

LEASING VS. PURCHASING OF FARM MACHINERY IN KANSAS

by

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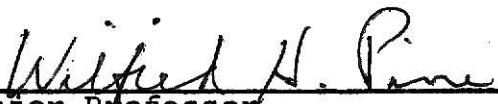
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CHAPTER I

INTRODUCTION

Farm machinery and equipment are major parts of the total investment in farming in the United States with only real estate being a greater percentage of the farmer's total assets. In 1976, machinery and motor vehicles consisted of \$65.9 billion or 50.2 percent of total physical non-real estate assets.¹ The individual farmer's requirements for farm machinery and equipment will likely increase. Consequently, it is important to investigate alternative methods for acquiring the use of farm machinery and equipment.

Farm machinery and equipment may be acquired by purchasing, leasing, renting, and custom hiring. Definitions of each method differs depending on the source used, but generally they mean the same.

Purchasing is the traditional and dominant method of acquiring farm machinery and equipment used in the United States. There are generally three ways of purchasing an asset: cash, credit, or combination of cash and credit. In

¹Economic Research Service, The Balance Sheet of the Farming Sector 1976, United States Department of Agriculture, Washington, D.C., Agriculture Information Bulletin No. 403, Sept., 1976, p. 2.

every case the purchaser acquires the title to the asset.² The owner is responsible for all insurance, taxes, repairs, maintenance, and all other costs associated with ownership, except in cases in which a maintenance contract is used.

Leasing, as used in the machinery industry, sometimes referred to as a financial lease, is a long term contractual arrangement in which the lessee (person leasing the machine) acquires the use of the farm machine in return for a lease payment to the lessor (person holding title to the machine).³ Although the length of time necessary to constitute a lease may differ, one year appears to be the breaking point between a long term and a short term arrangement and, therefore, will be used in this study. The lease payments can be made monthly, quarterly, semi-annually, or annually depending on contract specifications. Also, the contract specifies who is responsible for such items as repair costs, insurance, and property taxes. Generally, the lessee is responsible for those items but this is not a hard and fast rule.

Under the lease arrangement the lessor holds title to the machine at all times, while the purchaser of a machine receives title to the machine. The Internal Revenue Service specifies factors that constitute a conditional sales contract rather than a lease. Those factors are:

²John A. Hopkin, Peter J. Barry, and C. B. Baker, Financial Management in Agriculture, Interstate Printers and Publishers, Inc., Danville, Illinois, 1973, p. 294.

³Ibid., p. 295.

1. Portions of the periodic payments specifically apply to an equity to be acquired by the lessee.
2. Title will be acquired upon payment of a stated amount of rentals the lessee is required to make under the contract.
3. The total amount the lessee is required to pay for a relatively short period of use constitutes an excessively large proportion of the total sum required to be paid to secure the transfer of the title.
4. The agreed rental payments materially exceed the current fair rental value. This may indicate that the payments include an element other than compensation for the use of property.
5. The property may be acquired under a purchase option at a price that is nominal in relation to the value of the property at the time the lessee may exercise the option, as determined at the time of entering into the original agreement, or that is a relatively small amount when compared with the total payments the lessee is required to make.
6. Some portion of the periodic payments is specifically designated interest or is otherwise readily recognizable as the equivalent of interest.
7. Title will be acquired upon payment of an aggregate amount that approximates the price at which the lessee could have purchased the equipment when he entered into the agreement, plus interest and carrying charges.⁴

Renting, as used by the machinery industry, refers to the payment of a specific fee for the temporary (short-period) possession of a farm machine. In this study temporary possession is less than one year, and fees may be determined by the

⁴Internal Revenue Service, Farmer's Tax Guide 1977 Edition, United States Department of the Treasury, Washington, D.C., Income and Self Employment Tax Publication 225, 1976, pp. 26-27.

length of time the machine is used, by the amount of service obtained, or by the number of acres on which the machine is used.⁵ The farmer renting the machine is generally responsible only for maintenance of the machine during the rental period.

"Temporary" is the key word when considering rental as a major acquisition method. This study will concentrate mainly on acquisition methods used for a time period of ten years (time period discussed in detail in Chapter II).

Custom hiring is the acquisition of labor services as well as machine services for a given period of time.⁶ The farmer hiring the work done pays a specified fee for the machine and the operator and is usually not responsible for any maintenance, repair costs, insurance, or taxes on the hired machine. Phillip Henderson believes custom hiring is done on a "one shot basis," and feels that the farmer may or may not do the same thing the next year.⁷ For this reason this acquisition method could also be considered a temporary

⁵George B. Byers, and Kenny L. Wade, Estimating the Comparative Cost of Custom Hiring, Renting, Leasing or Owning of Selected Farm Machines, Agricultural Experiment Station, University of Kentucky, Lexington, Kentucky, Research Report 6, June 1970, p. 10.

⁶Peter J. Barry, Machinery Financing Decisions: Purchase, Lease, or Custom Hire, Department of Agricultural Economics, Texas A&M University, College Station, Texas, February, 1973, p. 10.

⁷Phillip Henderson, "Pros and Cons of Machinery Leasing From Farmer's Viewpoint," Talk presented to Omaha chapter of National Agricultural Advertising and Marketing Association, Omaha, Nebraska, May 10, 1971, p. 3.

acquisition method and fall into the same category as rental. This is assumed to be the case for this analysis.

In this study, leasing will be the main acquisition method examined while purchasing methods will be introduced in comparing the costs of the two major long term acquisition methods.

Objectives of Study

The objectives of this study are:

1. Determine the extent farm machinery and equipment is being leased in Kansas.
2. Determine the different leasing arrangements being used to lease farm machinery and equipment in Kansas.
3. Compare costs of leasing farm machinery and equipment with different methods of purchasing the same machinery.
 - A. Effects of changes in:
 1. Discount rate.
 2. Tax rate.
 3. Interest rate.
 4. Annual hourly usage.
 5. Number of years the machine is depreciated.
4. Present cost comparison data in a manner useful to farmers in determining the least cost acquisition method for their particular operations.

Definitions

Several terms which required special explanation have already been discussed. These terms consisted of the four major methods of acquisition available to the farmers in Kansas. These, however, are not the only terms that require

some explanation as to their meaning and implications in this study. These terms are discussed in the paragraphs to follow.

Net Cost is defined as the total of the cash outlay in year "i" minus the tax savings in year "i" ("i" is a specific year in the cost comparison analysis). Net costs are calculated on a yearly basis, so that the cash outlays and tax savings can be accounted for in the year they are realized.

Discounted Net Cost is the total of the net costs for a particular acquisition method discounted to a present value. This value is represented as a percent of purchase price, not a dollar value.

Cash Outlay refers to the actual cash which must be given up during year "i" for a specific acquisition method. The cash outlay could be a yearly lease payment, a down payment, annual repair costs, annual insurance, and so on.

Tax Savings is the dollar amount for a particular machine or piece of equipment that is subtracted from the farmer's gross income in determining the farmer's taxable income. This savings is determined by totaling the tax deductible items associated with either owning or leasing a farm machine or piece of equipment in year "i" and multiplying this value by the farmer's tax rate.

In leasing, the entire lease payment is considered an operating expense and, therefore, tax deductible. For ownership, on the other hand, the tax deductible items are depreciated over the life of the machine. For the first year of purchase investment tax credit and an additional 20 percent

depreciation deduction are available. However, for each acquisition method the interest, repair costs, sales or use taxes, insurance and property taxes are all tax deductible as operating expenses.

Tax Rate represents the percentage rate at which the farmer's taxable income is multiplied to receive the farmer's income tax liability.

Brief Discussion of Related Literature

The literature available on leasing of farm machinery and equipment varies from the actual subject matter discussed to the conclusions drawn. Basically the literature can be classified into three groups. These are the general, the closely related, and the specific references.

The General References include the articles or reports on leasing which discuss the advantages and disadvantages of leasing and some of the other aspects of leasing, such as the legal, tax, and cash flow aspects. Often these discussions include an example comparing leasing costs with purchasing costs. Usually these examples illustrate the concept the author was discussing. If, for example, an author was comparing tax savings for leasing with purchasing, he might use an example to illustrate this point. These articles and reports do, however, contain a great deal of information about leasing and its non-economic comparisons to purchasing. A few of the articles reviewed were "Machinery Leasing: Perspective

and Prospects,"⁸ "The Impact of Federal Income Taxes on the Decision to Lease or Buy Farm Machinery,"⁹ and Machinery Costs - Own, Lease or Custom Hire.¹⁰

The Closely Related References on leasing generally contain a great deal of information comparing the non-economic factors of leasing and purchasing, but tend to go into much more detail concerning the actual costs and tax savings which occur with leasing as compared to purchasing than do the General References. These studies, however, do not take into account some of the necessary variables to conduct a complete cost comparison on leasing vs. purchasing in their particular study area.

Conclusions from these studies are comparable with the more detailed studies in suggesting that ownership is generally the least cost alternative except in extreme cases. These extreme cases usually consisted of a farmer in a high tax bracket with a high opportunity cost on his money. Just how

⁸George D. Irwin, and Lawrence N. Smith, "Machinery Leasing: Perspective and Prospects," Agricultural Finance Review, Economic Research Service, United States Department of Agriculture, Farm Production Economics Division, Washington, D.C., Volume 33, July, 1972, pp. 42-47.

⁹Robert N. Penland, and Gayle S. Willett, "The Impact of Federal Income Taxes on the Decision to Lease or Buy Farm Machinery," Journal of the American Society of Farm Managers and Rural Appraisers, Inc., Volume 39, April, 1975, pp. 38-46.

¹⁰Merlyn M. Dahl, and Wallace G. Aanderud, Machinery Costs - Own, Lease or Custom Hire, Cooperative Extension Service, South Dakota State University, Brookings, South Dakota, Extension Circular 664 (revised).

extreme depended upon the type of leasing and purchasing arrangement used in the analysis. Most of these studies used only one or two leasing arrangements. It is questionable whether only one or two leasing arrangements is a representative sample of the leasing arrangements being used in that particular study area. A few of the articles reviewed were: Estimating the Comparative Cost of Custom Hiring; Renting, Leasing, or Owning of Selected Farm Machines;¹¹ Lease - Buy Computer Program;¹² Farm Equipment Leasing;¹³ and Pros and Cons of Machinery Leasing from the Farmer's Viewpoint.¹⁴

There are three major studies which belong in the third category of literature reviewed, Specific References. These studies more closely resemble this study and are discussed separately.

The first of these studies is a master's thesis completed in 1971 by David S. Palmer of Cornell University, entitled Financial Leasing: Its Significance and Potential for the Acquisition of Capital by Commercial Farmers. It was primarily a study of the extent of leasing in the state of New

¹¹Byers and Wade, Report No. 6.

¹²H. R. Hinman, Lease - Buy Computer Program, Department of Agricultural Economics, New York State College of Agriculture, Ithaca, New York, A. E. Ext. No. 586, May, 1971.

¹³James E. Hunt, and E. T. Shandys, Farm Equipment Leasing, Ohio Agricultural Research and Development Center, Wooster, Ohio, Research Circular 170, 1969.

¹⁴Henderson, Research Circular 170.

York and of some cost comparisons between leasing and purchasing.

To find the extent of leasing in the state of New York, Palmer sent questionnaires to farm machinery dealers in that state. Of the 119 dealers responding, only 16 dealers had leased farm machinery or equipment or 13.4 percent.

In doing his cost comparisons, Palmer used two different methods, the "True Cost of Leasing"¹⁵ analysis and the discounted cash flow method. The methods used by Palmer are more important to this study than results because leasing arrangements used in his analysis were different from the leasing arrangements found in Kansas. Also for the "true cost of leasing" method he used three specific examples of leasing arrangements used in New York and not generalized examples that could be used for all types of machines. The results are also limited in their usefulness because only one lease plan was included for two different horsepower tractors.

"The true cost of leasing," as Palmer refers to it, is the actual interest rate a farmer would have to pay if he were borrowing the money to purchase the machine. Palmer used the "Constant Ratio Equation" to translate the leasing charges to

¹⁵David S. Palmer, "Financial Leasing: Its Significance and the Acquisition of Capital by Commercial Farmers," unpublished M.S. thesis, Cornell University, Ithaca, New York, 1971, p. 62.

an approximate annual interest rate. The formula is as follows:¹⁶

$$c = \frac{2 M D}{P (N+1)}$$

c = calculated interest rate

M = number of payments per year

D = total finance charges (arrived at by multiplying the number of payments by the amount of the payment and subtracting the purchase price)

P = amount borrowed (purchase price of leased machine)

N = total number of payments over the life of the loan (lease)

Palmer used the discounted cash flow for comparison between leasing and purchasing of specific machines for variation in discount and tax rates. Since he did not credit the owner with the fair market value of the machine at the end of the comparison period, his results may be biased against purchasing. Palmer concluded that for various methods of farming, leasing may be more expensive than other methods of financing due to the interest costs involved.¹⁷

The second study to be discussed is entitled Equipment Leasing as an Alternative Source of Investment Capital for Northeast Farmers. This article was written by Eddy L. LaDue

¹⁶David S. Palmer, "Financial Leasing: Its Significance and the Acquisition of Capital by Commercial Farmers," unpublished M.S. thesis, Cornell University, Ithaca, New York, 1971, p. 63.

¹⁷Ibid., p. 116.

of Cornell University in 1975. LaDue also was interested in the extent of leasing in eight northeastern states and an analysis of the costs of lease vs. purchase and lease-buy vs. purchase. He also calculates break even points for certain lease plans and discount rates.

The northeastern states include New York, Pennsylvania, Vermont, Maine, Connecticut, Massachusetts, New Hampshire, and Rhode Island. To determine the extent of leasing in this area questionnaires were sent to farm machinery dealers. Eleven percent had provided equipment on a lease basis. Tractors were the most frequently leased machines, and purchasing the leased machine at the end of the lease was the most popular termination method.

LaDue found a wide variation in the lease rates charged for approximately the same machine. He cites three potential reasons: "1. Inexperience with leasing on the part of dealers; 2. an effort on the part of the dealers to receive what the market will bear; and, 3. dealers were accepting responsibility for differing levels of ownership costs."¹⁸

LaDue compared the lease vs. purchase and the lease-buy vs. purchase. The program calculated the present value of the net costs of buying, leasing, or lease-buying by subtracting either the lease or the lease-buy from the purchase thus

¹⁸Eddy L. LaDue, Equipment Leasing as an Alternative Source of Investment Capital for Northeast Farmers, Cornell University, Ithaca, New York, p. 16.

determining the advantage of leasing.¹⁹ LaDue used different tax rates and discount rates for the lease plans being analyzed, and he used the average lease rates in his analysis.

LaDue only looked at lease plans from two to five years in length, while in Kansas seven and ten year lease plans were available. The largest tractor used in LaDue's analysis is 110 horsepower, whereas in Kansas, much larger equipment was used. Also, LaDue only compares two tractor sizes and no other machines, thus limiting the usefulness of his results. LaDue concluded that leasing was unprofitable from the standpoint of the farmer. He did say that leasing is most likely to be profitable for farmers with tax rates of over 45 percent, for opportunity costs of capital exceeding 12 percent and for a relatively short expected period of use for the machine.²⁰

The third and final study is a master's thesis completed in 1971 by John A. Nigh of the University of Nebraska entitled Evaluation of the Least Acquisition Cost of Farm Machinery. He was primarily interested in leasing arrangements offered Nebraska farmers and the analysis of acquisition costs concentrating on the income tax implications and the least cost depreciation methods.

¹⁹Ibid., p. 23.

²⁰Ibid., p. 43.

Nigh talked directly to the manufacturer's representative to obtain the lease plans offered Nebraska farmers; the extent leasing was being used was not determined.

Nigh's cost comparisons included a cash purchase, a credit purchase, and the different lease plans obtained from the manufacturer's representative. These lease plans had an initial lease period from five to seven years and contained a renewal clause of two percent of the original lease payment, enabling the lessee to continue leasing the machine for several years. Each lease to be compared was renewed to a period of ten years, the study period, so that all acquisition methods could be compared on an equal time basis. Nigh used a discounted cash flow for computing his costs and generally used income tax savings in his comparisons.

Nigh analyzed only full pay-back leases and he assumed that the lessee would renew the lease of the machine at the end of the regulation period, when the most popular termination alternative is to purchase the leased machine. He also assumed that the dealer would agree to renew his lease on the machine at the end of the lease period. These assumptions may be unrealistic since the participating dealers had not been questioned concerning the actual practices used in Nebraska.

He tried to make his analysis applicable to different machines and machines of different purchase prices. He did this by giving the results as a percentage of purchase price. This eliminated having to compare different priced machines

because nearly all different priced machines could be compared by the use of percentages.

Comparisons also were made varying the purchase price actually paid by the purchaser. For this comparison he incorporated the theory that the purchaser may be able to purchase the machine at a discount of the regular purchase price simply by bargaining with the dealer, a discount of, for example, five or ten percent. However, the lease payment was generally calculated from the list price of the machine. He concluded that as the amount of the discount received by the purchasing farmer increased, the advantage to purchasing also increased.

Nigh compared several depreciation methods and concluded that the greatest tax advantage occurred with the sum-of-the-years digits method of depreciation.

Nigh's main conclusion was, "Nebraska farmers with limited capital, high opportunity costs and high income tax bracket can benefit most from leasing."²¹

²¹John A. Nigh, "Evaluation of the Least Acquisition Cost of Farm Machinery," unpublished M.S. thesis, University of Nebraska, Lincoln, Nebraska, 1971, p. 72.

