

Tracking biodiesel profitability, continued from page 3

Revenue, costs and net returns (profitability) are shown monthly as per gallon of biodiesel and per 100 pounds of soybean oil. Also, biodiesel and soy oil price breakeven levels are computed.

Major assumptions and characteristics of the biodiesel plant model

- 1) Turnkey biodiesel production facility
- 2) Facility built in 2007
- 3) Nameplate capacity of 30 million gallons
- 4) Facility construction cost (including working capital) of \$1.57 per gallon of nameplate capacity
- 5) Lender finances 50 percent of the project
- 6) Equity financing of 50 percent of the project.
- 7) Plant operates at 100 percent of nameplate capacity
- 8) Conversion factor of 7.65 pounds of soybean oil per gallon of biodiesel
- 9) A gallon of biodiesel produces .9 pounds of glycerine.
- 10) Natural gas requirement of 6 cubic feet per gallon of biodiesel
- 11) Typical input costs for an Iowa soybean oil biodiesel facility

The monthly profitability of this hypothetical plant is computed by using the monthly market prices for biodiesel, soybean oil, methanol and natural gas. Each month the analysis is updated with the previous month's prices. If any of these price data series do not fit your situation, you can enter an adjustment factor that will increase or decrease the coefficients in the price data series. All other variables are held constant throughout the analysis.

Input coefficient adjustment. Although we believe the coefficients in this model are a good representation of a soybean oil biodiesel plant, the user has the ability to change any of the input coefficients in the economic model to fit a special situation. A change in an input coefficient will be reflected in the analysis tables and graphs.

The input prices for the profitability model are updated monthly and are available on the AgDM Outlook and Profitability page or at: <http://www.extension.iastate.edu/agdm/energy/xls/d1-15biodieselp Profitability.xls>.

¹ Northern Iowa is defined as Iowa north of Interstate 80.



Side-stepping SE tax on a trade?*

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Ordinarily, transactions such as those involving trading in a used item of equipment for a new model are treated as “exchanges” but qualify as “like-kind” exchanges with little or no gain recognized. That is the case if the transaction involves a reciprocal transfer as distinguished from a transfer with money payment.

Relatively little thought is generally given to casting a transaction to avoid the often tax-free treatment of a reciprocal transfer. However, a practice

has developed in some areas of deliberately avoiding like-kind exchange treatment and characterizing a transaction as a sale of the used item traded in and a purchase of the replacement item. Such a strategy, if successful, reduces the taxpayer's 15.3 percent self-employment tax. The advantages, if successful, are magnified by the current higher levels of expense-method depreciation. The question is whether such a move is legitimate.

continued on page 5

Side-stepping SE tax on a trade?, continued from page 4

An example of the strategy

Assume a taxpayer wishes to buy a new tractor. The new tractor has a purchase price of \$100,000 and qualifies for a full deduction under either the 2008 limit of \$250,000 or the 2009 inflation-adjusted limit of \$250,000. The taxpayer also has an old tractor, which could be traded in, with an income tax basis of \$10,000 but a fair market value of \$70,000. The taxpayer agrees to pay \$30,000 in cash in the event of a trade.

If the taxpayer sets up the deal as a trade-in, eligible for like-kind exchange treatment, and does not make the election to treat the relinquished MACRS property as disposed of by the taxpayer at the time of the disposition, which allows the undepreciated basis to be added to the cash boot paid, only the cash boot paid is eligible for expense method depreciation. Thus, the expense method depreciation claimed would be limited to \$30,000. There would be no recapture of depreciation from the old tractor in the event of a trade.

But what if the transaction is set up as a sale of the used tractor and the purchase of the new tractor as separate deals? The sale of the used tractor at fair market value (\$70,000) would trigger recapture of depreciation (ordinary income) which would be calculated on Form 4797 and would not be subject to the 15.3 percent self-employment tax. Remember, if expense method depreciation property is disposed of, the recapture rules applicable to Section 1245 property are invoked. The recapture rules are triggered any time the property is not used predominantly in a trade or business at any time.

The new tractor would be eligible to be expensed with the depreciation amount from Form 4562 reported on Schedule F as an expense which would reduce farm income and the 15.3 percent self-employment tax.

Drawing the line between a sale of the used item and a trade-in

The first point to note is that the regulations clearly state that the exceptions to the general

rule (that the gain or loss is recognized) are to be strictly construed. The second point to observe is that the cases reflect a fine line between exchanges (as distinguished from a sale) and a purchase and sale of property. In a moment of frustration at this point, the Tax Court in a 1995 case, quoted from *Barker v. Comm'r*, “. . . if the exchange requirement is to have any significance at all, the perhaps formalistic difference between the two types of transactions must, at least on occasion, engender different results.” In that case, the Tax Court found that the purchase of one liquor store and the subsequent sale of another were two separate taxable events rather than a like-kind exchange. That point had been illustrated in a 1982 Tax Court case where the sale of a Colorado improved lot and the purchase of an improved parcel in California were not a like-kind exchange and were deemed to be separate and unrelated transactions.

In a 1999 United States District Court case, *C. Bean Lumber Transport, Inc. v. United States*, the purchase of new trucks was not sufficiently related to the sale of the used trucks to be a like-kind exchange with no recognition of gain. The Tax Court indicated that it was significant that the dealer paid cash for the equity in the used trucks. The court held that the transactions were independent transactions with gain or loss triggered on the used trucks.

The courts have also been willing to collapse transactions involving multiple steps back into economic reality with gain or loss recognized. That point was made in *Portland Mfg. Co. v. Commissioner*, involving an exchange of stock for stock, and in *Kuper v. Commissioner* where the parties had created a transaction with several steps to disguise a taxable exchange of stock.

So what does this all mean?

It is convincing that a sale of a used tractor to the same dealer at 9 a.m. and the purchase of a new tractor in an allegedly separate transaction at 1 p.m. on the same day with the same dealership with a significant income tax benefit riding on the characterization of the transaction, is suspect. It

continued on page 6

Side-stepping SE tax on a trade?, continued from page 5

is not clear whether the statement in the regulations that the exceptions (and like-kind exchanges are among the exceptions) are to be strictly construed would prevail in such a situation. A sale to a different dealership on a different date from the purchase of a similar piece of equipment is more likely to be treated as a separate sale and purchase.

However, such separate transactions are unlikely to yield as good a deal as setting up the transaction with the same dealership.

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Updates, continued from page 1

Internet Updates

The following updates have been added on www.extension.iastate.edu/agdm.

- Supplemental Revenue Assistance (SURE) – A1-44 (3 pages)
Average Crop Revenue Election (ACRE) – A1-45 (3 pages)
Computing a Grain Storage Rental Rate – C2-24 (3 pages)
Computing a Livestock Building Cash Rental Rate – C2-26 (3 pages)
Creating a Flexible Swine Building Rental Agreement – C2-27 (2 pages)
Introduction to Grant Writing – C5-06 (4 pages)

Current Profitability

The following profitability tools have been updated on www.extension.iastate.edu/agdm/info/outlook.html to reflect current price data.

- Corn Profitability – A1-85
Soybean Profitability – A1-86
Ethanol Profitability – D1-10
Biodiesel Profitability – D1-15
Returns for Farrow-to-Finish - B1-30
Returns for Weaned Pigs - B1-33
Returns for Steer Calves - B1-35
Returns for Yearling Steers - B1-35

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