

Buy or Lease Dairy Cows

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Dairy farmers ask whether leasing dairy cows is a possible alternative to owning them because of:

- Rising cow prices, expansion pressures, and the need for capital in other areas of the business.
- The availability of cow leasing firms in Missouri.

Some individuals are limited on the amount of capital they can borrow. Leasing enables dairy farmers: (1) to expand the number of cows to make greater use of available labor, management, and facilities; (2) to possibly acquire higher producing cows than present source of credit might allow; (3) to obtain the services and management advice offered by some cow leasing firms.

Leasing is a method of using additional capital without disturbing present sources of credit.

With the leasing agreement, the dairy farmer acquires the use of the dairy cow by making periodic payments to the person or firm granting the lease. Ownership rights of the cow remain with the lessor but the lessee (dairy farmer) has possession and the right to all milk receipts.

Prior to signing a leasing agreement, the dairy farmer should: (1) know what the cost per cow per year will be; (2) compare cost of leasing with cash obligations when borrowing money to buy cows; (3) determine whether the cow will be profitable enough to meet the annual cost of leasing or the annual cash-flow commitments if money is borrowed.

What To Look for in a Lease

It is very important that dairy producers understand all fine print included in the lease and understand fully what they are paying for. A well-written lease should specify:

1. Who selects the cows? What is their production potential?
2. What is the total purchase price?
3. Who owns the offspring—who gets the bull calves as well as the heifers?
4. Who retains the ownership of the cow when the lease expires? Is there an added cost for the dairy

farmer to acquire ownership upon expiration of the lease?

5. On the average, a dairy cow stays in the herd about three years. As cows leave the herd, who replaces them? Is the dairy farmer expected to grow replacements or does the leasing firm replace the culled cow with young mature cows or heifers about ready to freshen?
6. What is the procedure for replacement if the cow doesn't perform satisfactorily—non-breeder, low producer, etc.? How are production criteria to be determined—D.H.I. or owner sample? Who pays?
7. Who assumes death loss? Is this an added cost for the dairy farmer?
8. Who pays for routine blood tests and other veterinary costs associated with the cows? With the young stock?
9. Does the lease contract constitute a lien on just the cattle or is it subject to other property to secure the original investment?
10. Who is eligible to claim investment credit and depreciation on the initial cost of the cow? Or, can the dairy producer deduct the leasing cost as an annual business expense?

Decision to Lease or Buy

Factors such as availability of capital, cow prices, leasing terms, production costs, and the dairy farmer's goals are all a part of this decision. Each person's situation is different, so it is impossible to make a general recommendation that leasing or buying is better.

By making an economic comparison, each individual can decide if leasing or buying is the best deal. The budget in Table 1 illustrates a way to evaluate the cash-flow commitments of buying cows with borrowed capital in comparison with leasing.

In our example, let's assume:

1. Cash purchase—cows can be bought for \$1,200 per head. Credit is available on a four year loan at 14 percent interest.

Table 1. Estimated Cash Flow Budgets To Acquire a Dairy Cow by Leasing or Cash Purchase

Factor	AN EXAMPLE			
	Purchase plan (4-year plan)		Lease plan (45 months)	
	Per mo.	Total	Per mo.	Total
1. Purchase cost of cow, \$1200 principal payment	\$25.00	\$1,200.00		
2. Interest at 14% ¹	9.32	447.36		
3. Death loss, 4% annually of purchase price	4.00	192.00	\$.40	\$ 18.00 ²
4. Cow replacement cost (25%) for 2 years	7.29	350.00 ³	1.25	60.00 ⁴
5. Advance payment, 12% of Line 1			3.20	144.00
6. Monthly payment, 4% of Line 1			48.00	2,160.00
7. Insurance	1.50	72.00	1.60	72.00
8. Property taxes	.40	19.00	.40	18.00
9. Final payment to acquire title to cow				1.00
10. Total cash dollars	\$47.51	\$2,280.36	\$54.85	\$2,473.00
11. Annual cost for 4 years		\$ 570.09		\$ 618.25
12. Less estimated tax savings (Table 4, Line 6 + Line 1)		\$ _____		\$ _____
13. Annual cost after estimated annual tax savings		\$ _____		\$ _____

¹ Amortized over 4 years at 14% interest.