CHAPTER II

METHODOLOGY AND DATA

Methodology will be described in sections corresponding to the first three objectives, after which the data used in the economic analysis will be described. Assumptions for the study deal mainly with the discounted net cost comparisons and will be reviewed in that section.

METHODOLOGY

Extent of Farm Machinery Leasing in Kansas

To determine the extent of farm machinery and equipment leasing in Kansas, three inquiries were made. The first determined who was involved in leasing machinery in Kansas; the second questioned farm machinery dealers concerning leasing; and finally lessees were surveyed.

A questionnaire was sent to four groups associated with agriculture: 1. Members of the Kansas Society of Farm Managers and Rural Appraisers; 2. Members of the Kansas Association of Bank Agricultural Representative (KABAR); 3. The 105 County Agents; and 4. Farm Management Association fieldmen in Kansas. They were asked if they knew any dealer or farmer

leasing farm machinery or equipment, or financiers who were leasing to farmers or financing farmers who were leasing. A copy of this questionnaire appears in Appendix A.

Information received was limited with 38 percent responding. Of those, approximately half stated there was no leasing in their areas. However, the information received included 41 farmers thought to be leasing, 121 farm machinery dealers (some known to be leasing, others dealers in the respondent's area), and ten financiers associated with leasing.

The second inquiry involved sending questionnaires to farm machinery dealers in Kansas. In Kansas, farm machinery dealers could belong to the Western Hardware and Implement Association, so this association was contacted.²² Its membership includes a large percentage of the farm machinery dealers in Kansas, and provided a list of their members. Combining this list with the farm machinery dealers from the original survey, a good representation of the farm machinery dealers in Kansas was obtained.

A questionnaire was sent to half of the farm machinery dealers listed. The main question asked was if they were leasing now and, if not, had they leased in the past. Dealers responding "yes" were questioned about the machines and equipment leased and about aspects of leasing arrangements used.

²²In an article by Peter J. Barry and James W. Sutton entitled Financing Farm Machinery: The Role of the Retail Dealers in Texas a reference was made to the "Southern Hardware and Implement Association."

If the dealers had not previously leased farm machinery and equipment, they were asked why. The questionnaire sent to these dealers appears in Appendix B.

There were two reasons for surveying the farm machinery dealers and not the farmers concerning leasing. First, a great deal fewer farm machinery dealers than farmers reside in Kansas, and a relatively accurate list of these dealers can be obtained, while a list of farmers in Kansas would be difficult to obtain. Secondly, knowing the dealers leasing, and thus finding the different leasing arrangements being used in Kansas was a simpler task.

A complete study of farm machinery leasing in Kansas would require a survey of lessees. The names of only 41 farmers thought to be leasing were obtained from questionnaires sent to KABAR and Society of Farm Managers and Rural Appraisers members, County Agents throughout the state, and the Farm Management Fieldmen in Kansas. Names of lessees were not requested in the questionnaire to farm machinery dealers because they might question the confidentiality of the study. This fear was confirmed in the personal interviews of leasing dealers because they were reluctant to release names of farmers leasing from them. For these reasons a very small percent of the farmers leasing in Kansas was obtained.

The questionnaire was sent primarily to determine some of the characteristics of these farmers and their main reasons for leasing farm machinery and equipment. A copy of this questionnaire appears in Appendix C.

Leasing Arrangements Used
in Kansas

To determine the leasing arrangements used in Kansas, the second objective, several dealers leasing were personally interviewed. Criteria used for specifying which dealers should be interviewed were:

1. Every machinery classification must be represented. (After the dealers responses were returned and analyzed, leased machinery was grouped into six machinery classifications: tractors, combines, implements, haying equipment, other machinery, and irrigation equipment.)
 2. Dealers must lease to at least four farmers. If there was not a dealer in each classification leasing to four farmers, the dealer leasing to the greatest number of farmers in that machinery classification was chosen.
 3. Each machinery classification was represented by a dealer in the West and Central regions (majority of leasing occurred in these two regions).*
- * Since a small number of dealers leased other machinery and irrigation equipment, only one dealer in either region was interviewed.

Nine dealers and one leasing company were chosen utilizing the criteria: four farm machinery dealers from the West region and five dealers and one leasing company from the Central region.

The nine dealerships and two leasing companies were interviewed in November of 1976. One dealership manager in charge of leasing was out of town and the person interviewed had difficulty distinguishing between short term leasing and long term leasing.

Discounted Net Cost Comparisons

The third objective of this study was to compare costs of leasing and purchasing. The leasing arrangements used for this analysis were adapted from the leasing arrangements presently utilized in Kansas (described in Chapter IV). The purchase plans used in the analysis were acquired from the dealers personally interviewed.

Assumptions

Assumptions for this analysis are made primarily to keep certain circumstances consistent, enabling comparison of different acquisition methods strictly on the basis of discounted net costs. These assumptions are:

1. Farmer has examined his operation and determined it warrants the acquisition of a farm machine for a ten year period.
2. Farmer is consistent in his acquisition method over the ten year period.
3. All transactions are conducted at the beginning of the year.
4. For each acquisition method evaluated the tax rate, discount rate, interest rate, and annual hourly usage specified remain constant over the ten year period.
5. An opportunity cost exists on every investment.
6. The discounted net cost is calculated on an annual basis.
7. Cash outlays and tax savings are accounted for in the year realized.

8. The farmer having title of the machine at the end of the ten year period is credited for the fair market value of the machine.
9. The farmer is financially able to employ the least cost acquisition method.
10. There is no change during the study period for prices that would affect any cost estimates.

The economic analysis of leasing vs. purchasing was conducted on a discounted net costs basis. A cash flow method was used to calculate the net costs, then discounted to the present value. This equation was used.

$$P.V. = \frac{NC_i}{(1+d)^i}$$

P.V. = present value or discounted net costs
(as a percent of purchase price)

NC = net cost in year "i"

d = discount rate

i = specific year

The discounted net cost represents a percentage of purchase price. Purchase price equals the list price or the price used in determining lease payments of the machine being purchased or leased. Percentages were used so machines of different dollar values may be compared.

DATA

Sales Tax and Compensating Tax

Sales tax at the rate of three percent was included and paid in the first year for the purchasing arrangements. No

sales tax was required for the leasing arrangements unless the leased machine is purchased later, then a sales tax was paid. Annual lease payments are subject to a compensating tax, or use tax, equal to the sales tax rate of three percent.²³

Interest

Simple interest was used to calculate the amount of interest paid by the farmer in a given year. Interest paid equals the amount of money borrowed times the length of time borrowed (one year is assumed) times the interest rate. Interest rates included in the cost comparisons represent a range used in Kansas and were eight, nine, ten, eleven, twelve, and fourteen percent.

Depreciated Value

Using the declining balance method of depreciation, an estimate of the value of a machine can be calculated. This depreciation method best represents the decrease in value.²⁴ The resulting value represents the depreciated value as defined in this study. The depreciated value varies according to the amount the machine is used per year, so the depreciated values were calculated for three annual hourly usages, 500, 700, and 1000 hours per year, and appear in Table 1. The

²³Kansas, Statutes Annotated, Volume 6A, p. 203.

²⁴James C. Sydney and Everett Stoneberg, Farm Accounting and Business Analysis, Iowa State University Press, Ames, Iowa, 1974, p. 25.

TABLE 1: DEPRECIATED VALUES AS A PERCENT OF PURCHASE PRICE
FOR MACHINES USED 500, 700, AND 1000 HOURS PER YEAR.

Year	Depreciated Values as % of Purchase Price		
	500hrs./yr.	700hrs./yr.	1000hrs./yr.
0	100.00	100.00	100.00
1	85.71	80.00	71.43
2	73.46	64.00	51.02
3	62.96	51.20	36.44
4	53.96	40.36	26.29
5	46.25	32.17	18.78
6	39.64	25.62	13.41
7	33.98	20.38	9.58*
8	29.12	16.18	-
9	24.96	12.82	-
10	21.39	10.04*	-
11	18.33	-	-
12	15.71	-	-
13	13.47	-	-
14	11.55*	-	-

* The salvage value for the three annual hourly usages is approximately ten percent.

values shown equal the depreciated value as a percent of purchase price using the declining balance depreciation method.²⁵ Depreciated values appearing in Table 1 represent the values of the machines as a percent of purchase price after a certain number of years use for each hourly usage, and not their values after depreciation for the purchasing arrangements used in the analysis.

Tractors, as shown in Chapter III, are the most commonly leased machine in Kansas and can be utilized for different operations. Consequently, they were chosen for calculating repair costs, insurance, and property taxes. Several machines other than tractors realize a similar percentage of annual repair costs and decreasing values depending on the amount of annual hourly usage. Therefore, using tractors as a base for calculating different costs will not change the results greatly. Using tractors as a base permits a more detailed analysis of leasing vs. purchasing than if each machine was compared.

Repair Costs and Annual Hourly Usage

Repair costs generally occur throughout the year, but to assure that all transactions take place at the beginning of the year, assumption number three, half of the repair costs

²⁵Ibid., p. 26.

are realized at the beginning of the year and the other half at the beginning of the next year.

Repair costs vary as the annual hourly usage of the machine varies, so three annual hourly usages were compared: 500, 700, and 1000 hours per year, with 700 hours per year being considered average. Seven thousand hours were considered the useful life of the machines (700 hours per year times ten years useful life equals 7000 hours). A machine used 500 hours per year has a useful life of 14 years (7000 hours divided by 500 hours per year equals 14 years) and fewer annual repair costs per year. For 1000 hours per year the useful life is seven years (7000 hours divided by 1000 hours per year equals seven years) and greater annual repair costs. To have a useful machine for ten years a farmer using a machine 1000 hours per year needs to acquire a new machine at the end of seven years for three more years to equal a ten year period.

Repair costs as a percent of purchase price for the three hourly usages, 500 hours per year, 700 hours per year, and 1000 hours per year appear in Tables 2, 3, and 4, respectively.

Insurance and Property Tax

Costs for insurance and property taxes were based on the machine's actual value for each year, so these costs are decreasing as the actual value of the machine decreases. Insurance was assumed at .5 percent of fair market value in a given year and paid at the beginning of that year. Property

TABLE 2: REPAIR COSTS AS A PERCENT OF PURCHASE PRICE FOR
MACHINES USED 500 HOURS PER YEAR.

Year	Accumulated Hourly Usage	Yearly Percentage *	Accumulated Percentage
0		.50	.50
1	500	1.45	1.95
2	1000	2.15	4.10
3	1500	2.65	6.75
4	2000	3.15	9.90
5	2500	3.40	13.30
6	3000	3.72	17.02
7	3500	4.05	21.07
8	4000	4.32	25.39
9	4500	4.60	29.99
10	5000	3.40	33.39

* Assuming one half of the repair costs occur at the beginning of the year and half at the beginning of the next year.

TABLE 3: REPAIR COSTS AS A PERCENT OF PURCHASE PRICE FOR
MACHINES USED 700 HOURS PER YEAR.

Year	Accumulated Hourly Usage	Yearly Percentage *	Accumulated Percentage
0		.88	.88
1	700	2.41	3.29
2	1400	3.56	6.85
3	2100	4.41	11.26
4	2800	5.08	16.34
5	3500	5.65	21.99
6	4200	6.17	28.16
7	4900	6.71	34.87
8	5600	7.17	42.04
9	6300	7.57	49.61
10	7000	3.89	53.50

* Assuming one half of the repair costs occur at the beginning of the year and half at the beginning of the next year.

TABLE 4: REPAIR COSTS AS A PERCENT OF PURCHASE PRICE FOR
MACHINES USED 1000 HOURS PER YEAR.

Year	Accumulated Hourly Usage	Yearly Percentage *	Accumulated Percentage
0		1.45	1.45
1	1000	4.10	5.55
2	2000	6.05	11.60
3	3000	7.45	19.05
4	4000	8.65	27.70
5	5000	9.65	37.35
6	6000	10.60	47.95
7	7000	7.00	54.95
8	1000 ¹	4.10	59.05
9	2000	6.05	65.10
10	3000	3.40	68.50

* Assuming one half of the repair costs occur at the beginning of the year and half at the beginning of the next year.

¹ A new machine was acquired.

taxes were paid in two equal payments: December 15, and June 15 of the following year. The property tax rate was assumed at 1.7 percent of fair market value in a given year or equal payments of .85 percent. The fair market value of the machine varied with the annual hourly usage so the costs of insurance and property tax varied also. Table 5 shows the cost for insurance and property taxes for the three annual hourly usages as a percent of purchase price.

Depreciation

A seven year straight line method of depreciation was used for the purchase arrangements with annual hourly usages of 700 and 1000 hours per year. A fourteen year straight line method was used for 500 hours per year. A ten year straight line depreciation method was introduced in two of the purchase arrangements analyzed, for comparison purposes. With the purchase of a leased machine at termination of the lease, the straight line depreciation was used, and the machine depreciated to the end of its useful life. For example: if a leased machine used 700 hours per year was purchased after three years, it would be depreciated for seven more years on a straight line basis.

A ten percent salvage value was assumed for all machines when calculating straight line depreciation.

TABLE 5: INSURANCE AND PROPERTY TAX COSTS AS A PERCENT OF PURCHASE PRICE FOR MACHINES USED 500, 700, AND 1000 HOURS PER YEAR.

Year	Insurance and Property Tax Costs as a Percent of Purchase Price		
	500hrs./yr.	700hrs./yr.	1000hrs./yr.
0	.5	.5	.5
1	1.7	1.6	1.6
2	1.9	1.8	1.6
3	1.6	1.2	1.1
4	1.4	1.1	.7
5	1.2	.9	.6
6	1.0	.7	.4
7	.9	.6	.8
8	.7	.5	1.8 ¹
9	.7	.4	1.6
10	.5	.3	1.1

¹A new machine was acquired.

Additional First Year Depreciation Allowance and Investment Tax Credit

The additional first year depreciation allowance of 20 percent and the ten percent investment tax credit (I.T.C.) were included in the analysis with the purchase of the machine because, assuming a farmer is in a financial position to acquire a new machine, he will want the highest tax deduction possible. This assumes the deduction limits for the I.T.C. and the 20 percent additional depreciation have not been exceeded. If the twenty percent additional first year depreciation was not included, the discounted net cost for the purchase plans would be greater in the first years, but less in later years. So, if the discount rate was very high it would increase the discounted net cost. If the I.T.C. were excluded the discounted net cost for a purchase would increase only in the first year.

Range of Tax Rates

Kansas Farm Management Association data were employed in determining the range of tax rates for this study. From the association data the high 25 percent of net farm incomes for 1971 to 1975 were averaged to find an average high net income. The tax liability for this high income value was calculated and converted to a percentage, and was considered the high value of the range, approximately 40 percent. A 50 percent tax rate was included for extreme cases. The tax rates used were 15, 25, 30, 35, 40, and 50 percent.

Range of Discount Rate

The discount rate was determined by the same method as the tax rates, except for averaging rates of return. The discount rates used were zero, three, six, nine, twelve, and fifteen percent. To represent the actual cost over the study period the zero percent discount rate was included. The discount rate represents the farmer's rate of return to total capital invested in his farming operation, but will be referred to as the discount rate in this study.

CHAPTER III

LEASING AND LEASING ARRANGEMENTS FOR FARM MACHINERY IN KANSAS

Extent of Leasing in Kansas

Questionnaires were sent to 290 dealers representing half the farm machinery dealers in Kansas. After a second mailing, 205 questionnaires were returned, or a 70 percent response. Seventeen of these dealers were either no longer in farm machinery business or in the lawn and garden phase of the industry, which left 188 questionnaires for tabulation.

Table 6 shows the number and percent of dealers responding, dealers leasing, dealers not leasing now but leasing in the past, and dealers renting on the basis of geographic area. Approximately the same number of dealers responded from each of the three regions. For the entire state 16 percent of all dealers responding were leasing, with the majority located in the West and Central regions. Of those dealers not leasing presently, 15.2 percent had leased in the past, with again the majority being located in West and Central Kansas. Of the dealers responding, 35.1 percent were renting farm machinery and equipment with the greatest concentration in Central Kansas.

TABLE 6: NUMBER AND PERCENT OF DEALERS RESPONDING TO THE QUESTIONNAIRE, DEALERS LEASING, DEALERS NOT NOW LEASING BUT LEASING IN THE PAST, AND DEALERS RENTING FOR EACH GEOGRAPHICAL REGION AND TOTAL FOR KANSAS.

Region	Dealers Responding	Dealers Leasing	Dealers not now Leasing but Leasing in the Past	Dealers Renting
	<u>No.</u> %	<u>No.</u> %	<u>No.</u> %	<u>No.</u> %
East	62 33.0	2 3.2	7 11.7	17 27.4
Central	67 35.6	15 22.4	9 17.3	29 43.3
West	59 31.4	13 22.0	8 17.4	20 33.9
State Total	188 100.0	30 16.0 *	24 15.2	66 35.1

* Of responding dealers, 16 percent were presently leasing farm machinery or equipment.

Approximately eight farmers were leasing from each leasing dealer with a range from one to 35 farmers. Based on these figures for the entire state of Kansas approximately 550 farmers are leasing, or approximately 0.7 percent of all farmers in Kansas.²⁶ This is a rough estimate, but it indicates the extent of leasing in Kansas.

Table 7 shows the number and percent of dealers leasing different types of farm machines. Tractors were by far the most popular machine leased.

