

AGRICULTURAL GUIDE

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Dairy Cows

Buy or Lease Dairy Cows SEP 16 1985

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Dairy farmers ask whether leasing dairy cows is a possible alternative to owning them because of cash-flow pressures and the need for capital elsewhere.

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 get services and advice from 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.

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

	AN EXAMPLE			
	Purchase plan (4-year plan)		Lease plan (45 months)	
	Per Mo.	Total	Per Mo.	Total
1. Purchase cost of cow, \$1,200 principal payment	\$25.00	\$1,200		
2. Interest at 12% ¹	7.92	380		
3. Death loss, 4% annually of purchase price	4.00	192	\$.40	\$ 18 ²
4. Cow replacement cost (25%) for 2 years	7.29	350 ³	1.33	60 ⁴
5. Advance payment, 12% of line 1			3.20	144
6. Monthly payment, 4% of line 1			48.00	2,160
7. Insurance	1.50	72	1.60	72
8. Property taxes	.20	10	.22	10
9. Final payment to acquire title to cow				1
10. Total cash dollars	\$45.91	\$2,204	\$54.75	\$2,465
11. Annual cost for 4 years		\$ 551		\$ 616
12. Less estimated tax savings (Table 4, line 6 plus line 1)		\$ _____		\$ _____
13. Annual cost after estimated annual tax savings (line 11 minus line 12)		\$ _____		\$ _____

¹Amortized over 4 years at 12% interest.

²10% times \$1,200 cow equals \$120 or \$10/month times 4% times 45 months.

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

⁴Cow 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.

	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	_____	_____	_____	_____ ²
4. Cow Replacement Cost for _____ years	_____	_____ ³	_____	_____ ⁴
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 plus line 1)		\$_____		\$_____
13. Annual Cost After Estimated Annual Tax Savings		\$_____		\$_____

¹Amortized over _____ years at _____ interest.

²Calculate lessee's death loss according to lease agreement.

³Cow cost \$ _____ minus \$ _____ salvage value of cow times _____ % annual replacement rate times _____ years.

⁴\$ _____ cow cost times _____ % annual replacement rate times _____ years.

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 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—DHI or owner sample? Who pays?
7. Who assumes death loss? Is it an added cost?
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.

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 12 percent interest.
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 for at least \$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. One must remember, a loan or lease payment continues at a fixed rate. Short-run costs and returns (cash flow) should be considered as illustrated in Table 3.

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

	EXAMPLE	MY FARM
PER DAIRY COW ¹ (Fluid Market - 14,000# Milk Sold/Cow)		
<i>Income</i>		
Milk, 14,000# @ \$12.25/cwt.	\$1,715	_____
Cull cow and young stock, 450# times 51¢	229	_____
Gross income	\$1,944	_____
<i>Expenses</i>		
Feed:		
Grain ration, 6,900# @ 9¢ per lb. ²	\$ 621	_____
Hay, 4.8 tons alfalfa and mixed @ \$80/ton	384	_____
Mixed hay, 1.5 tons @ \$55/ton	83	_____
Pasture, 6 animal unit months @ \$7/month	42	_____
Total feed for cow and young stock	\$1,130	_____
Other costs:		
Machinery, feed handling and preparation, etc.	\$ 63	_____
Veterinary and medicine	36	_____
Other livestock materials, hauling, etc. ³	165	_____
Utilities, dairy farm share	45	_____
Operating interest (¼ of above costs times 12%)	42	_____
Total other variable costs	\$ 351	_____
Total all variable costs not including labor, \$1,130 plus \$351	\$1,481	_____
Remainder to pay: Lease or service borrowed capital or labor and fixed costs, \$1,944 minus \$1,481	\$ 463	_____

*Estimated income and expenses for 1984-1987.

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.

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 \$551 annual cost of buying or the \$616 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 those 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 (\$ _____ times _____ % ÷ 5 yrs.)	\$ _____	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)		
_____ times _____ % income tax rate (line 4)	\$ _____	XXXXXXXXXX
_____ times _____ % income tax rate (line 5)	XXXXXXXXXX	\$ _____

¹Dairy cows are classified as 5-year property for depreciation. Investment credit is 10% or 8% of cost basis for depreciation. If 10% election is used, 50% investment credit must be deducted from depreciation basis; 8% can be claimed with no adjustment in depreciation basis.

²Depreciation will average about 20% unless alternate ACRS method is used at the 12-year level, which is not practical for a dairy cow. Estimate depreciation: Depreciation basis (cost minus investment credit deduction when applicable) times 20% equals \$ _____ or use the same procedure used on tax return for purchased dairy cows.

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.

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