² 10% times \$1,200 cow equals \$120 or \$10/month times 4% times 45 months.

³ Cow cost \$1,200 minus \$500 salvage value of cow times 25% annual replacement rate times 2 years.

⁴ Cow cost \$1,200 times 10% times 25% annual replacement rate times 2 years.

Table 2. Estimated Cash Flow Budgets to Acquire a Dairy Cow by Leasing or a Cash Purchase.

Factor	MY SITUATION			
	Purchase Plan		Lease Plan	
	Per Mo.	Total	Per Mo.	Total
1. Purchase Cost of Cow \$ _____ Principal Payment	\$ _____	\$ _____	XXXXXX	XXXXXX
2. Interest _____ % ¹	_____	_____	XXXXXX	XXXXXX
3. Death Loss, _____ % Annually of Purchase Price	_____	_____	_____	_____
4. Cow Replacement Cost for _____ years	_____	_____ ²	_____	_____ ³
5. Advanced Payment	XXXXXX	XXXXXX	_____	_____
6. Monthly Payment, _____ % of line 1	XXXXXX	XXXXXX	_____	_____
7. Insurance	_____	_____	_____	_____
8. Property Taxes	_____	_____	_____	_____
9. Final Payment To Acquire Title to Cow	XXXXXX	XXXXXX	XXXXXX	_____
10. Total Cash Dollars	\$ _____	\$ _____	\$ _____	\$ _____
11. Annual Cost, _____ years.	XXXXXX	\$ _____	XXXXXX	\$ _____
12. Less Estimated Tax Savings (Table 4, line 6 + line 1)		\$ _____		\$ _____
13. Annual Cost After Estimated Annual Tax Savings		\$ _____		\$ _____

¹ Amortized over _____ years at _____ interest.

² Cow cost \$ _____ minus \$ _____ salvage value of cow times _____ % annual replacement rate times _____ years.

³ \$ _____ cow cost times _____ % annual replacement rate times _____ years.

Table 3. Potential Annual Income Per Dairy Cow To Pay for Lease and/or Toward Outright Purchase.*

	EXAMPLE	MY FARM
Fluid Market - 13,500# Milk Sold/Cow		
PER DAIRY COW ¹		
<i>Income</i>		
Milk, 13,500# @ \$14.00/cwt.	\$1,890	_____
Cull cow and young stock, 550# x 60¢	330	_____
Gross income	\$2,220	_____
<i>Expenses</i>		
Feed:		
Grain ration, 8,000# @ 10¢ per lb. ²	\$ 800	_____
Hay, 4.5 tons alfalfa and mixed \$70/ton	315	_____
Silage, 6 tons @ \$24/ton	144	_____
Pasture, 9 animal unit months @ \$7/month	63	_____
Total feed for cow and young stock	\$1,322	_____
Other costs:		
Machinery, feed handling and preparation, etc.	\$ 55	_____
Veterinary and medicine	28	_____
Other livestock materials, hauling, etc. ³	125	_____
Utilities, dairy farm share	34	_____
Operating interest (½ of above costs x 14%)	109	_____
Total other variable costs	\$ 351	_____
Total all variable costs not including labor, \$1,322 + \$351	\$1,673	_____
Remainder to pay: Lease or service borrowed capital or labor and fixed costs, \$2,220 minus \$1,673	\$ 574	_____

*Estimated income and expenses for 1981-83.

¹Includes one cow and 1.3 head young stock weighing 500#.

²Includes grain ration for cow and young stock, plus milk replacer, starter, and grower feed for young stock.

³Includes milk hauling, co-op charges, and capital retained; parlor supplies, DHI, and breeding and cattle marketing.

2. Leasing plan—45 month agreement.

- Advance payment—12 percent of initial cost of the cow.
- Monthly charge—4 percent of initial cost of the cow.
- Cost to obtain title of cow at end of lease—\$1 per head.
- At end of lease, calves as well as cows belong to the dairy farmer. However, if calves (bulls) are sold before the contract is paid in full, the proceeds from the calves are applied against the purchase agreement, thus shortening the length of the contract. If a leased cow dies, the lessor pays up to 90 percent of the original cost of the dead cow with the dairy farmer paying 10 percent of the replacement cost. If a higher cost cow is purchased, the dairy farmer pays 100 percent of the excess cost. For the first 24 months, non-breeders and low producers are replaced at the same cost to the dairy farmer as are dead cows.