The manufacturer's leasing plan was used by 63.3 percent of the respondents and 63.3 percent used their own leasing arrangements. This means that some of the dealers were using both arrangements. Eighty percent of the leasing dealers utilized a lease purchase option, and 26.7 percent were providing machinery to a leasing company. Ninety-three percent expected to continue leasing.

Those dealers not presently leasing were asked to identify major reasons for not leasing (Table 8). The two major reasons for not leasing were lack of demand by farmers and lack of machinery. Other reasons receiving approximately the same number of responses were that leasing was unprofitable for farmers; that farmers were not interested; that too much capital was required of dealers; that leasing was unprofitable

²⁶Daryl L. Brinkman, William H. Kastens, and M. E. Johnson, Number of Farms and Land in Farms, Statistical Reporting Service, United States Department of Agriculture, Kansas Crop and Livestock Reporting Service, January 20, 1977.

TABLE 7: NUMBER AND PERCENT OF LEASING DEALERS LEASING
DIFFERENT TYPES OF FARM MACHINES.

Machine Leased	No. of Dealers Leasing Each Type of Machine *	% of Dealers Leasing Each Type of Machine
Tractors	23	76.7
Combines	13	43.3
Implements	4	13.3
Haying Equipment	3	10.0
Other Machinery	7	23.3
Irrigation	4	13.3

* Each dealer could identify more than one type of machine leased.

TABLE 8: REASONS FOR NOT LEASING OBTAINED FROM NON-LEASING DEALERS.

Reason for not Leasing	Percent of Dealers Responding
Lack of machinery	35.4
Lack of demand	45.6
Unprofitable for farmer	24.7
Farmers not interested	25.9
Too much capital required	28.5
Lack of adequate financing	8.9
Lack of suitable leasing plan	10.8
Unprofitable for dealer	27.8
Tax angle	3.2
Too much paper work	22.2
Leasing prohibited by manufacturer	0.6
Difficulty in determining residual value	16.5
Poor care of machinery by lessee	5.1

for dealers; and that there was too much paperwork for the dealers.

Dealers held mixed views on the importance of leasing in the future. Of dealers that were leasing, 80 percent felt that leasing will be of greater importance in the future, while only 47.2 percent of the dealers not leasing felt the same. For all the dealers responding, 27.1 percent said leasing would not be of greater importance in the future, 51.1 percent said it would be of greater importance, and 21.8 percent did not answer the question.

Farm Machinery Leasing Arrangements

To determine the types of leasing arrangements utilized by farmers in Kansas, our second objective, nine machinery dealers and two leasing companies were interviewed. Leasing arrangements used and some of the specifics about them were the main objectives, but we also wanted to know if these arrangements were similar or if they varied widely, and the nature of these variations.

There are three major types of leasing arrangements used in Kansas: 1. Lease-Purchase Plan - consisting of the farmer leasing the machine for a specified number of years (less than ten years) and then purchasing the leased machine for market value, 2. Continuous-Lease Plan - consisting of the farmer leasing a machine for a specified time period at the end of which the leased machine is returned and a new machine is

leased, and 3. Long-Term Lease - consisting of a ten-year lease and at the end of this period the lessee purchases the machine.

Of the dealers and leasing companies interviewed, five were using the Lease-Purchase Plan, three the Continuous-Lease Plan, and two were using the Long-Term Lease Plan. One of the dealers interviewed was not leasing at the present time.

Lease-Purchase Plan

The Lease-Purchase Plan is the most widely utilized lease plan in Kansas. Four dealers and one leasing company were using this plan, but different initial lease periods were used. Initial lease periods for the five lessors were three, three, four, five, and seven years. The leases were generally alike with only slight variations.

Basically, the dealer's full line of machinery was available for leasing, although some minimum dollar limits were set on the amount that could be leased. For example, the leasing company would lease any depreciable item but the machine or machines leased must have a total value of \$25,000.

The initial lease period varied from one to ten years, the most common of which were three, four, and five years for farm machinery dealers and seven years for the leasing company. The longer lease period for the leasing company was due to the fact that irrigation systems were the main items leased.

In every instance but one the lessee was responsible for repair costs, insurance, property taxes, and maintenance. In the exception it depended on the contract.

Lease payments generally were determined by use of tables furnished by manufacturers including variations in dealer's profit, interest rates, and residual values. A "factor" was obtained from these tables using certain variables (dealer's profit, interest rate, years leased, residual value, etc.) as guides, and multiplied by the purchase price of the machine to determine the lease payment. This "factor" is a pre-calculated value, which, when multiplied by the purchase price, equals a lease payment which insures a profit to the lessor. Exceptions to this method of calculating lease payments were one dealer and one leasing company. This dealer treated every case on an individual basis, and could compute the lease payments by two distinct methods. One method he calculated on an hourly basis according to the size of machine and usage, and the other method was the manufacturer's "factor" discussed above. The leasing company used a "factor" system also, but the "factor" was based on the price the investor paid for money he used.

In every instance the lease payment was required in advance with some variations in frequency of payments. They could be either monthly, quarterly, semi-annually, or annually. One dealer required monthly payments and a few dealers offered seasonal payments or payment schedules tailored to farmers' harvest periods.

Termination alternatives available to lessees were:

1. purchase leased machine, which in every case was chosen for the Lease-Purchase Plan, 2. lease new machine, and
3. purchase new machine.

When asked if the farmer's requirements were any different for leasing than purchasing, two of the dealers responded that there was no difference, and a third said the same but required a minimum net worth of \$75,000. The other dealer and leasing company both wanted three years' previous financial statements while one dealer said the requirements were more strict. The leasing company stated the cost of the machine being leased could not exceed 40 percent of the lessee's net worth.

Three out of the five dealers agreed that the customer's previous business with the dealer was an important part in determining who could lease and who could not. One dealer explained his views on prospective lessees this way, "The people that don't think the machine is in good condition at the end of the lease and will turn it in--these people don't take care of the machine and the dealer doesn't want to lease to those people."

The characteristics of the farmers and their operations obtained from the lease-purchase plan dealers varied. Three out of five dealers said the farmer had been in the business for a long time and was well established, while the other two said younger farmers were leasing. Four lessors believed the lessees were the bigger farmers and the other said his lessees

were about average. Four of the lessors grouped their lessees as both owners and renters of land and the other believed the majority of farmers leasing from him were farming only owned ground.

The dealers agreed they were leasing primarily to provide another service to their customers. As for the future of leasing in Kansas or in the nation, two of the dealers felt it would stay about the same, two dealers felt it would increase in the future, and the leasing company said it would increase 50 percent by 1980.

Lease Plans two and four represent the Lease-Purchase Plan classification in the Economic Analysis of Leasing vs. Purchasing discussed in Chapter IV.

Continuous-Lease Plan

The Continuous-Lease Plan consists of a farmer leasing a machine for a specified number of years and at the end of the initial lease period the lessee returns the leased machine to the dealer and leases a new machine. Three dealers use this type of lease in Kansas.

Generally the dealers who are in this category initiated a lease plan as an alternative to their manufacturers' lease plans. This was obvious when talking to these dealers about their particular lease plans and how the different lease payments were determined. These three dealers offered their full line of equipment for lease, and the most common lengths of leases were one, two, and five years.

For the one year lease, lease payments were paid in advance, yearly, semi-annually, or quarterly. When the dealer was asked to explain how he determined lease payments, he could not make generalizations. He handled every case differently, so much so, he could not give a representative example. This dealer felt that if it is more beneficial for the farmer to lease one piece of equipment, it would be even more beneficial to lease all his equipment. As could be expected, this dealer usually leases more than one machine to a farmer on a one year basis. The dealer was responsible for everything but fuel, oil, and operator.

In the two year Continuous-Lease plan the dealer was also responsible for everything but fuel, oil, and operator. The lease payments were paid quarterly in advance and determined on an hourly basis. The lessee was charged an hourly rate for a specific horsepower machine leased with a minimum annual hourly usage of 1000.

For the five year Continuous-Lease plan the lessee is responsible for repairs, maintenance, insurance, and property taxes. Lease payments are made yearly in advance and determined by a certain predetermined "factor." This "factor" is a percentage of purchase prices that is used in calculating the actual lease payment. The "factor" can be altered depending upon the expected condition of the machine at the end of the lease. For example, if the lessee was expected to be very rough on the machine the "factor" would increase and vice versa.

All three dealers offered three termination alternatives: 1. purchase of new machine, 2. purchase of leased machine, or 3. lease of new machine. The third alternative was chosen for a Continuous-Lease arrangement. The farmer's requirements were much greater for leasing than purchasing and the customer's previous business was considered very important by the three lessors. If negligence was shown by the lessee, the lessee was responsible for the additional costs.

According to these lessors the leasing farmers were all well established and farmed both owned and rented ground. Two of the dealers were leasing to larger farmers while the other dealer was leasing to all size farmers.

When asked why they were leasing, all three dealers responded that they wished to make a profit and provide another service. Their comments on the future of leasing were favorable. Two dealers felt it would increase and the other felt the more profit made by leasing the more leasing would occur.

Long-Term Lease

The Long-Term Lease lasts for ten years. One leasing company and one dealer were in this classification but the dealer transacts all his leasing business through a leasing company, so two leasing companies are being described.

The dealer was an irrigation equipment dealer, so irrigation equipment was leased, while the leasing company leased any depreciable item. The lease payments for both are paid in advance and determined by a "factor" that is multiplied by the

purchase price. The lessee is responsible for repairs, maintenance, insurance, and property taxes for both situations. The termination alternatives are to re-lease the machine or to purchase the leased machine. The dealer has yet to have a lease terminated while the leasing company's lessees usually purchase the leased machine.

Substantial financial records are required for both lessors, but the customer's previous business does not play a large role in determining who is eligible for leasing. The farmers leasing generally are well established, both owners and tenants, and of all sizes. The dealer is mainly leasing to provide another service while the leasing company is trying to make a profit. Farmers and dealer are optimistic about the future of leasing and feel it will increase.

Lessees of Farm Machinery

Questionnaires were sent to 41 Kansas farmers thought to be leasing. Of the 13 returned only seven were leasing and they were asked why they were leasing. The majority said it was more advantageous from a cash flow situation. Other reasons mentioned were taxes, lower costs method, opens line of credit, and receives better service from the dealer.

The general characteristics of Kansas farmers leasing are that they operate larger sized farms and have been associated with the leasing dealer at least seven years. Items leased, in order of number leased were tractors, combines,

implements, irrigation equipment, and haying equipment. At least 30 percent of lessees' farms were irrigated, and the majority expected to continue leasing.

CHAPTER IV

ECONOMIC ANALYSIS OF LEASING VS. PURCHASING OF FARM MACHINERY

This chapter describes and compares the discounted net costs for eight different acquisition methods, five leasing and three purchasing arrangements used in Kansas. All eight plans were adapted from the leasing and purchasing arrangements found from the personal interviews held with leasing farm machinery dealers in Kansas. The five leasing plans represent two to ten year leases and three types of leasing arrangements discussed in Chapter III. The three purchasing plans represent standard arrangements used in Kansas. The eight methods compared are described in terms of items included as cash outlays and tax savings.

Purchase Arrangements

Certain items are consistent for each purchasing arrangement and others vary. Consistent items used in this analysis are: 1. the purchaser is responsible for maintenance (fuel, oil, and operator), repair costs, insurance, property taxes, and sales tax; 2. a seven year straight line depreciation is used (ten year depreciation method is introduced for comparison purposes); 3. the purchaser takes full advantage of the ten

percent I.T.C.; 4. the additional first year depreciation allowance of 20 percent is realized in the first year of ownership; and 5. the purchaser is credited for depreciated value of the machine at the end of the ten year period. The inconsistent items for each different purchasing arrangement are discussed separately.

CASH

The first purchasing arrangement is the direct cash purchase or CASH. The purchaser pays cash for the machine at the date of purchase. Sales tax is paid that day also. No interest is required.

CPPI

The second purchasing arrangement is an installment sales contract with no down payment, a credit purchase plan, or CPPI. The purchaser finances the cost plus sales tax of the machine through a lending agency, such as a bank or Production Credit Association, where no down payment is required. Three equivalent annual payments (.33 of purchase price) and simple interest on the amount borrowed is required. Each payment plus interest is due at the beginning of the following year. For example: if purchased January, 1977, the first payment is due January, 1978.

CPP2

The final purchasing arrangement, CPP2 (credit purchase plan No. 2), is a three year financing plan with a 30 percent down payment required. The farmer pays 30 percent of the purchase price initially plus sales tax and finances the remaining over a three year period. The payments over the three years are equal and paid at the first of the following year along with the interest incurred. The interest is calculated using simple interest on the amount borrowed from the financier.

Leasing ArrangementsLP1

Lease Plan 1 (LP1) is a continuous-lease with a lease period of two years. The farmer leases a new machine for two years and then returns it in order to lease a new machine for two more years. Over the ten year study period this procedure occurs five times. The lessee has a minimum annual hourly usage of 1000 hours, and the lease payment is calculated on an hourly basis, so if used less than 1000 hours the lessee still pays for 1000 hours use. The majority of dealers interviewed believed that farmers leasing were the larger farmers and it is assumed they would be using larger machinery. The dealer implementing this leasing arrangement charged \$6.00 per hour for 125 to 150 horsepower tractors and \$8.00 per hour for tractors with greater than 175 horsepower. So, \$7.00 per hour

was chosen as an average rate for the larger machines. The lease payment is \$7000 per year (1000 hours/year times \$7.00/hour equals \$7000/year).

The farmer is borrowing the money for each lease payment plus the use tax on a one year basis. Therefore, if he leases the machine on January 1, 1977, he borrows the capital from a financier and repays it on January 1, 1978. He is assumed to do this every year. This concept is assumed for each leasing arrangement presented in this analysis.

In LP1 the lessor is responsible for all repair costs, insurance, and property taxes. The lessee, as for every other leasing arrangement presented, is responsible for maintenance and for the operator of the machine.

LP2

LP2 (Lease Plan 2) is a lease-purchase plan with an initial lease period of three years. The lessee is required to pay .3014 of list price plus a use tax yearly for which he borrows the capital as described above. At the end of the three year least period the farmer purchases the machine at depreciated value.²⁷ The purchase price plus the sales tax is borrowed from a financier for one year and at the beginning of the next year the principal plus interest is paid.

Since the machine is purchased, the farmer is entitled to the ten percent investment tax credit and additional first

²⁷Calculated using the declining balance method of depreciation, shown in Table 1.

year depreciation allowance in the year of purchase. Depreciation is also available for the farmer for the remaining seven years of the machine's ten year life. Since the farmer is depreciating the machine for seven years, the full ten percent, I.T.C. and additional first year depreciating allowance are deductible. At the end of the ten year period the farmer is credited with the depreciated value of the machine. The farmer is responsible for all repair costs, insurance, and property taxes during the life of the machine.

LP3

LP3 (Lease Plan 3) is a continuous-lease plan with a lease period of five years or two five year leases representing the ten year study period. The lease payments are .2350 of purchase price each year plus a use tax. This amount is borrowed from a financier and paid back plus interest the following year.

The lessee is responsible for repairs, insurance, and property taxes. There could be some advantage to this lease due primarily because the farmer has repair costs for at most a five year old machine. Some of this advantage could be offset because property taxes and insurance would be greater for a five year machine than a ten year old machine.

The lessee is not credited for the machine at the end of the study period because the lessor has title to the machine.

LP4

Lease Plan 4 (LP4) is a lease-purchase plan much like LP2 except that the initial lease period is seven years instead of three. The annual lease payments are .2020 of purchase price plus the use tax. This amount is borrowed for one year. All other characteristics are the same for both lease plans except that there is only three years' depreciation available to the farmer when the machine is purchased. Because of this only one third of the I.T.C. is deductible. Also, a machine must be held six years to be eligible for additional first year depreciation allowance so it was omitted. The farmer is credited for depreciated value of the machine at the end of the ten year period. The farmer is responsible for all repair costs, property taxes, and insurance.

LP5

LP5 (Lease Plan 5) is a long-term lease of ten years. The lease payments are .15 of purchase price yearly plus a use tax which is borrowed for one year. Since at the end of the ten year period the lessee has not purchased the machine, no credit is given the farmer. The farmer is responsible for all repair costs, property tax, and insurance.

Economic Analysis

The eight acquisition methods compared in this analysis were formulated on a yearly cash flow basis. The net cash

flows were discounted and summed to obtain a total present cost. Each acquisition method was represented by a cash flow showing cash outlays and tax savings over the ten year study period. Actually, eleven years were necessary to realize tax savings in the proper year.

Examples of two cash flows appear in Tables 9 and 10. They show the CPPl and LP3 at a discount rate of zero percent, 30 percent tax rate, ten percent interest rate, and 700 hours of use per year for a machine with a purchase price of \$25,000. Year "0" represents the time the machine was actually purchased or leased. A discount rate of "0" was used in this illustration to represent the actual cash outlay for the machine over the ten year period. Note in Table 9 that the purchaser is credited with the value of the machine at the end of the study period.

To make this analysis versatile and adaptable to a large number of different situations, the major variables in the study were varied to cover a wide range of values. The major variables were discount rates ranging from 0 to 15 percent, tax rates from 15 to 50 percent, interest rate from 8 to 14 percent and annual hourly usage from 500 to 1000 hours per year. By calculating discounted net costs for all possible combinations of variables, nearly every situation could be compared.

