Are Farmland Prices Being Driven Up By Provisions of the Internal Revenue Code?

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Under Section 1031 of the Internal Revenue Code, owners of farmland can delay paying some taxes on capital gains from the sale of farmland. The catch to this special provision of the income tax code is that the proceeds from the sale of the land have to be re-invested in farmland or other real property within a specific period of time. These types of transactions, commonly known as "like-kind exchanges", allow farmers to hold on to the financial capital that would otherwise go to the U.S. Treasury as a tax payment.

Some commentators have argued that the recent escalation in farmland values has been fueled, in part, by the like-kind exchange provisions of the federal income tax code. The reasoning is that farmers are selling farmland at a premium for development purposes and then paying prices for farmland that are above the agricultural value of land so that they can defer the payment of taxes on capital gains. The purpose of this paper is to determine if it is financially advantageous to pay more than the agricultural value of land in order to postpone the payment of taxes on capital gains from the sale of land to a developer.

LAND VALUATION MODEL

Equation 1 is a mathematical expression of the profit-maximizing objective of farmland owners who sell land for development purposes and then re-invest the proceeds from these sales back into farmland. The goal of these farmland owners is to take actions that maximize net present value. (NPV)

Equation 1: Net Present Value of Land Sale and Reinvestment

$$NPV = \left[VD_0 - CG_0 - \left[(1+a)*(1+p)*VF_0\right]\right] + \left[\sum_{n=1}^{N} ATRF_n *(1+a)*(1+d)^{-n}\right] + \left[VF_N *(1+a)*(1+d)^{-N}\right] - \left[CG_N *(1+d)^{-N}\right]$$

Where:

VD_0 is the value of land sold for development;
CG_0, the tax on capital gain paid in year 0;
a, the additional acres of farmland purchased (.10 = 10 percent);
p, the premium paid for farmland (.10 = 10 percent);
VF_0, the value of land in farming in year 0;
N, the number of years the farmland will be held;
$ATRF_n$, the after-tax returns from farmland in year n;
VF_N, the value of land in farming in year N;
CG_N, the tax on capital gain paid in year N; and
d, the opportunity cost of capital (.10= 10 percent).

ANALYSIS

Equation 1 can be used to solve for the prices that can be paid for farmland and still earn the same net return (as reflected by the net present value) as the one earned when taxes are immediately paid on capital gains and farmland is purchased at a price equal to the farm-based value of land. A computerized spreadsheet containing Equation 1 was constructed to perform this type of analysis for a hypothetical case where:

a) land is sold for $10,000 per acre for development;
b) farmland can be purchased for farming at a price of $3,000 per acre;
c) the basis of the land being sold is $1,000 per acre
d) the opportunity cost of capital is 5 percent;
e) the annual before-tax returns to land are $90 per acre;
f) the annual growth in land values is 4 percent per year;
g) land is to be held for 50 years;
h) the tax rate on ordinary income is 28 percent; and
g) the tax rate on capital gains is 15 percent

Total investment in farmland is a function of: the number of acres purchased and the average price paid per acre. Thus purchasing 3 acres for $3000 per acre results in the same investment in land as buying 2.571 acres for $3500 per acre. This trade-off between acres purchased and price paid for land is noteworthy because it means a land buyer with fixed amount of financial capital must settle for purchasing fewer acres of land as the price paid for land is increased.

The computerized decision model used to perform this analysis accounts for the trade-off between purchase price and acres purchased as it develops the most profitable plan for re-investing the net after-tax proceeds from the sale of farm land for development purposes back into the farm land. The re-investment plan is defined in terms of: the

amount of capital invested in farm land (the product of the price paid for land and the number of acres purchased) and the taxes paid on the proceeds of the sale of land for development purposes. The tax liabilities on the initial sale of land can be deferred or avoided all together if all the sale proceeds are invested back into farm land. The question being considered here with the use of this model is whether in fact it is financially advantageous to re-invest capital back into farm land in order to minimize tax liabilities.

Three land purchase options were analyzed using the computerized decision model and the above assumptions. They were:

Option 1 – Pay taxes of $1,350 per acre on capital gains and use the remaining $8,650 to purchase 2.88 acres of farmland at a price of $3,000 per acre.

Option 2 – Defer all taxes on capital gains by purchasing of farmland 2.90 acres at a price of $3,447 per acre then pay taxes on capital gains in 50 years when land is sold.