3. Other assumptions:

- In the budgeting process, *consider only those factors that vary between the lease and purchase plans*. Thus, assume all other costs and income to be the same, such as feed, veterinary, labor, milk production, milk prices, etc.

- Assume the annual replacement rate is 25 percent. *During the first two years, raised replacement heifers are not available, so replacements must be purchased to maintain the same size herd. With the purchase plan, the replacement cost less the value of the cull cow is a cash cost. With the lease, cows are replaced on the same basis as when a cow dies.*
- Cull cows will sell at \$500 per head.

Summary and Conclusions

With the assumption used in this comparison, buying cows is the least costly method. However, as stated before, availability of credit, etc., may make the leasing plan a real possibility even though it is higher cost. It must be emphasized that these conclusions depend entirely on the assumptions outlined and should not be generalized to other situations. Variations in lease and purchase (loan) arrangements can result in different conclusions.

If the leasing firm does not replace cows on the same basis as dead cows, the cost of replacement (first two years) may be similar to the purchase plan as reported on Table 1, line 4. This would increase the cost of leasing.

Budget-Out Anticipated Income

Will the cow produce enough income above cash production costs to meet the \$570 annual cost of buying or the \$618 cost of leasing? In the event the cow will not generate the necessary income, additional cows or developing a dairy enterprise may not be practical at this time.

There may be some production practices identified which could be initiated or developed to improve the profit within the present herd.

Note to Dairy Farmers: Your prices of inputs may vary from that used in the example in Table 3. To make your decision, you can develop your own budget in the "My Farm" column.

Leasing Costs and Income Taxes

The tax advantage accrued from leasing may be an

important factor for some producers. Prior to entering a lease agreement, the following questions should be answered:

- Who is eligible to claim investment credit and depreciation?
- Is the arrangement really a bona fide lease or is it a conditional sales contract? If the arrangement is interpreted as a sales contract by IRS, the cow must be depreciated and lease payments are not deductible.

In summary, when lease payments exceed deductible expenses, such as depreciation, property taxes, insurance, and interest on borrowed money, leasing will have a tax advantage over buying. Any such advantage would have to be reduced by the amount of investment credit claimed on a cow purchase.

Table 4 can be used to estimate tax savings for each plan. Tax saved will reduce the cash cost reported on Table 1, line 12.

Table 4. Estimated Annual Tax Savings for Acquiring a Dairy Cow Through Lease or Purchase.

Factor	Annual	
	Purchase	Lease
1. Investment Credit ¹ (\$ _____ ÷ _____ years)	\$ _____	XXXXXXXXXX
2. Depreciation Claimed ²	\$ _____	XXXXXXXXXX
3. Interest Paid on Loan ³	\$ _____	XXXXXXXXXX
4. Total Depreciation and Interest Paid (add lines 2 and 3)	\$ _____	XXXXXXXXXX
5. Annual Lease Payment ⁴	XXXXXXXXXX	\$ _____
6. Estimated Tax Savings; Transfer to Table 1, Line 12		
_____ x _____ % Income Tax Rate =	\$ _____	XXXXXXXXXX
Line 4		
_____ x _____ % Income Tax Rate =	XXXXXXXXXX	\$ _____
Line 5		

¹Dairy cows with a useful life of more than three years may be eligible. Three to five years useful life has an applicable percentage of 33⅓%. Purchase cost \$ _____ times 33⅓ times 10% = Investment Credit. The credit must be claimed in first year of purchase. It can be used to offset taxes due.

²Estimate depreciation. Cost \$ _____ minus Salvage Value \$ _____ = \$ _____ ÷ _____ years useful life = \$ _____ depreciation. Or follow same procedure used on your tax return.

³Calculate annual interest charge from data reported in Table 1, line 2.

⁴Annual lease payment based on monthly payment times 12 reported in Table 1, line 6.