Six discount rates, tax rates, and interest rates were used along with three annual hourly usages in calculating each discounted net cost. A program was devised to calculate the

TABLE 9: CASH FLOW FOR CREDIT PURCHASE PLAN 1 WHEN THE DISCOUNT RATE = .00, TAX RATE = .30, INTEREST RATE = .10, AND ANNUAL HOURLY USAGE = 700 HOURS PER YEAR.

Years	0	1	2	3	4	5	6	7	8	9	10	11	Totals
CASH OUTLAYS													
Annual Payment		\$8332	8332	8333									
Sales Tax		750											
Interest		2575	1667	833									
Repair Costs	220	602	890	1102	1270	1412	1542	1678	1792	1892	972		
Ins. & Prop. Tax	125	400	450	300	275	225	175	150	125	100	75		
TOTAL CASH OUTLAYS	345	12659	11339	10568	1545	1637	1717	1828	1917	1992	1047	0	\$46,594
TAXABLE COSTS (in year realized)													
Sales Tax													
Interest			2575	1667	833								
Repair Costs		220	602	890	1102	1270	1412	1545	1678	1792	1892	972	
Ins. & Prop. Tax		125	400	450	300	275	225	175	150	125	100	75	
Depreciation		2500	2500	2500	2500	2500	2500	2500					
20% Add. Dep.		5000											
TOTAL TAXABLE COSTS	0	7845	6827	5507	4735	4045	4137	4217	1828	1917	1992	1047	\$39,097
TAX SAVINGS		2354	2048	1652	1420	1214	1241	1265	548	575	598	314	
+ I.T.C.		2500								D.V. = 2500			
TOTAL TAX SAVINGS	0	4854	2048	1652	1420	1214	1241	1265	548	575	3098	314	\$18,229
NET COSTS	345	7805	9291	8916	125	423	476	563	1369	1417	1417	(-314)	
													DISCOUNTED NET COSTS at "0" discount rate = \$28,365

TABLE 10: CASH FLOW FOR LEASE PLAN 3 WHEN THE DISCOUNT RATE = .00, TAX RATE = .30, INTEREST RATE = .10, AND ANNUAL HOURLY USAGE = 700 HOURS PER YEAR.

Years	0	1	2	3	4	5	6	7	8	9	10	11	Totals
CASH OUTLAYS													
Lease Payments		\$5875	5875	5875	5875	5875	5875	5875	5875	5875	5875	5875	
Use Tax		175	175	175	175	175	175	175	175	175	175	175	
Interest		605	605	605	605	605	605	605	605	605	605	605	
Repair Costs	220	602	890	1102	1270	895	602	890	1102	1270	675		
Ins. & Prop. Tax	125	400	450	300	275	350	400	450	300	275	225		
TOTAL CASH OUTLAYS	345	7659	7995	8057	8200	7900	7657	7995	8057	8200	7555	0	=\$79,618
TAXABLE COSTS (in year realized)													
Lease Payments		5875	5875	5875	5875	5875	5875	5875	5875	5875	5875	5875	
Use Tax		175	175	175	175	175	175	175	175	175	175	175	
Interest		605	605	605	605	605	605	605	605	605	605	605	
Repair Costs	220	602	890	890	1102	1270	895	602	890	1102	1270	675	
Ins. & Prop.. Tax	125	400	400	450	300	275	350	400	450	300	275	225	
TOTAL TAXABLE COSTS	0	345	7659	7995	8057	8200	7900	7657	7995	8057	8200	7555	=\$79,618
TOTAL TAX SAVINGS	0	104	2297	2398	2417	1460	2370	2297	2398	2417	2460	2266	=\$22,885
NET COSTS	345	7553	5698	5659	5783	5440	5287	5698	5659	5783	5095	(-2266)	
													DISCOUNTED NET COSTS at "0" discount rate = \$56,733

discounted net costs for every combination of variables for all eight acquisition methods. The discounted net cost for each acquisition method for each annual hourly usage appears in Appendix D.

Discounted net costs for all eight plans with variables held constant near the middle of the range appear in Table 11. The numbers in parenthesis indicate the ranking of each plan. All three purchase plans have an advantage over the lease plans for the near middle variables. The long-term lease, LP5, has the least cost of all lease plans, while the lease-purchase plans, LP2 and LP4, have approximately the same costs. The acquisition method of highest costs to the farmer were the Continuous-Lease plans LP1 and LP3. Figure 1 illustrates graphically the values in Table 11 to further show the wide range in discounted net costs to the farmer acquiring the same machine for the same period of time, and for equal annual hourly usages.

Variation in Discount Rate

Figure 2 illustrates the discounted net cost for the eight acquisition methods holding everything constant except the discount rate. Increasing the discount rate causes several effects worth noting. The major effect of increasing the discount was a decrease in the discounted net cost. The decrease in costs due to a change in discount rate varies for each method compared.

TABLE 11: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE
FOR ALTERNATIVE ACQUISITION METHODS WITH ALL
VARIABLES CONSTANT.*

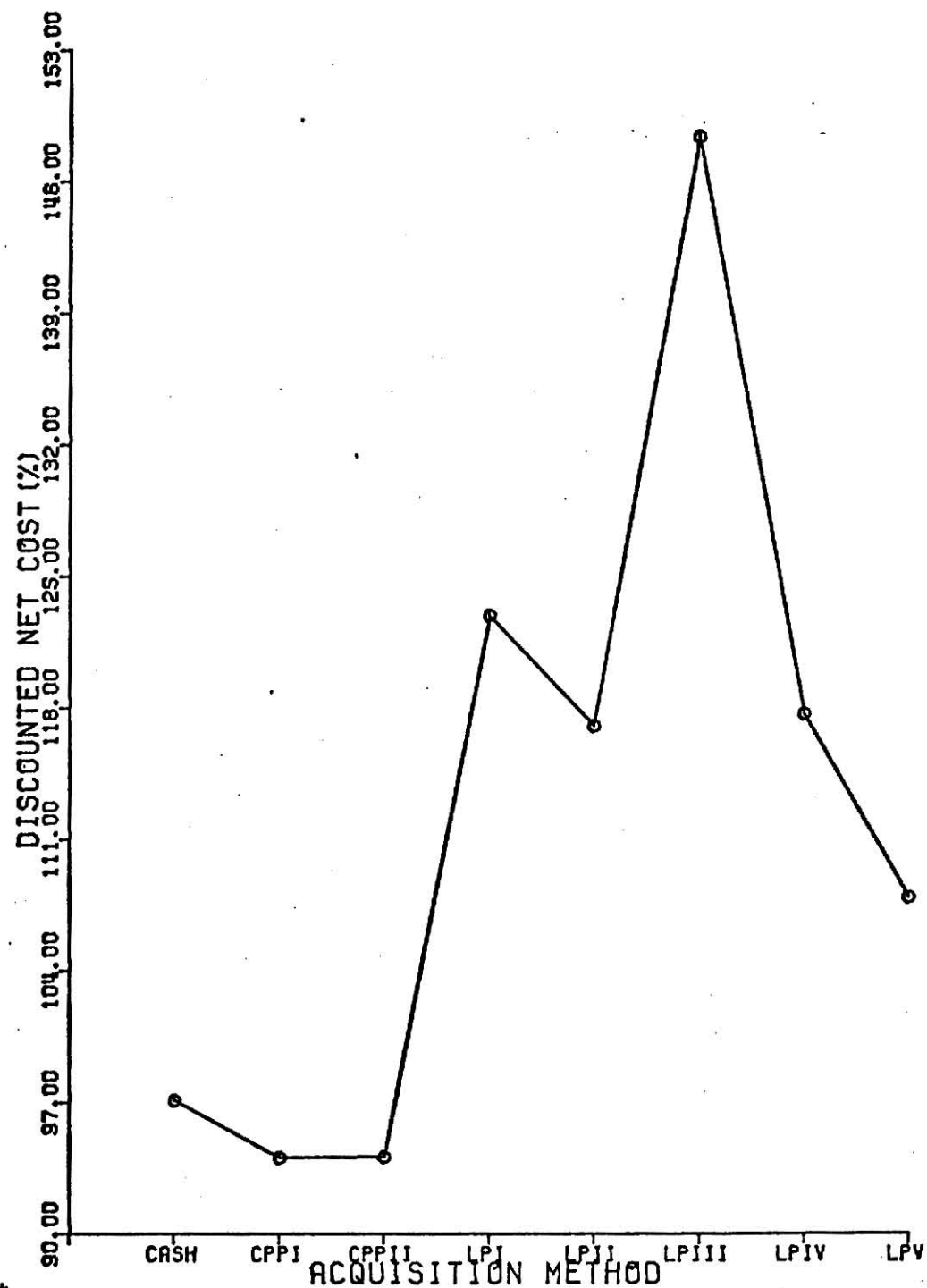
Acquisition Methods	Discounted Net Costs
CASH	97.11 (3)
CPP1	94.08 (1)
CPP2	94.14 (2)
LP1	122.95 (7)
LP2	117.07 (5)
LP3	148.48 (8)
LP4	117.75 (6)
LP5	107.95 (4)

* Discount rate = .09, Tax rate = .30, Interest rate = .10,
Annual hourly usage = 700hrs./yr.

**THIS BOOK
CONTAINS
NUMEROUS PAGES
WITH DIAGRAMS
THAT ARE CROOKED
COMPARED TO THE
REST OF THE
INFORMATION ON
THE PAGE.**

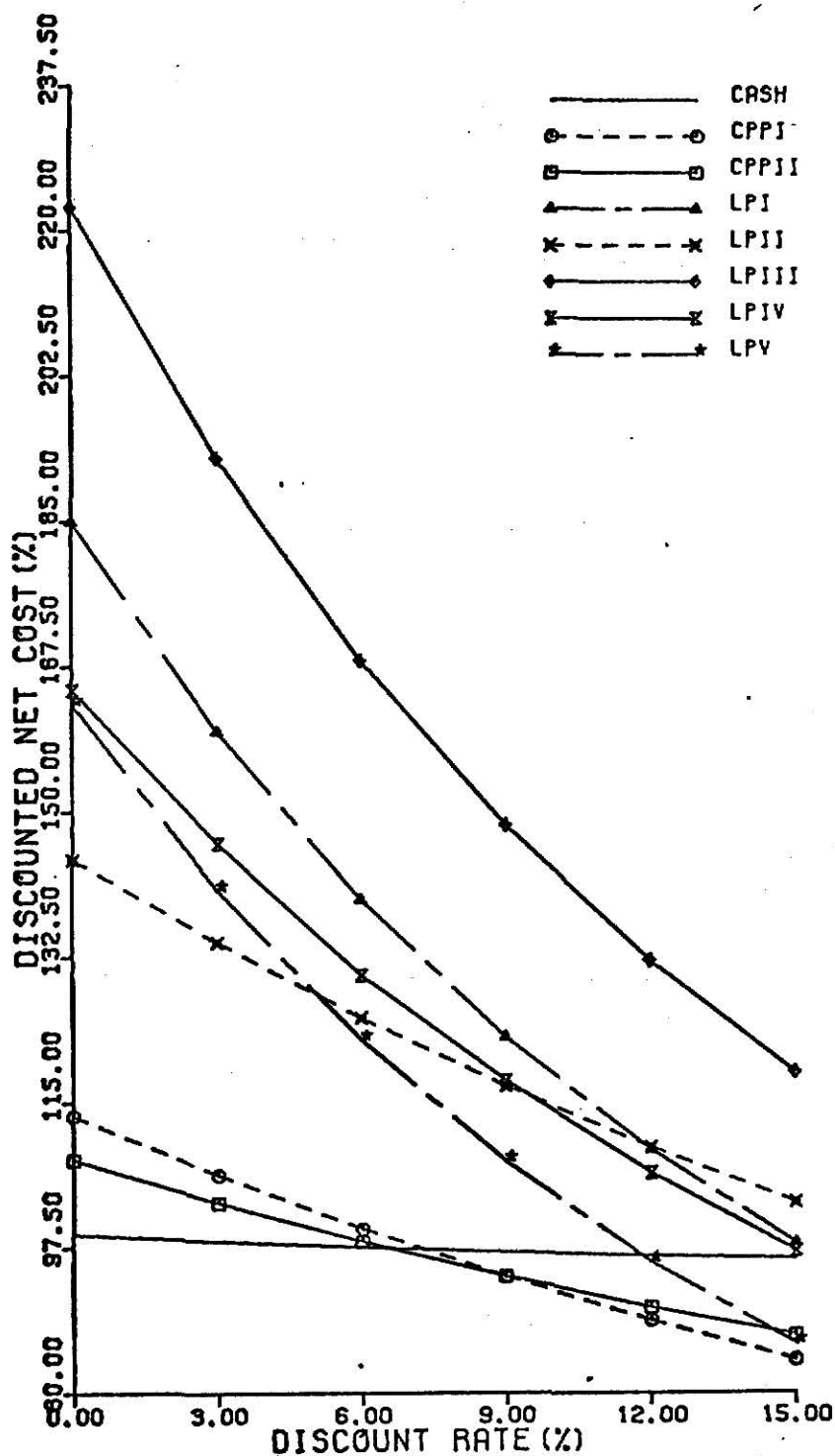
**THIS IS AS
RECEIVED FROM
CUSTOMER.**

FIGURE 1: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE FOR ALTERNATIVE ACQUISITION METHODS WITH ALL VARIABLES HELD CONSTANT.*



* Discount rate = .09, Tax rate = .30, Interest rate = .10,
Annual hourly usage = 700hrs./yr.

FIGURE 2: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE FOR ALTERNATIVE ACQUISITION METHODS WITH THE DISCOUNT RATE VARIED HOLDING THE OTHER VARIABLES CONSTANT.*



* Tax rate = .30, Interest rate = .10, Annual hourly usage = 700hrs./yr.

A change in the discount rate had its greatest impact on LP3 because this plan had the highest discounted net cost for the discount rate to affect initially; thus the high discounted net cost was more vulnerable to the discounting process. All the lease plans with constant payments for the ten year period were affected much more than the purchase or lease-purchase arrangements.

LP2 was the least affected leasing arrangements because of the large amount of cash outlay in the early years leaving less in the later years for discounting, while the effect on LP4 was similar to the constant lease payment plans because of seven years of constant payments followed by the purchase of the leased machine, thus enabling more to be discounted over a longer period of time. CASH had the greatest cash outlay in the first year and was affected the least by the change in the discount rate.

It can be concluded that as the payments are made over a longer period of time the discount rate will have greater effect. Therefore, as the discount rate increases the advantage of purchasing will decrease if the lease payments are made over a long period of time. Figure 2 shows this effect. As the discount rate increases, LP5 becomes more and more attractive until it surpasses all plans except CPPl. If this trend were continued, LP5 would become the least cost method of acquiring a farm machine.

Variation in Tax Rate

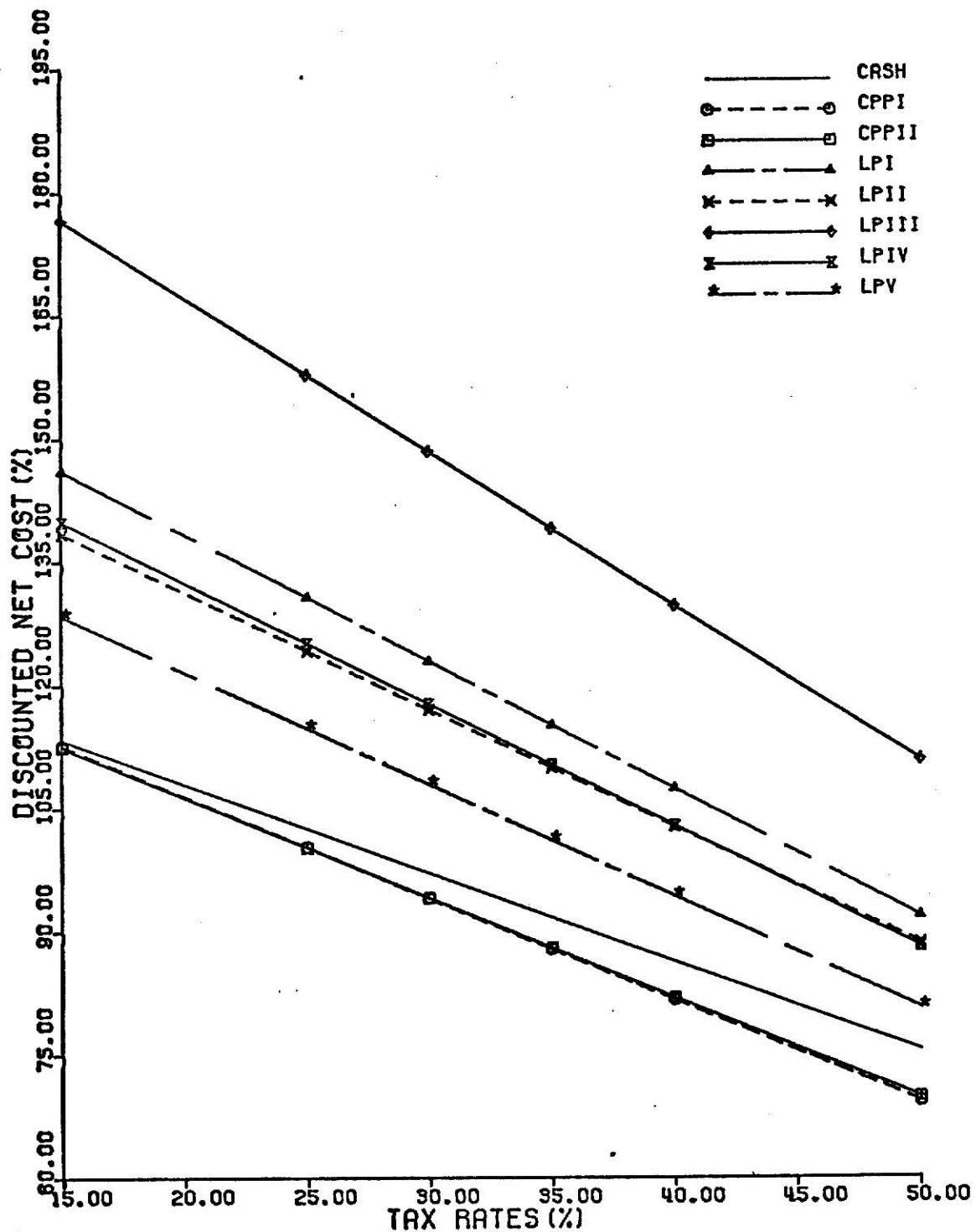
The discounted net cost for the eight acquisition methods analyzed holding all variables constant except the tax rate appears in Figure 3. The discounted net cost decreases as the tax rate increases, but there was no appreciable change in the ranking of the eight plans. Again the plan with the highest discounted net cost was affected the most by the change, while the cash method was affected the least. Even with the highest tax bracket used the three purchase plans were still the least costly to the farmer, while the lease plans had a similar ranking as before.

