a current expense. The price of bearing orchards is expected to increase, with the maximum increase dependent on the marginal income tax bracket of the investor.

As after-tax returns increase, a long-run supply response is also set in motion. An estimated supply response model for California navel oranges traces possible impacts of ACRS through time. The model assumes that investors are in the 50% marginal income tax bracket and an 8% discount rate is used (Hardesty and Carman). The estimated price of an acre of developed navel orange trees (omitting land values) initially increases a maximum of approximately 44%. This results in an increase in plantings, a decrease in removals, increased production and decreased navel orange prices. A projection to 1995 estimates that ACRS increases total acres 27%, bearing acreage 21%, and decreases prices 7%. However, even with ACRS, projected 1995 acreage and production are below actual 1980 levels.

Tax Shelter Investments

Some analysts believe that the decrease in tax rates under ERTA will reduce the demand for tax shelter investments; we do not expect a significant decrease in agricultural investments. The differential tax treatment of ordinary income and capital gains continues to make income conversion attractive. In addition, there will be an increased number of agricultural investments available since purchase of existing orchards, including the old favorites citrus and almonds, offers tax shelters as good or better than orchard development. Breeding livestock will become more popular because of shortened tax lives, no salvage value, and the investment tax credit. Land investments will also continue to be attractive income and estate tax shelters for many individuals.

Structural Impacts

The hypothesized individual and aggregate response to provisions in the Economic Recovery Tax Act of 1981 will tend to perpetuate and possibly accelerate structural changes in agriculture already underway. For example, Boehlje has argued elsewhere with respect to the use valuation provisions in estate tax law that

change include the encouragement of higher leverage for farmers, potential separation of the ownership and operation of farmland and additional pressures in the rental market (including the development of innovative leases to maintain qualifications for this provision for landlords), and entry problems because of the premium that can be paid by older farmers for property with similar productivity. The reduced offerings of land because some farmers will choose to own land until death to obtain the tax benefits, combined with the increased demand to buy real property to obtain the estate tax benefits will most likely result in increased real estate prices. And since the tax benefits only accrue at death, additional divergence between the value of land and its income generating capacity would result in further cash flow problems for those buying land, particularly the beginning farmer.

We expect continued pressure on farmland prices, larger farm sizes, adoption of management practices to exploit farm tax rules, incorporation for its tax advantages, and continued exploitation of farm tax rules by both farm and nonfarm investors.

References

- Boehlje, Michael. An Analysis of the Implications of Selected Income and
 Estate Tax Provisions on the Structure of Agriculture. Ames, Iowa:
 The Center for Agricultural and Rural Development Report 105, October 1981.
- Provisions on the Structure of United States Agriculture." The Agricultural Law Journal Spring 1982:99-124.
- Boehlje, Michael and Ken Krause. Economic and Federal Tax Factors

 Affecting the Choice of a Legal Farm Business Organization.

 Washington, D.S.: USDA, ESS, Agr. Econ. Report No. 468, June 1981.
- Carman, Hoy F. "Changing Federal Income Tax Rates and Optimum Farm Size."

 American Journal of Agricultural Economics 54(1972):490-491.
- Carman, Hoy F. and James G. Youde. "Alternative Tax Treatment of Orchard Development Costs: Impacts on Producers, Middlemen and Consumers."

 American Journal of Agricultural Economics 55(1973):184-191.
- Carman, Hoy F. "Income Tax Reform and California Orchard Development." Western Journal of Agricultural Economics 6(1981):165-180.
- Davenport, Charles, Michael D. Boehlje and David B. H. Martin. The Effects of Tax Policy on American Agriculture. Washington, D.C.: USDA, ERS, Agr. Econ. Report No. 480, February 1982.
- Duffy, Michael and Larry L. Bitney. "The All Gilt Breeding Herd . . . More After-Tax Profits?" Department of Agricultural Economics Report No. 77, University of Nebraska, May 1977.
- Durst, Ron, Wendy Rome and James Hrubovcak. The Economic Recovery Tax Act of 1981: Provisions of Significance to Agriculture. Washington,

 D.C.: USDA, ERS, NED, Staff Report No. AGES 810908B, September 1981.
- Gravelle, Jane E. "Effects of the 1981 Depreciation Revisions on the Taxation of Income from Business Capital" National Tax Journal 35(1982);1-20.
- Hardesty, Sermin D. and Hoy F. Carman. "Orchard Investment and the Economic Recovery Tax Act of 1981." Dept. Agr. Econ. Working Paper No. 82-3, University of California, Davis, July 1982.
- Johnson, Sandra. "The Impact of the Economic Recovery Tax Act of 1981 on the Intergenerational Transfer of Farm Estates." M.S. Thesis, Department of Economics, Iowa State University, Ames, Iowa, 1982.
- Lin, William, H. F. Carman, C. V. Moore, and G. W. Dean. "Producer Response to Income Taxes: An Empirical Test Within a Risk Framework." National Tax Journal 27(1974):183-195.
- Musser, Wesley N., Neil R. Martin, Jr., and Fred B. Saunders. "Impact of Capital Gains Taxation on Farm Organization: Implications for Meat Animal Production on Diversified Farms." Dept. Agr. Econ., University of Georgia, 1976.