Option 3 – Defer all taxes on capital gains by purchasing 2.58 acres of farmland at an average price of $3,878 per acre and pay no taxes on the gain when the land passes to heirs with a basis adjustment to its fair market value on the date of death in 50 years.

Option 1 is the base-line option that results in the seller receiving net after-tax receipts of $8,650 from selling farmland for $10,000 and investing those net proceeds in farmland. Options 2 and 3 are tax deferment strategies that result in the seller maintaining possession of the $1,350 that are paid as taxes on capital gains in Option 1. With these latter two options the seller has $10,000 available to re-invest in farmland because no taxes on capital gains are due at that time. The results for these three land purchase options are reported in Table 1.

A key assumption underlying this analysis is that the land buyer in question will invest all of the after-tax proceeds from the sale of land for development purposes back into farmland. This re-investment is necessary to take advantage of tax deferments allowed under section 1031. The amount of acres purchased in each of the three cases considered here is different for each of the three cases because different amounts of net after-tax capital are available for investing in farmland which means different prices are paid for land

The difference between Option 2 and Option 3 is the tax liability that must be paid 50 years in the future. With Option 2, total taxes on capital gains are $1,350 (taxes deferred on the gain realized from the sale of the development land) plus taxes on the capital gains that are realized on the new farmland that is purchased. With Option 3, no taxes are paid on capital gains because this potential tax liability is eliminated when the original landowner dies and the land in question passes on to heirs of the original landowner.

Options 2 and 3 represent actions farmland-owners can take to defer or eliminate the payment of taxes on capital gains. These are the Section 1031 exchanges that are thought to be encouraging farmers and other owners of farmland to pay more than the farming based value of farmland.

The prices for Options 2 and 3 show that a person can pay more than the agricultural value of land ($3,000/acre in this case) and obtain the same level of net returns as when land is purchased at the agricultural value without the benefit of the like-kind exchange rules.

With Option 2, the landowner uses $1,350 of tax savings to purchase slightly more acreage (2.90 vs. 2.88) and pay a higher price ($3,447 vs. $3,000) and still earns the same level of net returns as are earned with Option 1. The purchase price for land for Option 2 is about 14.9 percent higher than the agricultural value of land.

Option 3, which is the case where income tax provisions eliminate taxes on capital gains, has an even higher purchase price for land. With this option, the person selling farmland for $10,000 per acre can purchase 2.58 acres per acre sold and pay a price of $3,878 per acre and still get the same net returns as from Option 1. These results for Option 3 show that the landowner could pay about 29 percent more than the agricultural value of land and receive the same net returns from farmland. This is possible because of the tax deferrals (section 1031) and reductions (basis adjustment at death) that are available to the person who elects to reinvest the proceeds of farmland sales back into farmland or other real property.

CONCLUSIONS

It has been shown through case studies presented here that it may be financially justifiable for landowners purchasing replacement farmland and qualifying for Section 1031 tax treatment to pay a price for farmland that exceeds the agricultural value of land. Results show that tax savings for like-kind exchanges qualifying for Section 1031 treatment make it possible to pay prices for farmland that are 14 to 29 percent higher than the agricultural value and still earn the same net returns that are earned when farmland is purchased for its agricultural value without the benefit of the like-kind exchange rules. These results show that persons may be justified in paying higher prices for farmland but they do not mean persons who have sold farmland for development purposes at a high

premium will willingly bid these gains away. As profit-maximizers, they persons would most likely try to purchase farmland as cheaply as they can. This is an important point because it means those persons who could pay higher prices for farmland will not automatically do so.

It is quite probable that Section 1031 exchanges put an upward pressure on the price of farmland. This may have created some problems for entering farmers who are trying to purchase land. However, the extent of that pressure is not determined by this study. Other factors, such as buying non-farmland real property to complete the like-kind exchange need to be considered. The problems of these prospective land buyers could probably be reduced by eliminating Section 1031 tax deferrals for farmland exchanges. This change in tax policy is likely to have a mixed effect on the price of farmland. It would remove the upward pressure that is identified in this study, but it may create another upward pressure by discouraging the sale of farmland by owners who can no longer defer the taxes on the capital gains.

Table 1: Present Values of Various Options for Investing The Proceeds of a Farmland Sale

Option	Acres Purchased	Purchase Price Per Acre	Present Value (PV) of After-tax Receipts
1	2.88	3,000	10,368
2	2.90	3,447	10,369
3	2.58	3,878	10,369