These findings are consistent with Robert N. Penland and Gayle S. Willett's study entitled "The Impact of Federal Income Taxes on the Decision to Lease or Buy Farm Machinery." They concluded, "The lease tax advantage is not sufficient enough to be the determining factor."²⁸ They go on to advise the farmer that he would be better off to make a lease vs. buy decision on non-tax consideration. The change in tax rate does not greatly affect the least cost acquisition method shown in this study, but an increase in tax rate coupled with an increase in discount rate may have an effect on the least cost alternative to the farmer.

Legislation dealing with depreciation and investment has an effect on the cost advantage of purchasing over leasing. Changes in laws pertaining to investment tax credit and the

²⁸Penland and Willett, Volume 39, pp. 38-46.

FIGURE 3: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE FOR ALTERNATIVE ACQUISITION METHODS WITH THE TAX RATE VARIED HOLDING THE OTHER VARIABLES CONSTANT.*



* Discount rate = .09, Interest rate = .10, Annual hourly usage = 700hrs./yr.

additional first year depreciation allowance of 20 percent could affect the decision whether to lease or purchase. If, for example, the I.T.C. was disallowed, the discounted net costs would increase for the purchasing arrangements, therefore, having an effect on the conclusion of this study.

Likewise if 20 percent additional depreciation allowance was disallowed, it would spread the depreciation out over the life of the machine. Thus, the net costs increased in the early years where discounting has a small effect, and decreased in the later years where discounting has a greater effect. This process would increase the discounted net costs so leasing might become a competitive acquisition method for farm machinery and equipment.

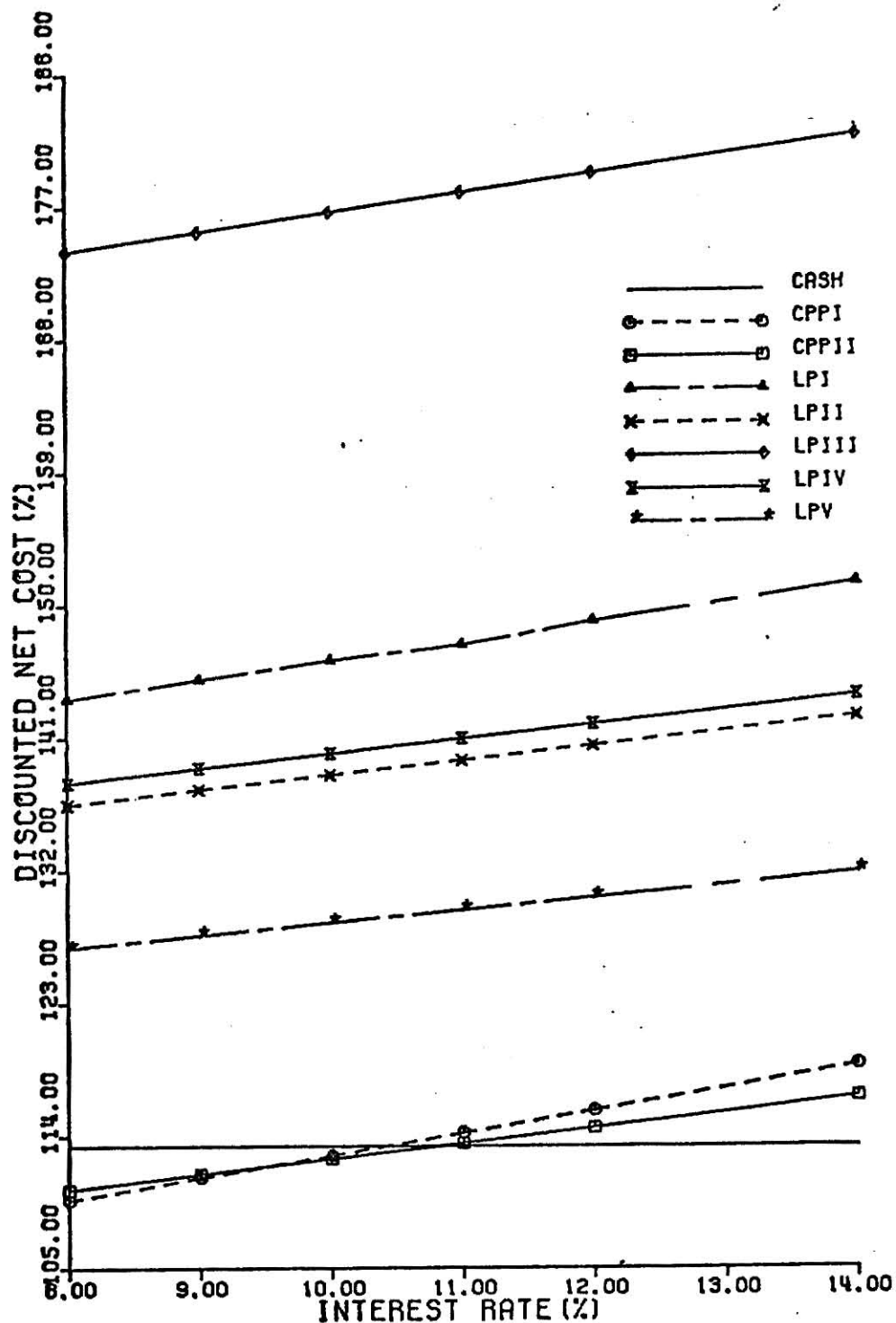
Variation in Interest Rate

Figure 4 shows the discounted net costs for the eight acquisition methods as the interest rate varies holding all other variables constant. As the interest rate increases, the discounted net costs for each plan increases except the CASH method, mainly because there was no interest charge associated with the CASH method. At the higher interest rate CPP1 is greater than CPP2 because CPP1 incurs more interest and the interest rate is having more effect.

Variation in Annual Hourly Usage

Every acquisition method was calculated using three different annual hourly usages, 500 hours per year, 700 hours per

FIGURE 4: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE FOR ALTERNATIVE ACQUISITION METHODS WITH THE INTEREST RATE VARIED HOLDING THE OTHER VARIABLES CONSTANT.*



* Discount rate = .09, Tax rate = .30, Annual hourly usage = 700hrs./yr.

year, and 1000 hours per year. This was done primarily because different farmers rarely use their machines the same number of hours per year. This required a few alterations in the cash outlays and tax savings for each acquisition method.

The basic changes made shifting from 700 to 500 hours per year were repair costs, insurance, property taxes, and depreciated values at the end of the ten year study period. Repair costs were reduced since the machine was running fewer hours and depreciated values over the ten year period were increased, therefore making insurance and property taxes increase. The number of years depreciated was increased from seven years to fourteen years because this equalled useful life, assuming 7000 hours as the useful life. After those modifications were taken into consideration, the yearly discounted net cost for each of the eight acquisition methods were multiplied by 1.4. Since the discounted net costs are compared on the basis of 700 hours of use per year, 500 hours per year must be multiplied by 1.4 to equal 700 hours of work done per year. For example, if a machine was only used 500 hours per year it would take that machine and .4 of another one exactly the same working 500 hours per year to equal one machine working 700 hours per year.

This concept also applies to the switch from 700 hours per year to 1000 hours per year. Only .7 of machine is needed to equal 700 hours work per year. So after the modifications were made to simulate 1000 hours of use per year, the net costs for each year were multiplied by .7 then discounted

equalling discounted net costs. This was done for each acquisition method analyzed in this study.

There were several modifications made, changing from 700 hours per year to 1000 hours per year. The number of years depreciated was left at seven years, but at the end of those seven years the machine's useful life had terminated (seven years times 1000 hours per year equals 7000 hours), so a new machine must be acquired for the remainder or three years. In the three purchase plans the farmer was required to purchase a new machine at the end of the seven years using the same purchase arrangement as before. The farmer was credited the depreciated value of the machine as a trade-in on the purchase price of a new machine.²⁹ To keep the analysis consistent the farmer was credited the depreciated value at the end of the ten year period for the machine purchased three years previously.

When the machine was used 1000 hours per year the repair costs were greater than if only used for 700 hours per year. This increase in repair costs was taken into account along with the decrease in insurance and property taxes for owning a more fully used machine having lower depreciated value. These changes were taken into account for all acquisition methods to which it applied.

²⁹ Calculated using the declining balance method of depreciation, shown in Table 1.

For LP1 and LP3 the only modification was to adjust the work done to 700 hours per year. After seven years for LP2 the farmer leased a new machine and was credited for the machine he owned at the depreciated value as if sold outright. He was not credited for the machine being leased at the conclusion of the second three year lease, for the ten year study period had concluded. LP4 becomes a continuous-lease due to the decrease from ten to seven years' useful life. Since LP4 has a seven year initial lease period and with the useful life of the machine only seven years, the farmer must lease a new machine instead of buying the previous leased machine. LP5 was calculated for 1000 hours of usage per year because it was assumed that a farmer would not lease a machine with a useful life of only seven years for a ten year lease.

The discounted net cost of alternative acquisition methods with the annual hourly usage varied, holding all other variables constant appear in Table 12 and graphically in Figure 5. It can be shown from both that changing the amount of annual hourly usage does not affect the least cost alternative to the farmer, although they do illustrate the difference in discounted net costs for a machine utilized 500 hours per year and 1000 hours per year. It is also shown that the variation in the discounted net cost between plans at the high level of usage is much less than that of the lower usages.

Several things should be pointed out in Table 12 and Figure 5. The discounted net cost of LP5 is less than the CASH purchasing arrangement at 500 annual hourly usage. LP1

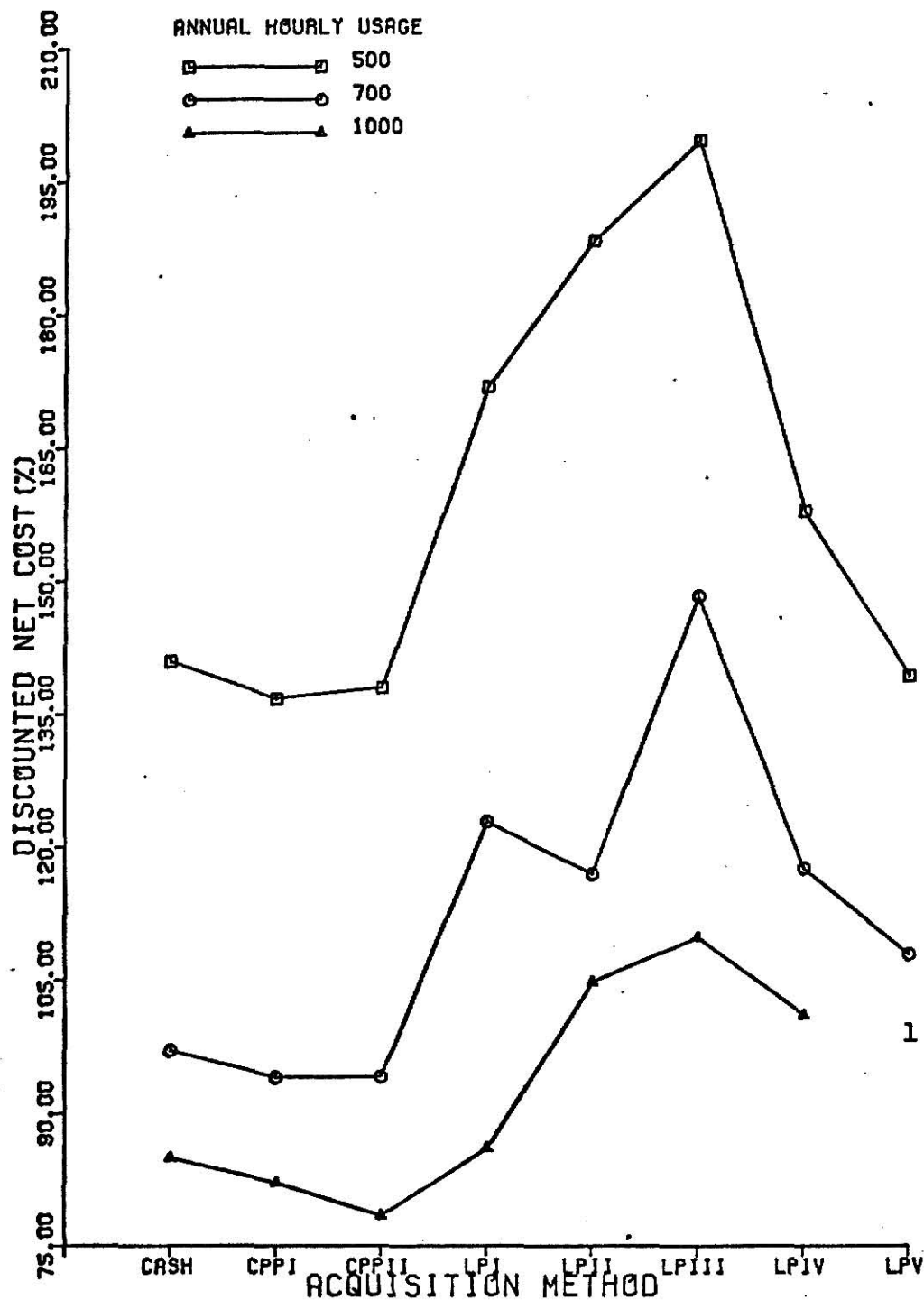
TABLE 12: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE FOR ALTERNATIVE ACQUISITION METHODS WITH THE ANNUAL HOURLY USAGE VARIED HOLDING THE OTHER VARIABLES CONSTANT.*

Acquisition Method	Discounted Net Costs for					
	500hrs./yr.		700hrs./yr.		1000hrs./yr.	
CASH	141.01	(4)	97.11	(3)	84.97	(3)
CPP1	136.81	(1)	94.08	(1)	82.17	(2)
CPP2	138.03	(2)	94.14	(2)	78.41	(1)
LP1	172.12	(6)	122.95	(7)	86.06	(4)
LP2	188.66	(7)	117.07	(5)	104.78	(6)
LP3	200.05	(8)	148.48	(8)	109.86	(7)
LP4	158.20	(5)	117.75	(6)	101.12	(5)
LP5	139.55	(3)	107.95	(4)	- ¹	

* Discount rate = .09, Tax rate = .30, Interest rate = .10.

¹ LP5 is a 10 year lease plan, therefore, can be used only for 500 and 700 annual hourly usages.

FIGURE 5: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE FOR ALTERNATIVE ACQUISITION METHODS WITH THE ANNUAL HOURLY USAGE VARIED HOLDING THE OTHER VARIABLES CONSTANT.*



*Discount rate = .09, Tax rate = .30, Interest rate = .10.

¹LP5 is a 10 year lease plan, therefore, can be used only for 500 and 700 hours per year.

becomes more competitive with the purchasing arrangements at 1000 annual hourly usage. Even though the machine is utilized many hours per year, the cost advantage still remains with purchasing except in the two cases discussed above.

Selected Situations

Each of the four variables discussed have different effects on the discounted net costs for the eight plans. To determine what effect a change in all four variables would have on each acquisition method, three different circumstances were assumed. The below average situation "A" consists of a high interest rate, low discount rate, low tax rate, and a low annual hourly usage. The average situation "B" consists of average values for interest rate, discount rate, tax rate, and annual hourly usage, while the above average, "C," has low interest rate, high discount and tax rates, and high annual hourly usage. The four situations are presented in Table 13.

It is evident in Table 13 that as the farmer's situation increases the discounted net cost of acquiring a machine decreases. This can best be seen in Figure 6 which illustrates Table 13 graphically. As his situation changes, the relative cost of each acquisition method changes, until in situation "C" all of the lease plans are of lower cost to the farmer than the CASH plan. Situation "C" holds the greatest opportunity for leasing as a least cost alternative to the farmer since there is little variation between the CPP1, CPP2, and LP1 alternatives.

TABLE 13: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE FOR ALTERNATIVE ACQUISITION METHODS FOR BELOW AVERAGE, AVERAGE, AND ABOVE AVERAGE SITUATIONS.

