

To lease or to buy?

The answer differs from one dairy to the next. To know what's right for you, learn about the tax implications and true costs of both options.

By Eddy LaDue and Jason Karszes

Selecting the least expensive financing alternative is an important management decision whenever you buy a machine or piece of equipment. Deciding upon the best loan is easy enough: You simply compare effective interest rates being charged.

But comparing a loan to a lease is more complex. One isn't necessarily better than the other; they're simply different. The two financing methods can have different tax, cash flow and ownership implications. And depending upon your dairy's financial situation, one may fit your business better than the other.

Leases can look attractive. They offer a fixed rate of interest, don't require pledging assets as collateral and may provide tax advantages.

Lease payments basically pay for:

- The decline in value – or economic depreciation – of the asset being leased.
- Interest on the funds invested. Let's say you lease a \$100,000 chopper for three years with annual payments of \$33,672 in advance. (Table 1) The chopper is expected to be worth \$10,500 at the end of the three years. The lease has a 10% implicit interest rate – that rate which you effectively pay.

Two methods of comparison

You can compare loans to leases two ways:

1. Before-tax analysis. First, determine the lease's implicit rate of interest, as was done for the chopper example. Then compare it to the loan's interest rate, which is also a before-tax rate.

In the chopper example, the lease payments exactly pay for its decline in value and

the interest on the outstanding investment at the implicit rate. So the lease's implicit rate is equivalent to the loan's interest rate.

Before-tax analysis can be used when you don't expect to pay income taxes or have necessary tax data.

2. After-tax analysis. Tax advantages are one of the biggest reasons dairy producers lease instead of take out a loan. Leases allow a faster write-off of an asset's cost. Lease payments can generally be written off in the year they're made. But a purchased asset must be depreciated over a period set by tax law, and interest is expensed when it's paid.

This faster write-off has two possible advantages:

- The time value of money. If a lease allows you to write off \$15,000 this year instead of \$10,000, the taxes saved because of the extra \$5,000 in expenses can be used interest-free until the taxes have to be paid in three to seven, or more, years due to reduced



Table 1. Lease payments divided into depreciation & interest

	Lease payment	Interest portion of payment	Payment depreciation	Remaining investment
1st payment	\$33,672	--	\$33,672	\$66,328
2nd payment	\$33,672	\$6,633	\$27,039	\$39,289
3rd payment	\$33,672	\$3,929	\$29,743	\$9,546
End of year 3	--	\$954*	--	\$10,500

*Interest on remaining investment from the last interest payment to the end of the lease period. The buyer doesn't pay this interest directly. The leasing company receives this interest, plus the remaining investment, by selling the asset at the residual value. Calculate the implicit rate on a lease by using a financial calculator or a computer program designed for that.

expenses in the future.

If the marginal tax rate doesn't change over the asset's useful life, the total taxes paid won't differ between a lease and a loan. The amount that can be written off and, thus, the taxes to be paid will be lower only if the lease is more expensive.

In many cases, this is the only tax advantage to leasing.

- An actual reduction in taxes paid if your marginal tax rate is higher in the early years of the asset's life, compared to later years. For example, a dairy producer considers buying a machine that would be depreciated over seven years. If in the year of the purchase he has unusually high income that pushes his Federal tax rate from 15% to 27%, a lease would save taxes if income declines so the tax rate is 15% in year seven.

A farm with a constant marginal tax rate throughout the seven-year period would have the same total tax bill with a lease or a purchase, if the total costs were similar.

It all depends

Larger-sized dairies have used leasing to keep total purchases under the \$200,000 maximum to qualify for Section 179 immediate expensing of investments. This is an alternative to depreciating a purchase over several years. In this case, leasing allows faster write-off of up to \$24,000 of asset purchases. This mechanism doesn't increase the total amount that can be expensed over the life of the asset. And the savings realized accrue from a delay in the payment of taxes.

Since leasing's main tax effect is to move expenses from one year into another, analysis of leasing should consider more than the current year's taxes. For example, a farm that expects income and, thus, tax brackets to be higher in future years would have a tax disadvantage by moving income from the future into the present.

Reducing the tax burden this year would actually increase future taxes by a larger amount. The time value of money advantage still exists, but it would be partially offset, or overwhelmed, by the increased taxes.

For New York farmers, leasing means they

lose the state investment tax credit. This is 4% of the amount invested and only influences state taxes. It's a credit, so it actually reduces the amount of taxes paid.

How does leasing stack up when you compare it to a loan with a variable interest rate and rates are expected to increase? Leasing may look good in this case since fixed lease payments protect against rate rises. (The benefit may still not make leasing better.)

For example, assume you're buying a \$120,000 tractor. You borrow money at 6% interest for five years.

The lease is for five years with a \$22,000 advance payment at signing, \$20,000 annual lease payments for three years and a fourth-year payment of \$18,000. The lease includes a buyout of \$40,000 at the end of the lease, which you will finance over the following five years at 9% interest. Your dairy has a marginal tax rate of 46% and an opportunity cost of capital of 8.5%.

Assume:

- Interest rates are constant
- Your tax rate doesn't decline in future years.

- Buying the tractor won't influence the availability of Section 179 depreciation since your total purchases are under \$200,000.

What's your best alternative? To buy the tractor with borrowed money. You save \$3,855 (Table 2).

Now for the qualifiers:

- If your tax bracket is unusually high this year – say 27% federal and 6.85% state – but is expected to return to a more normal level in the future (15% federal and 5.9% state), the advantage of using borrowed funds declines to \$1,464.

- If interest rates increase gradually to 7% in year two of the lease, 8% in year three and 9% in following years, the lease becomes the best alternative by \$711.

- If buying the tractor increases your purchase of depreciable assets so your business doesn't qualify for Section 179 depreciation, the advantage of leasing increases to \$4,375.

Now you know: Your specific situation determines whether leasing is the best financial option for you. ■

Table 2. Advantage of lease over purchase in different circumstances

Situation	Advantage of leasing
Base circumstance: 6% interest, constant tax & interest rates	-\$3,855
Lower future tax rates	-\$1,464
Lower future tax rates, higher interest rates	\$711
Lower tax rates, higher interest rates & Section 179 taken on other assets	\$4,375

FYI

- Find a computer spreadsheet for comparing a lease and a loan on an after-tax basis at the Agricultural and Small Business Finance website: http://agfinance.aem.cornell.edu/decision_aids.htm. Download the LEAP program (version 2).

- At the same website, find a computer spreadsheet for calculating the implicit rate of interest for a lease. Download the BTL lease program.

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