

Leasing vs. Buying Farm Machinery

Leasing Terminology

- Lessee
- Lessor
- Initial value
- Residual value
- Lease factor
- Closed end lease

Lease Clauses

- Usage penalty (hours)

- Lessee responsibilities
 - ✓ Insurance
 - ✓ Fees
 - ✓ Taxes
 - ✓ Normal maintenance
 - ✓ Damage due to abuse or negligence

Negotiation Points on Leases

- Initial value
- Lease factor
- Annual hours

Net after Tax Cash Flow

➤ See tables 1 and 2

Example Parameters - Purchase

- \$100,000 purchase price
- \$20,000 due at close
- \$80,000 note over 7 years at 12% interest
- Depreciation on an accelerated table over 7 years

Example Parameter - Lease

- 3 year closed end lease
- \$100,000 initial value
- \$67,165 residual value
- Lease factor that results in annual payments of \$18,665

Table 1. Debt-Purchase Analysis

Year	A Principal Payments	B Interest Payments	C Depreciation	D Residual Value	E \$Tax Deductible (B+C-D)	F Tax Savings ² (E x .28)	G Tax Adjusted Cash Flow	H Discount Factor ¹ (6%)	I Discounted Cash Flow (G x H)
0	-20,000						-20,000	1.00	-20,000
1	-7,764	-9,182	-10,710		19,892	5,570	-11,376	.943	-10,728
2	-8,749	-8,198	-19,130		27,328	7,652	-9,294	.890	-8,272
3	-9,859	-7,088	-15,030		22,118	6,193	-10,753	.840	-9,033
	-53,628			67,165	12,035*	2,407**	11,130	.840	9,349
4									
5									
6									
7									
8									
Net Present Value of Cash Flows									<u>-38,684</u>

*Salvage Value – Book Value³

** (Residual Value – Book Value) x .20

¹Discount factors are obtained from Table 3 (discount rate table)

²Marginal income tax rate

³The book value is the purchase price less the accumulated depreciation

Table 2. Lease Analysis

Year	A Lease Payments	B Tax Savings (A x .28)	C Tax Adjusted Cash Flow (A – B)	D Discount Factor (6%)	E Discounted Cash Flow (G x H)
0	-18,665		-18,665	1.0	-18,665
1	-18,665	5,226	-13,439	.943	-12,673
2	-18,665	5,226	-13,439	.890	-11,960
3		5,226	5,226	.840	4,390
4					
5					
6					
7					
8					
9					
10					

Net Present Value of Cash Outflow -38,908

Table 3. Annual Discount Factors

Year	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	.943	.935	.926	.917	.909	.901	.893	.885	.877	.870
2	.890	.873	.857	.842	.826	.812	.797	.783	.769	.756
3	.840	.816	.794	.772	.751	.731	.712	.693	.675	.658
4	.792	.763	.735	.708	.683	.659	.636	.613	.592	.572
5	.747	.713	.681	.650	.621	.593	.567	.543	.519	.497
6	.705	.666	.630	.596	.564	.535	.507	.480	.456	.432
7	.665	.623	.583	.547	.513	.482	.452	.425	.400	.376
8	.627	.582	.540	.502	.467	.434	.404	.376	.351	.327
9	.592	.544	.500	.460	.424	.391	.361	.333	.308	.284
10	.558	.508	.463	.422	.386	.352	.322	.295	.270	.247
11	.527	.475	.429	.388	.351	.317	.288	.261	.237	.215
12	.497	.444	.397	.356	.319	.286	.257	.213	.208	.187