Acquisition Method	Discounted Net Costs for					
	Below Average ¹ "A"		Average ² "B"		Above Average ³ "C"	
CASH	154.43	(1)	97.11	(3)	67.00	(8)
CPP1	174.08	(3)	94.08	(1)	51.34	(1)
CPP2	167.95	(2)	94.14	(2)	52.39	(3)
LP1	274.59	(7)	122.95	(7)	51.53	(2)
LP2	255.51	(6)	117.07	(5)	65.17	(6)
LP3	317.82	(8)	148.48	(8)	66.13	(7)
LP4	239.69	(5)	117.75	(6)	60.97	(4)
LP5	221.85	(4)	107.95	(4)	64.80	(5) ⁴

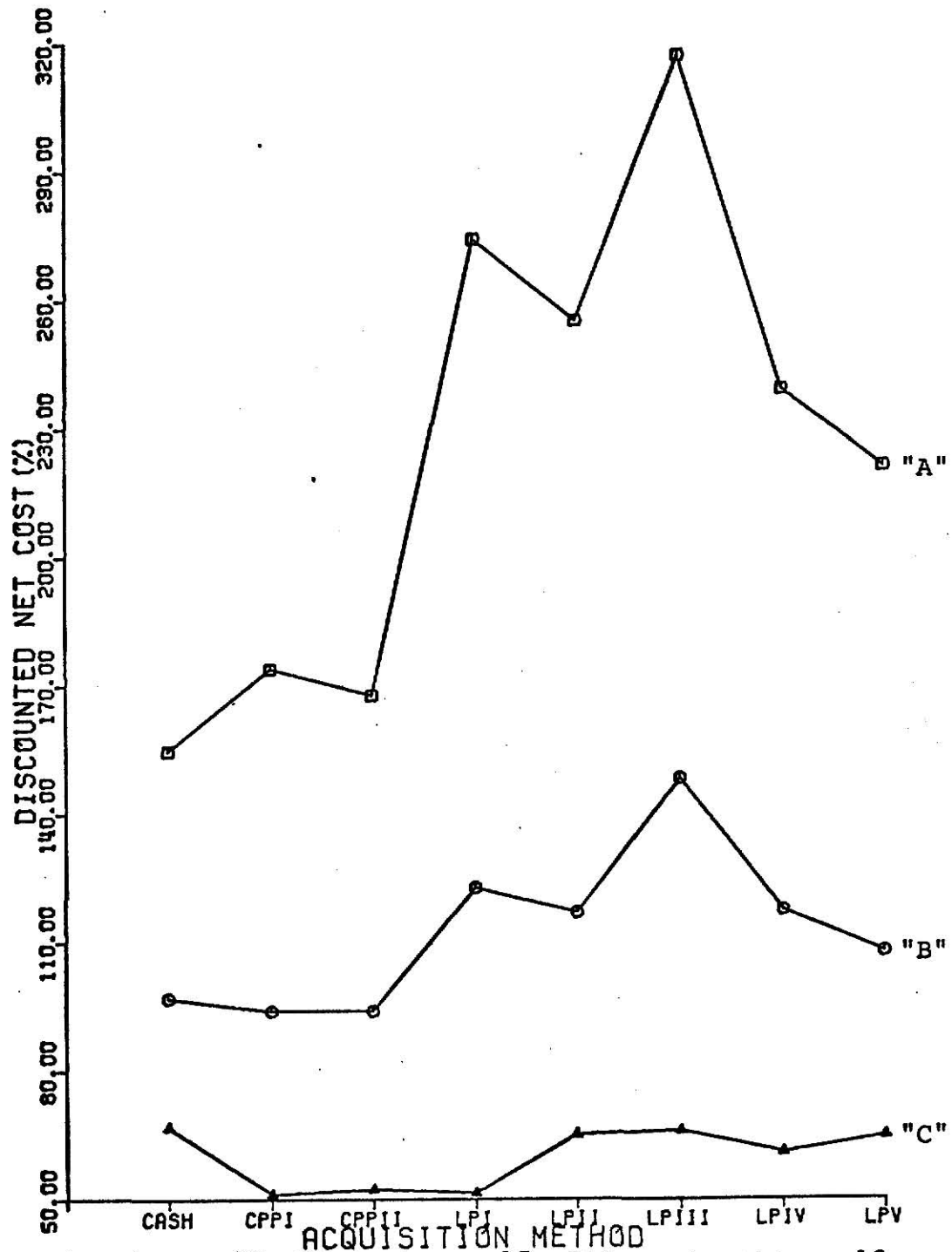
¹Discount rate = .03, Tax rate = .15, Interest rate = .12, Annual hourly usage = 500hrs./yr.

²Discount rate = .09, Tax rate = .30, Interest rate = .10, Annual hourly usage = 700hrs./yr.

³Discount rate = .15, Tax rate = .50, Interest rate = .08, Annual hourly usage = 1000hrs./yr.

⁴LP5's highest annual hourly usage is 700hrs./yr., so this was used with the other values in situation "C" to get the discounted net cost.

FIGURE 6: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE FOR ALTERNATIVE ACQUISITION METHODS FOR BELOW AVERAGE ("A"), AVERAGE ("B"), AND ABOVE AVERAGE ("C") SITUATIONS.



"A" Discount rate = .03, Tax rate = .15, Interest rate = .12,
Annual hourly usage = 500hrs./yr.
 "B" Discount rate = .09, Tax rate = .30, Interest rate = .10,
Annual hourly usage = 700hrs./yr.
 "C" Discount rate = .15, Tax rate = .50, Interest rate = .08,
Annual hourly usage = 1000 hrs./yr.

It can be concluded that as the farmer's tax rate, discount rate, and annual hourly usage increase and interest rate decrease, leasing becomes more competitive as an acquisition method. The farmer with a high tax rate, discount rate, and annual hourly usage and a low interest rate should consider leasing as an alternative to purchasing.

Variation in Depreciated Periods

Determining how the discounted net costs were affected by changing the number of years depreciated was an objective of this study. To resolve this question the number of years a machine was depreciated was changed from seven to ten years for purchasing arrangements CPP1 and CPP2 and comparisons were made (Table 14). Changing the number of years depreciated from seven to ten years increased the discounted net costs because when the depreciation period was increased, the depreciation deduction for each year was less but for more years. With the discounting process employed, having the same deductions but for more years decreases the total deduction allowable, therefore increasing the discounted net cost. Tables showing all possible combinations of discount rate, tax rate, and interest rate at 700 hourly usage for plans CPP1 and CPP2 with ten year depreciation appear in Appendix E.

TABLE 14: DISCOUNTED NET COSTS AS A PERCENT OF PURCHASE PRICE FOR CREDIT PURCHASE PLANS 1 AND 2 WITH THE NUMBER OF YEARS THE MACHINE IS DEPRECIATED VARIED HOLDING THE OTHER VARIABLES CONSTANT.*

Acquisition Method	No. of Years Depreciated	Discounted Net Cost
CPP1	7 years	94.08
CPP1	10 years	95.70
CPP2	7 years	94.14
CPP2	10 years	95.76

* Discount rate = .09, Tax rate = .30, Interest rate = .10, Annual hourly usage = 700hrs./yr.

Use of Tables

The final objective of this study was to present the cost comparison data in a manner useful to farmers in determining the least cost acquisition method for their particular operations. These comparisons are in tabular form and appear in Appendix D.

The farmer must ask himself four questions for the tables to be of any use to him: 1. How many hours per year does he use his machine? 2. What percent of his net income will be paid for income tax in years to come? 3. What will be the interest rate he must pay to borrow capital? and 4. What is his expected rate of return on invested capital (discount rate) for years to come? After answering these four questions he may choose from these values provided by this study that best represents his particular operation.

The farmer must also be familiar with the type of purchase plan available and the type of lease plan available. He must then determine which of the acquisition methods used in his analysis best fits his particular situation.

After the farmer has determined the four values to use and the acquisition methods to be compared he can refer to the tables in Appendix D to find discounted net costs for comparisons. The tables are arranged so simple steps can be followed to arrive at the discounted net cost desired. These steps are:

1. Find the desired acquisition method for the correct annual hourly usage.

2. Find the desired interest rate on the left vertical axis.
3. Find the box where this interest rate and the desired tax rate, top horizontal axis, meet.
4. Find the desired discount rate on the right vertical axis, and where these values meet is the desired discounted net cost.

Since the discounted net cost is expressed as a percentage, it must be multiplied by the purchase price of the machine to determine cost of acquiring the machine for a ten year period.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

Approximately half of the farm machinery dealers in Kansas were mailed questionnaires concerning the leasing of farm machinery and equipment in Kansas with 70 percent returned and tabulated. Sixteen percent of the dealers were leasing, the majority occurring in the West and Central geographic regions of the state. Fifteen percent were not presently leasing, but had leased in the past. Only approximately 0.7 percent of the farmers in Kansas were leasing farm machinery and equipment, of which tractors were the most often leased. Sixty-three percent of the dealers leasing were using their manufacturers' lease plan while 63 percent were also using their own leasing plan, and 93 percent expected to continue leasing in the future.

When non-leasing dealers were asked why they were not leasing farm machinery or equipment, the major reasons were lack of demand by farmers and lack of machinery. Several other reasons with approximately the same number of responses were: unprofitable for the farmer, the farmers not interested, too much capital required of the dealer, unprofitable for the

dealers, and too much paperwork for the dealers. Forty-seven percent of the non-leasing dealers and 80 percent of the leasing dealers felt leasing would be of greater importance in the future, while 51 percent of all dealers responding felt it would.

For the dealers and leasing companies personally interviewed, there were three basic types of leasing arrangements being used in Kansas: Lease-Purchase Plan, consisting of the farmer leasing the machine for a specified number of years (less than ten years) and then purchasing the leased machine for fair market value, the most common arrangement found; Continuous-Lease Plan, consisting of the farmer leasing a machine for a specified time period at the end of which the leased machine is returned and a new machine is leased; and the Long-Term Lease, consisting of a ten year lease; at the end of this period the lessee purchases the machine. Generally, the dealer's entire stock of new machinery was available for lease with some minimum dollar amounts indicated. The leasing arrangements ranged in years from one to ten years with the majority from three to five years. All of the lease payments were paid in advance, while most were calculated by multiplying a certain "factor" times the purchase price of the machine. Some of the lease payments were calculated on an hourly basis, and a few dealers used a combination for calculating payments. The lessee was responsible for repairs, maintenance, insurance, and property taxes, but there were exceptions.

There were three termination alternatives offered the lessee: purchase the leased machine, the most common practice in Kansas; lease a new machine; or return the leased machine and buy a new machine. Release of the same machine was the alternative in a few instances. Approximately half of the dealers interviewed felt the requirements for the farmer were about the same for purchasing as for leasing, while the other half felt they were greater for leasing. Half the dealers felt the customer's previous business with them had an effect on his eligibility for leasing, while the other half believed it was not a major determinant in their decisions.

The dealers said lessees were generally the larger well established farmers who both owned and rented farmland. No distinction could be made between irrigating and dry land farming. The main reason given for leasing by the dealers interviewed was to provide another service to the farmers. The majority felt that leasing was on the increase.

Of the limited number of lessees questioned, the majority felt they were leasing because it was more advantageous from a cash flow situation. It was assumed (assumption number nine) that the farmer was financially able to employ the least cost acquisition method, which implied the farmer was in a cash flow position to do so. Therefore, any variation from this assumption was not taken into consideration, or the advantage of leasing for a farmer in a tight cash flow situation was not analyzed. Future analysis on this aspect of the decision to lease or purchase could reveal an advantage for leasing over

purchasing for farmers in a tight cash flow situation. Other reasons for leasing included taxes, lower costs, opens line of credit, and receives better service from the dealer. These farmers were larger farmers that had been associated with their dealers at least seven years, 30 percent of the lessees' farms were irrigated. The majority expected to continue leasing.

Eight acquisition methods, five leasing and three purchasing arrangements, were compared on a discounted cash flow basis for a ten year period. A computer was employed to calculate the discounted net costs, expressed as a percent of purchase price, for each arrangement as the discount, tax, and interest rates were varied along with the annual hourly usage. Those discounted net costs appear in tabular form in Appendix D.

Comparing discounted net cost for all eight plans holding all variables constant near middle values shows that the three purchasing arrangements have a distinct cost advantage. Of the leasing arrangements, the Long-Term Lease (ten year lease) had the least cost, while the Continuous-Lease (re-lease new machine) had the highest cost to the farmer.

As the discount rate was varied, an inverse relationship with cost was observed. The discount rate has its greatest effect on arrangements with longer pay back period: therefore, as the discount rate increased the advantage to purchasing decreased, if the lease payments were made over a long period of time. The ten year lease becomes competitive with the

purchasing arrangements at a discount rate greater than 12 percent.

An inverse relationship was also distinguished as the tax rate was allowed to vary, but there was no appreciable change in the least cost alternatives to the farmer. Even at the highest tax rate compared the discounted net costs for the three purchase plans were below all five leasing arrangements. The only distinction between the effect of the tax rate and interest rate on the discounted net cost is that a change in the interest rate has a direct relationship to these costs.

Changing the amount of annual hourly usage for a farm machine does not change the least cost alternative to the farmer, although it does decrease the difference in variation between the discounted net costs of leasing and purchasing. Even though the machine is utilized 1000 hours per year the cost advantage remains with purchasing.

To determine the effect a change in all four variables, below average, average, and above average situations were compared. From these comparisons it was shown that as the discount and tax rates and annual hourly usage increase, and the interest rate decreases, leasing becomes more competitive with the purchasing arrangements.

When the number of years a machine depreciated using the straight line method was increased, the discounted net costs for the purchasing arrangements only slightly increased.

Conclusions

The leasing of farm machinery and equipment is limited in Kansas with only approximately 0.7 percent of the farmers leasing. Although the majority of the dealers feel it will become of greater importance in the future, there will have to be some changes in the leasing arrangements themselves, and in legislation concerning investment tax credit and additional first year depreciation allowance of 20 percent for leasing to become competitive with purchasing. The cost comparisons confirmed one of the farm machinery dealer's reasons for not leasing at present: lack of demand by farmers. These comparisons show that farmers with high return to capital invested (discount rate), in a high tax bracket and use their machines above average hours per year could find leasing the most economical method of obtaining the service of machinery.

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APPENDIX A

Questionnaire sent to:

1. Members of the Kansas Society of Farm
Managers and Rural Appraisers
2. Members of the Kansas Association of Bank
Agricultural Representatives
3. County Agents
4. Kansas Farm Management Association Fieldmen

KANSAS AGRICULTURAL EXPERIMENT STATION
Department of Agricultural Economics
Waters Hall, Manhattan, KS 66506

July 1976

To County Agricultural Agents, Extension Fieldmen and Area Economists

We have inquiries concerning leasing of farm machinery and equipment including irrigation and specialty equipment used on farms in Kansas. The Kansas Agricultural Experiment Station has initiated a study to find out the extent of such leasing in Kansas, who is involved, what is being leased, how it is being leased, why it is leased, and other relevant information and the economic basis for leasing. Our first task is to acquire lists of persons and businesses involved. We would appreciate your help by filling in the following form in so far as you can. Use the back of the page for additional space if needed. Individual information and sources are held in confidence. We would plan to contact those you list to get information on leasing machinery.

Thank you,

Wilfred H. Pine, Professor

Barry K. Childs, Graduate Assistant

LESSORS TO KANSAS FARMERS

(Machinery Manufacturers & Dealers, Leasing Companies, Individuals, Others owning the machinery)

1. Name: _____ Firm: _____
Address: _____
Phone: _____ kinds of machines leased: _____
To whom leased: _____

2. Name: _____ Firm: _____
Address: _____
Phone: _____ Kinds of machines leases: _____
To whom leased: _____

3. Name: _____ Firm: _____
Address: _____
Phone: _____ kinds of machines leased: _____
To whom leased: _____

- 2 -

LESSEES
(Farmers)

1. Name: _____ Phone: _____
 Address: _____
 Kinds of machines leased: _____
2. Name: _____ Phone: _____
 Address: _____
 Kinds of machines leased: _____
3. Name: _____ Phone: _____
 Address: _____
 Kinds of machines leased: _____
4. Name: _____ Phone: _____
 Address: _____
 Kinds of machines leased: _____
5. Name: _____ Phone: _____
 Address: _____
 Kinds of machines leased: _____

OTHERS: (FINANCIERS BANKS, ETC.) BROKERS, ETC.
 (Anyone involved with or between lessors and lessees)

1. Name: _____ Firms: _____
 Address: _____
 Phone: _____ How associated with leasing: _____
2. Name: _____ Firms: _____
 Address: _____
 Phone: _____ How associated with leasing: _____

Comments: _____

Return to: Wilfred H. Pine, Professor
 Department of Agricultural Economics, Waters Hall
 Kansas State University
 Manhattan, KS 66506

• APPENDIX B

Questionnaire sent to Kansas Farm Machinery Dealers

**Kansas Agricultural Experiment Station
Department of Agricultural Economics
Farm Machinery Leasing Study**

Dear Mr. Dealer,

The Kansas Agricultural Experiment Station has initiated a study concerning the leasing of farm machinery and equipment including irrigation and speciality equipment used on farms in Kansas. Our initial task is to determine some of the basic facts about leasing, such as the amount of leasing; who is doing it; what is being leased; and if no leasing, why. We would appreciate your help in filling in the following form. The basis for a sound study is good initial data. It is the strict policy of the Experiment Station to hold individual information and sources in confidence.

Please note in the following form, we are making a distinction between renting and leasing. "Leasing" is defined as the use of a machine for more than one year or a long term agreement. Lease-purchase agreements should also be included as a lease agreement. "Renting" is defined as the use of a machine for less than one year or a short term agreement.

Since this study is in the relative early stages we may find it necessary to contact you again.

Sincerely,

Wilfred H. Pine
Professor

Barry K. Childs
Graduate Research Assistant

1. Do you have any farm machinery or equipment leased out (long term) directly to farmers:
 - a. Now? (yes or no) _____
 - b. If no, have you done so anytime in the past? (yes or no) _____ (approximate years) _____
 - c. If yes to a or b, what kind of machinery or equipment are or were leased out? _____

2. If answer 1. a is YES,
 - a. (1) Do you have your own leasing arrangement? (yes or no) _____
 - (2) Do you use your manufacturer's leasing plan? (yes or no) _____
 - (3) Does your own leasing arrangement or your manufacturer's leasing plan include a lease-purchase option? (yes or no) _____
 - (4) Do you or have you as a dealer provided farm machinery or equipment to a company or business leasing it to farmers:
 - (a) Now? (yes or no) _____
 - (b) In the past? (yes or no) _____ (approximate years) _____
 - (c) If yes to (a) or (b) briefly what role do or did you play? _____

- 2 -

- b. How have you financed the machinery or equipment leased out:
- (1) Used your own capital. (yes or no) _____
 - (2) Used manufacturer's financing agency. (yes or no) _____
 - (3) Borrowed from a finance agency other than the manufacturer's agency (yes or no) _____
- c. About how many farmers lease machinery or equipment directly from you? _____
- d. Do you expect to continue to lease out farm machinery or equipment? (yes or no) _____
3. If answer 1. a is NO
- a. Why haven't you been leasing out farm machinery or equipment? (Check all items that apply and list others)
- _____ lack of available machinery
 - _____ lack of demand for farmers
 - _____ unprofitable for farmers
 - _____ farmers not interested
 - _____ too much capital tied up
 - _____ lack of suitable leasing
 - _____ lack of adequate financing
 - _____ unprofitable for dealer
 - _____ tax angle
 - _____ too much paper work
 - _____ manufacturer prohibits leasing
 - _____ difficulty in determining residual value
 - _____ other reasons (specify) _____
- b. Are you considering leasing out machinery and equipment? (yes or no) _____
4. Do you feel that leasing is going to become of greater importance in the future? (yes or no) _____
5. Are you renting (short term) farm machinery or equipment out directly to farmers:
- a. Now? (yes or no) _____
 - b. If NO, have you done so anytime in the past? (yes or no) _____ (approximate years when done) _____
 - c. If NO to a. do you plan to start renting out farm machinery or equipment in the future? (yes or no) _____

(Optional)

NAME _____ PHONE _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____

• APPENDIX C

Questionnaire sent to Leasing Farmers

KANSAS AGRICULTURAL EXPERIMENT STATION
Department of Agricultural Economics
Farm Machinery Leasing Study

Dear Sir:

The Kansas Agricultural Experiment Station has initiated a study concerning the leasing of farm machinery and equipment including irrigation and speciality equipment used on farms in Kansas. To complete our study, we must determine why farmers are leasing farm machinery and equipment rather than purchasing the same machine. We would appreciate your help in answering the following questions so that this study may be completed.

Please note in the following questions, we are making a distinction between renting and leasing. "Leasing" is defined as the use of a machine for more than one year or a long term agreement. Lease-purchase agreements should also be included as a lease agreement. "Renting" is defined as the use of a machine for less than one year or a short term agreement. Please use the enclosed envelope to return this questionnaire.

Sincerely,

Wilfred H. Pine, Professor

Barry K. Childs, Graduate Research Assistant

1. Where is the majority of your cropland located? (County) _____
2. Number of acres farmed (both owned and rented).
less than 500 _____ between 1501 and 2000 _____
between 501 and 1000 _____ between 2001 and 2500 _____
between 1001 and 1500 _____ greater than 2501 _____
3. Type of cropland: Percent dryland _____ Percent under irrigation _____
4. Number and type of machines being leased. Also indicate size in appropriate measurement.
Tractor _____ Tillage equipment _____
Combine _____ Irrigation equipment _____
Haying equipment _____ Other _____
5. What year did you start leasing? _____
6. How many years have you been associated with the dealer you are leasing from? _____
7. Would you please check and explain if needed, the major reason or reasons for leasing?
____ More advantageous from a cash flow situation
____ Because of the tax aspect. Explain _____
____ Leasing is the least cost way of acquiring the machine for your farming operations.
Explain _____
____ Opens up your line of credit with your financier
____ Better service from dealer on leased machinery rather than purchased machinery.
Other (specify) _____
8. Is your leasing arrangement satisfactory from your standpoint? (yes or no) ____ If not, why? _____
9. Is there a Leasing Company involved? (yes or no) ____ If so, explain _____
10. Are you planning to continue leasing? (yes or no) _____

APPENDIX D

Discounted net costs as a percent of purchase price
for each acquisition method compared,
at three annual hourly usages

CASH PURCHASE PLAN

500 hours per year

		<u>Tax Rate</u> (Percent)							
		15.	25.	30.	35.	40.	50.		
<u>Interest Rate</u> (Percent)	8.	I 155.80	I 145.66	I 140.59	I 135.52	I 130.46	I 120.32	I 0.	<u>Discount Rate</u> (Percent)
		I 154.43	I 145.56	I 141.12	I 136.69	I 132.25	I 123.38	I 3.	
		I 152.99	I 145.13	I 141.19	I 137.26	I 133.33	I 125.46	I 6.	
		I 151.60	I 144.54	I 141.01	I 137.48	I 133.95	I 126.89	I 9.	
		I 150.28	I 143.88	I 140.68	I 137.48	I 134.28	I 127.88	I 12.	
		I 149.08	I 143.23	I 140.30	I 137.37	I 134.44	I 128.58	I 15.	
	9.	I 155.80	I 145.66	I 140.59	I 135.52	I 130.46	I 120.32	I 0.	
		I 154.43	I 145.56	I 141.12	I 136.69	I 132.25	I 123.38	I 3.	
		I 152.99	I 145.13	I 141.19	I 137.26	I 133.33	I 125.46	I 6.	
		I 151.60	I 144.54	I 141.01	I 137.48	I 133.95	I 126.89	I 9.	
	10.	I 150.28	I 143.88	I 140.68	I 137.48	I 134.28	I 127.88	I 12.	
		I 149.08	I 143.23	I 140.30	I 137.37	I 134.44	I 128.58	I 15.	
		I 155.80	I 145.66	I 140.59	I 135.52	I 130.46	I 120.32	I 0.	
		I 154.43	I 145.56	I 141.12	I 136.69	I 132.25	I 123.38	I 3.	
		I 152.99	I 145.13	I 141.19	I 137.26	I 133.33	I 125.46	I 6.	
		I 151.60	I 144.54	I 141.01	I 137.48	I 133.95	I 126.89	I 9.	
	11.	I 150.28	I 143.88	I 140.68	I 137.48	I 134.28	I 127.88	I 12.	
		I 149.08	I 143.23	I 140.30	I 137.37	I 134.44	I 128.58	I 15.	
		I 155.80	I 145.66	I 140.59	I 135.52	I 130.46	I 120.32	I 0.	
		I 154.43	I 145.56	I 141.12	I 136.69	I 132.25	I 123.38	I 3.	
	12.	I 152.99	I 145.13	I 141.19	I 137.26	I 133.33	I 125.46	I 6.	
		I 151.60	I 144.54	I 141.01	I 137.48	I 133.95	I 126.89	I 9.	
		I 150.28	I 143.88	I 140.68	I 137.48	I 134.28	I 127.88	I 12.	
		I 149.08	I 143.23	I 140.30	I 137.37	I 134.44	I 128.58	I 15.	
		I 155.80	I 145.66	I 140.59	I 135.52	I 130.46	I 120.32	I 0.	
		I 154.43	I 145.56	I 141.12	I 136.69	I 132.25	I 123.38	I 3.	
	14.	I 152.99	I 145.13	I 141.19	I 137.26	I 133.33	I 125.46	I 6.	
		I 151.60	I 144.54	I 141.01	I 137.48	I 133.95	I 126.89	I 9.	
		I 150.28	I 143.88	I 140.68	I 137.48	I 134.28	I 127.88	I 12.	
		I 149.08	I 143.23	I 140.30	I 137.37	I 134.44	I 128.58	I 15.	

CASH PURCHASE PLAN

700 hours per year

		<u>Tax Rate</u> (Percent)							
		15.	25.	30.	35.	40.	50.		
<u>Interest Rate</u> (Percent)	8.	I 122.68	I 107.07	I 99.27	I 91.46	I 83.66	I 68.05	I 0.	<u>Discount Rate</u> (Percent)
		I 118.93	I 105.27	I 98.43	I 91.60	I 84.77	I 71.10	I 3.	
		I 115.85	I 103.76	I 97.71	I 91.67	I 85.62	I 73.53	I 6.	
		I 113.31	I 102.51	I 97.11	I 91.70	I 86.30	I 75.50	I 9.	
		I 111.22	I 101.48	I 96.61	I 91.74	I 86.87	I 77.13	I 12.	
		I 109.48	I 100.63	I 96.21	I 91.78	I 87.36	I 78.51	I 15.	
	9.	I 122.68	I 107.07	I 99.27	I 91.46	I 83.66	I 68.05	I 0.	
		I 118.93	I 105.27	I 98.43	I 91.60	I 84.77	I 71.10	I 3.	
		I 115.85	I 103.76	I 97.71	I 91.67	I 85.62	I 73.53	I 6.	
		I 113.31	I 102.51	I 97.11	I 91.70	I 86.30	I 75.50	I 9.	
	10.	I 122.68	I 107.07	I 99.27	I 91.46	I 83.66	I 68.05	I 0.	
		I 118.93	I 105.27	I 98.43	I 91.60	I 84.77	I 71.10	I 3.	
		I 115.85	I 103.76	I 97.71	I 91.67	I 85.62	I 73.53	I 6.	
		I 113.31	I 102.51	I 97.11	I 91.70	I 86.30	I 75.50	I 9.	
		I 111.22	I 101.48	I 96.61	I 91.74	I 86.87	I 77.13	I 12.	
		I 109.48	I 100.63	I 96.21	I 91.78	I 87.36	I 78.51	I 15.	
	11.	I 122.68	I 107.07	I 99.27	I 91.46	I 83.66	I 68.05	I 0.	
		I 118.93	I 105.27	I 98.43	I 91.60	I 84.77	I 71.10	I 3.	
		I 115.85	I 103.76	I 97.71	I 91.67	I 85.62	I 73.53	I 6.	
		I 113.31	I 102.51	I 97.11	I 91.70	I 86.30	I 75.50	I 9.	
	12.	I 122.68	I 107.07	I 99.27	I 91.46	I 83.66	I 68.05	I 0.	
		I 118.93	I 105.27	I 98.43	I 91.60	I 84.77	I 71.10	I 3.	
		I 115.85	I 103.76	I 97.71	I 91.67	I 85.62	I 73.53	I 6.	
		I 113.31	I 102.51	I 97.11	I 91.70	I 86.30	I 75.50	I 9.	
		I 111.22	I 101.48	I 96.61	I 91.74	I 86.87	I 77.13	I 12.	
		I 109.48	I 100.63	I 96.21	I 91.78	I 87.36	I 78.51	I 15.	
	14.	I 122.68	I 107.07	I 99.27	I 91.46	I 83.66	I 68.05	I 0.	
		I 118.93	I 105.27	I 98.43	I 91.60	I 84.77	I 71.10	I 3.	
		I 115.85	I 103.76	I 97.71	I 91.67	I 85.62	I 73.53	I 6.	
		I 113.31	I 102.51	I 97.11	I 91.70	I 86.30	I 75.50	I 9.	
		I 122.68	I 107.07	I 99.27	I 91.46	I 83.66	I 68.05	I 0.	
		I 118.93	I 105.27	I 98.43	I 91.60	I 84.77	I 71.10	I 3.	
		I 115.85	I 103.76	I 97.71	I 91.67	I 85.62	I 73.53	I 6.	
		I 113.31	I 102.51	I 97.11	I 91.70	I 86.30	I 75.50	I 9.	
		I 111.22	I 101.48	I 96.61	I 91.74	I 86.87	I 77.13	I 12.	
		I 109.48	I 100.63	I 96.21	I 91.78	I 87.36	I 78.51	I 15.	
		I 122.68	I 107.07	I 99.27	I 91.46	I 83.66	I 68.05	I 0.	
		I 118.93	I 105.27	I 98.43	I 91.60	I 84.77	I 71.10	I 3.	
		I 115.85	I 103.76	I 97.71	I 91.67	I 85.62	I 73.53	I 6.	
		I 113.31	I 102.51	I 97.11	I 91.70	I 86.30	I 75.50	I 9.	

CASH PURCHASE PLAN

1000 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
8.	Interest Rate (Percent)	I 109.33 I	I 94.94 I	I 87.75 I	I 80.56 I	I 73.37 I	I 58.99 I	0.
		I 105.91 I	I 93.57 I	I 87.40 I	I 81.23 I	I 75.06 I	I 62.71 I	3.
		I 102.44 I	I 91.71 I	I 86.35 I	I 80.99 I	I 75.63 I	I 64.91 I	6.
		I 99.09 I	I 89.68 I	I 84.97 I	I 80.26 I	I 75.55 I	I 66.14 I	9.
		I 95.99 I	I 87.64 I	I 83.46 I	I 79.29 I	I 75.11 I	I 66.75 I	12.
		I 93.18 I	I 85.70 I	I 81.96 I	I 78.22 I	I 74.48 I	I 67.00 I	15.
9.	Interest Rate (Percent)	I 109.33 I	I 94.94 I	I 87.75 I	I 80.56 I	I 73.37 I	I 58.99 I	0.
		I 105.91 I	I 93.57 I	I 87.40 I	I 81.23 I	I 75.06 I	I 62.71 I	3.
		I 102.44 I	I 91.71 I	I 86.35 I	I 80.99 I	I 75.63 I	I 64.91 I	6.
		I 99.09 I	I 89.68 I	I 84.97 I	I 80.26 I	I 75.55 I	I 66.14 I	9.
		I 95.99 I	I 87.64 I	I 83.46 I	I 79.29 I	I 75.11 I	I 66.75 I	12.
		I 93.18 I	I 85.70 I	I 81.96 I	I 78.22 I	I 74.48 I	I 67.00 I	15.
10.	Interest Rate (Percent)	I 109.33 I	I 94.94 I	I 87.75 I	I 80.56 I	I 73.37 I	I 58.99 I	0.
		I 105.91 I	I 93.57 I	I 87.40 I	I 81.23 I	I 75.06 I	I 62.71 I	3.
		I 102.44 I	I 91.71 I	I 86.35 I	I 80.99 I	I 75.63 I	I 64.91 I	6.
		I 99.09 I	I 89.68 I	I 84.97 I	I 80.26 I	I 75.55 I	I 66.14 I	9.
		I 95.99 I	I 87.64 I	I 83.46 I	I 79.29 I	I 75.11 I	I 66.75 I	12.
		I 93.18 I	I 85.70 I	I 81.96 I	I 78.22 I	I 74.48 I	I 67.00 I	15.
11.	Interest Rate (Percent)	I 109.33 I	I 94.94 I	I 87.75 I	I 80.56 I	I 73.37 I	I 58.99 I	0.
		I 105.91 I	I 93.57 I	I 87.40 I	I 81.23 I	I 75.06 I	I 62.71 I	3.
		I 102.44 I	I 91.71 I	I 86.35 I	I 80.99 I	I 75.63 I	I 64.91 I	6.
		I 99.09 I	I 89.68 I	I 84.97 I	I 80.26 I	I 75.55 I	I 66.14 I	9.
		I 95.99 I	I 87.64 I	I 83.46 I	I 79.29 I	I 75.11 I	I 66.75 I	12.
		I 93.18 I	I 85.70 I	I 81.96 I	I 78.22 I	I 74.48 I	I 67.00 I	15.
12.	Interest Rate (Percent)	I 109.33 I	I 94.94 I	I 87.75 I	I 80.56 I	I 73.37 I	I 58.99 I	0.
		I 105.91 I	I 93.57 I	I 87.40 I	I 81.23 I	I 75.06 I	I 62.71 I	3.
		I 102.44 I	I 91.71 I	I 86.35 I	I 80.99 I	I 75.63 I	I 64.91 I	6.
		I 99.09 I	I 89.68 I	I 84.97 I	I 80.26 I	I 75.55 I	I 66.14 I	9.
		I 95.99 I	I 87.64 I	I 83.46 I	I 79.29 I	I 75.11 I	I 66.75 I	12.
		I 93.18 I	I 85.70 I	I 81.96 I	I 78.22 I	I 74.48 I	I 67.00 I	15.
14.	Interest Rate (Percent)	I 109.33 I	I 94.94 I	I 87.75 I	I 80.56 I	I 73.37 I	I 58.99 I	0.
		I 105.91 I	I 93.57 I	I 87.40 I	I 81.23 I	I 75.06 I	I 62.71 I	3.
		I 102.44 I	I 91.71 I	I 86.35 I	I 80.99 I	I 75.63 I	I 64.91 I	6.
		I 99.09 I	I 89.68 I	I 84.97 I	I 80.26 I	I 75.55 I	I 66.14 I	9.
		I 95.99 I	I 87.64 I	I 83.46 I	I 79.29 I	I 75.11 I	I 66.75 I	12.
		I 93.18 I	I 85.70 I	I 81.96 I	I 78.22 I	I 74.48 I	I 67.00 I	15.

Discount Rate (Percent)

CREDIT PURCHASE PLAN 1

500 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate (Percent)</u>	8.	I 175.13	I 162.76	I 156.58	I 150.39	I 144.21	I 131.84	I 0.
		I 164.83	I 153.90	I 148.44	I 142.97	I 137.51	I 126.58	I 3.
		I 155.27	I 145.50	I 140.62	I 135.73	I 130.85	I 121.08	I 6.
		I 146.46	I 137.64	I 133.23	I 128.82	I 124.41	I 115.59	I 9.
		I 138.35	I 130.32	I 126.31	I 122.29	I 118.27	I 110.24	I 12.
		I 130.92	I 123.55	I 119.86	I 116.18	I 112.49	I 105.12	I 15.
	9.	I 177.55	I 164.89	I 158.57	I 152.24	I 145.91	I 133.26	I 0.
		I 167.14	I 155.95	I 150.35	I 144.76	I 139.16	I 127.97	I 3.
		I 157.49	I 147.48	I 142.47	I 137.46	I 132.46	I 122.45	I 6.
		I 148.58	I 139.54	I 135.02	I 130.49	I 125.97	I 116.93	I 9.
		I 140.40	I 132.16	I 128.04	I 123.92	I 119.79	I 111.55	I 12.
		I 132.89	I 125.32	I 121.54	I 117.75	I 113.97	I 106.40	I 15.
	10.	I 179.96	I 167.02	I 160.56	I 154.09	I 147.62	I 134.68	I 0.
		I 169.46	I 158.00	I 152.27	I 146.55	I 140.82	I 129.36	I 3.
		I 159.71	I 149.45	I 144.32	I 139.19	I 134.07	I 123.81	I 6.
		I 150.71	I 141.44	I 136.81	I 132.17	I 127.53	I 118.26	I 9.
		I 142.45	I 133.99	I 129.77	I 125.54	I 121.31	I 112.86	I 12.
		I 134.86	I 127.10	I 123.21	I 119.33	I 115.45	I 107.68	I 15.
	11.	I 182.38	I 169.16	I 162.54	I 155.93	I 149.32	I 136.10	I 0.
		I 171.77	I 160.05	I 154.19	I 148.33	I 142.47	I 130.76	I 3.
		I 161.92	I 151.42	I 146.17	I 140.92	I 135.68	I 125.18	I 6.
		I 152.84	I 143.34	I 138.60	I 133.85	I 129.10	I 119.60	I 9.
		I 144.50	I 135.33	I 131.50	I 127.17	I 122.83	I 114.17	I 12.
		I 136.83	I 128.87	I 124.89	I 120.91	I 116.92	I 108.96	I 15.
	12.	I 184.79	I 171.29	I 164.53	I 157.78	I 151.03	I 137.52	I 0.
		I 174.08	I 162.10	I 156.11	I 150.12	I 144.13	I 132.15	I 3.
		I 164.14	I 153.40	I 148.03	I 142.65	I 137.28	I 126.54	I 6.
		I 154.97	I 145.25	I 140.39	I 135.52	I 130.66	I 120.94	I 9.
		I 146.54	I 137.67	I 133.23	I 128.79	I 124.35	I 115.48	I 12.
		I 138.80	I 130.64	I 126.56	I 122.48	I 118.40	I 110.24	I 15.
	14.	I 189.63	I 175.55	I 168.51	I 161.48	I 154.44	I 140.36	I 0.
		I 178.71	I 166.20	I 159.95	I 153.69	I 147.44	I 134.93	I 3.
		I 168.58	I 157.34	I 151.73	I 146.11	I 140.50	I 129.27	I 6.
		I 159.23	I 149.05	I 143.96	I 138.88	I 133.79	I 123.61	I 9.
		I 150.64	I 141.34	I 136.69	I 132.04	I 127.39	I 118.09	I 12.
		I 142.75	I 134.19	I 129.91	I 125.64	I 121.36	I 112.80	I 15.

Discount Rate (Percent)

CREDIT PURCHASE PLAN 1

700 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
Interest Rate (Percent)	8.	I 136.48	I 119.24	I 110.63	I 102.01	I 93.39	I 76.16	I 0.
		I 126.35	I 111.19	I 103.61	I 96.03	I 88.45	I 73.30	I 3.
		I 117.47	I 104.00	I 97.26	I 90.53	I 83.79	I 70.33	I 6.
		I 109.64	I 97.56	I 91.52	I 85.48	I 79.44	I 67.37	I 9.
		I 102.69	I 91.77	I 86.32	I 80.86	I 75.40	I 64.48	I 12.
		I 96.51	I 86.56	I 81.59	I 76.62	I 71.65	I 61.71	I 15.
	9.	I 138.20	I 120.77	I 112.05	I 103.33	I 94.61	I 77.17	I 0.
		I 128.00	I 112.65	I 104.98	I 97.31	I 89.64	I 74.29	I 3.
		I 119.05	I 105.41	I 98.59	I 91.77	I 84.94	I 71.30	I 6.
		I 111.16	I 98.92	I 92.80	I 86.68	I 80.56	I 68.32	I 9.
		I 104.15	I 93.09	I 87.55	I 82.02	I 76.48	I 65.42	I 12.
	10.	I 97.91	I 87.83	I 82.79	I 77.75	I 72.71	I 62.62	I 15.
		I 139.93	I 122.29	I 113.47	I 104.65	I 95.83	I 78.19	I 0.
		I 129.65	I 114.12	I 106.35	I 98.59	I 90.82	I 75.28	I 3.
		I 120.63	I 106.82	I 99.91	I 93.00	I 86.09	I 72.28	I 6.
		I 112.68	I 100.28	I 94.08	I 87.88	I 81.68	I 69.27	I 9.
		I 105.62	I 94.40	I 88.79	I 83.18	I 77.57	I 66.35	I 12.
	11.	I 99.32	I 89.10	I 83.99	I 78.87	I 73.76	I 63.54	I 15.
		I 141.66	I 123.81	I 114.89	I 105.97	I 97.05	I 79.20	I 0.
		I 131.30	I 115.58	I 107.72	I 99.86	I 92.00	I 76.28	I 3.
		I 122.22	I 108.23	I 101.23	I 94.24	I 87.24	I 73.25	I 6.
		I 114.20	I 101.64	I 95.35	I 89.07	I 82.79	I 70.23	I 9.
	12.	I 107.08	I 95.71	I 90.02	I 84.34	I 78.65	I 67.28	I 12.
		I 100.73	I 90.36	I 85.18	I 80.00	I 74.82	I 64.45	I 15.
		I 143.38	I 125.33	I 116.31	I 107.29	I 98.27	I 80.22	I 0.
		I 132.96	I 117.05	I 109.09	I 101.14	I 93.18	I 77.27	I 3.
		I 123.80	I 109.64	I 102.55	I 95.47	I 88.39	I 74.22	I 6.
		I 115.72	I 102.99	I 96.63	I 90.27	I 83.91	I 71.18	I 9.
	14.	I 108.54	I 97.02	I 91.26	I 85.50	I 79.74	I 68.22	I 12.
		I 102.14	I 91.63	I 86.38	I 81.13	I 75.87	I 65.37	I 15.
		I 146.83	I 128.38	I 119.15	I 109.93	I 100.70	I 82.25	I 0.
		I 136.26	I 119.98	I 111.83	I 103.69	I 95.55	I 79.26	I 3.
		I 126.97	I 112.46	I 105.20	I 97.94	I 90.69	I 76.17	I 6.
		I 118.76	I 105.71	I 99.19	I 92.66	I 86.14	I 73.09	I 9.
		I 111.47	I 99.64	I 93.73	I 87.82	I 81.91	I 70.09	I 12.
		I 104.95	I 94.17	I 88.77	I 83.38	I 77.99	I 67.20	I 15.

Discount Rate (Percent)

CREDIT PURCHASE PLAN 1

1000 hours per year

		<u>Tax Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate</u> (Percent)	8.	I 128.83	I 112.19	I 103.87	I 95.55	I 87.22	I 70.58	I 0.
		I 115.76	I 101.52	I 94.40	I 87.28	I 80.16	I 65.92	I 3.
		I 104.87	I 92.54	I 86.37	I 80.20	I 74.03	I 61.70	I 6.
		I 95.71	I 84.91	I 79.50	I 74.10	I 68.70	I 57.89	I 9.
		I 87.94	I 78.37	I 73.58	I 68.80	I 64.02	I 54.45	I 12.
		I 81.27	I 72.72	I 68.44	I 64.17	I 59.89	I 51.34	I 15.
	9.	I 131.13	I 114.21	I 105.76	I 97.30	I 88.84	I 71.93	I 0.
		I 117.76	I 103.29	I 96.06	I 88.83	I 81.59	I 67.13	I 3.
		I 106.64	I 94.11	I 87.85	I 81.58	I 75.32	I 62.79	I 6.
		I 97.30	I 86.33	I 80.84	I 75.35	I 69.86	I 58.88	I 9.
		I 89.38	I 79.66	I 74.80	I 69.94	I 65.08	I 55.37	I 12.
		I 82.59	I 73.91	I 69.56	I 65.22	I 60.88	I 52.20	I 15.
	10.	I 133.42	I 116.24	I 107.65	I 99.06	I 90.46	I 73.28	I 0.
		I 119.76	I 105.07	I 97.72	I 90.37	I 83.03	I 68.33	I 3.
		I 108.41	I 95.69	I 89.33	I 82.97	I 76.61	I 63.88	I 6.
		I 98.89	I 87.75	I 82.17	I 76.60	I 71.03	I 59.88	I 9.
		I 90.82	I 80.95	I 76.02	I 71.09	I 66.15	I 56.29	I 12.
		I 83.91	I 75.09	I 70.69	I 66.28	I 61.87	I 53.05	I 15.
	11.	I 135.72	I 118.26	I 109.54	I 100.81	I 92.08	I 74.63	I 0.
		I 121.76	I 106.84	I 99.38	I 91.92	I 84.46	I 69.54	I 3.
		I 110.19	I 97.27	I 90.81	I 84.35	I 77.89	I 64.97	I 6.
		I 100.48	I 89.17	I 83.51	I 77.85	I 72.19	I 60.88	I 9.
		I 92.26	I 82.24	I 77.24	I 72.23	I 67.22	I 57.21	I 12.
		I 85.23	I 76.28	I 71.81	I 67.33	I 62.86	I 53.91	I 15.
12.	I 138.01	I 120.29	I 111.43	I 102.57	I 93.70	I 75.98	I 0.	
	I 123.77	I 108.62	I 101.04	I 93.47	I 85.89	I 70.75	I 3.	
	I 111.96	I 98.85	I 92.29	I 85.73	I 79.18	I 66.06	I 6.	
	I 102.07	I 90.59	I 84.84	I 79.10	I 73.36	I 61.88	I 9.	
	I 93.70	I 83.54	I 78.45	I 73.37	I 68.29	I 58.13	I 12.	
	I 86.55	I 77.47	I 72.93	I 68.39	I 63.85	I 54.77	I 15.	
14.	I 142.60	I 124.34	I 115.21	I 106.07	I 96.94	I 78.68	I 0.	
	I 127.77	I 112.17	I 104.37	I 96.56	I 88.76	I 73.16	I 3.	
	I 115.50	I 102.00	I 95.25	I 88.50	I 81.75	I 68.24	I 6.	
	I 105.25	I 93.42	I 87.51	I 81.60	I 75.69	I 63.87	I 9.	
	I 96.58	I 86.12	I 80.89	I 75.66	I 70.43	I 59.97	I 12.	
	I 89.18	I 79.84	I 75.17	I 70.50	I 65.83	I 56.48	I 15.	

		<u>Discount Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate</u> (Percent)	8.	I 128.83	I 112.19	I 103.87	I 95.55	I 87.22	I 70.58	I 0.
		I 115.76	I 101.52	I 94.40	I 87.28	I 80.16	I 65.92	I 3.
		I 104.87	I 92.54	I 86.37	I 80.20	I 74.03	I 61.70	I 6.
		I 95.71	I 84.91	I 79.50	I 74.10	I 68.70	I 57.89	I 9.
		I 87.94	I 78.37	I 73.58	I 68.80	I 64.02	I 54.45	I 12.
		I 81.27	I 72.72	I 68.44	I 64.17	I 59.89	I 51.34	I 15.
	9.	I 131.13	I 114.21	I 105.76	I 97.30	I 88.84	I 71.93	I 0.
		I 117.76	I 103.29	I 96.06	I 88.83	I 81.59	I 67.13	I 3.
		I 106.64	I 94.11	I 87.85	I 81.58	I 75.32	I 62.79	I 6.
		I 97.30	I 86.33	I 80.84	I 75.35	I 69.86	I 58.88	I 9.
		I 89.38	I 79.66	I 74.80	I 69.94	I 65.08	I 55.37	I 12.
		I 82.59	I 73.91	I 69.56	I 65.22	I 60.88	I 52.20	I 15.
	10.	I 133.42	I 116.24	I 107.65	I 99.06	I 90.46	I 73.28	I 0.
		I 119.76	I 105.07	I 97.72	I 90.37	I 83.03	I 68.33	I 3.
		I 108.41	I 95.69	I 89.33	I 82.97	I 76.61	I 63.88	I 6.
		I 98.89	I 87.75	I 82.17	I 76.60	I 71.03	I 59.88	I 9.
		I 90.82	I 80.95	I 76.02	I 71.09	I 66.15	I 56.29	I 12.
		I 83.91	I 75.09	I 70.69	I 66.28	I 61.87	I 53.05	I 15.
	11.	I 135.72	I 118.26	I 109.54	I 100.81	I 92.08	I 74.63	I 0.
		I 121.76	I 106.84	I 99.38	I 91.92	I 84.46	I 69.54	I 3.
		I 110.19	I 97.27	I 90.81	I 84.35	I 77.89	I 64.97	I 6.
		I 100.48	I 89.17	I 83.51	I 77.85	I 72.19	I 60.88	I 9.
		I 92.26	I 82.24	I 77.24	I 72.23	I 67.22	I 57.21	I 12.
		I 85.23	I 76.28	I 71.81	I 67.33	I 62.86	I 53.91	I 15.
12.	I 138.01	I 120.29	I 111.43	I 102.57	I 93.70	I 75.98	I 0.	
	I 123.77	I 108.62	I 101.04	I 93.47	I 85.89	I 70.75	I 3.	
	I 111.96	I 98.85	I 92.29	I 85.73	I 79.18	I 66.06	I 6.	
	I 102.07	I 90.59	I 84.84	I 79.10	I 73.36	I 61.88	I 9.	
	I 93.70	I 83.54	I 78.45	I 73.37	I 68.29	I 58.13	I 12.	
	I 86.55	I 77.47	I 72.93	I 68.39	I 63.85	I 54.77	I 15.	
14.	I 142.60	I 124.34	I 115.21	I 106.07	I 96.94	I 78.68	I 0.	
	I 127.77	I 112.17	I 104.37	I 96.56	I 88.76	I 73.16	I 3.	
	I 115.50	I 102.00	I 95.25	I 88.50	I 81.75	I 68.24	I 6.	
	I 105.25	I 93.42	I 87.51	I 81.60	I 75.69	I 63.87	I 9.	
	I 96.58	I 86.12	I 80.89	I 75.66	I 70.43	I 59.97	I 12.	
	I 89.18	I 79.84	I 75.17	I 70.50	I 65.83	I 56.48	I 15.	

Discount Rate (Percent)

CREDIT PURCHASE PLAN 2

500 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate (Percent)</u>	8.	I 169.12	I 157.44	I 151.61	I 145.77	I 139.93	I 128.26	I 0.
		I 161.58	I 151.28	I 146.13	I 140.98	I 135.83	I 125.54	I 3.
		I 154.53	I 145.34	I 140.74	I 136.14	I 131.55	I 122.35	I 6.
		I 148.01	I 139.72	I 135.57	I 131.42	I 127.27	I 118.98	I 9.
		I 142.01	I 134.46	I 130.68	I 126.91	I 123.13	I 115.58	I 12.
		I 136.51	I 129.58	I 126.11	I 122.65	I 119.18	I 112.24	I 15.
	9.	I 170.78	I 158.91	I 152.98	I 147.04	I 141.11	I 129.24	I 0.
		I 163.17	I 152.69	I 147.45	I 142.21	I 136.97	I 126.50	I 3.
		I 156.06	I 146.70	I 142.02	I 137.34	I 132.66	I 123.29	I 6.
		I 149.48	I 141.03	I 136.80	I 132.58	I 128.35	I 119.90	I 9.
		I 143.42	I 135.73	I 131.88	I 128.03	I 124.18	I 116.48	I 12.
		I 137.87	I 130.80	I 127.27	I 123.73	I 120.20	I 113.13	I 15.
	10.	I 172.45	I 160.38	I 154.35	I 148.32	I 142.29	I 130.22	I 0.
		I 164.76	I 154.10	I 148.77	I 143.45	I 138.12	I 127.46	I 3.
		I 157.59	I 148.06	I 143.29	I 138.53	I 133.76	I 124.24	I 6.
		I 150.94	I 142.34	I 138.03	I 133.73	I 129.43	I 120.82	I 9.
		I 144.83	I 136.99	I 133.07	I 129.15	I 125.22	I 117.38	I 12.
		I 139.23	I 132.02	I 128.42	I 124.82	I 121.21	I 114.01	I 15.
	11.	I 174.12	I 161.85	I 155.72	I 149.59	I 143.46	I 131.20	I 0.
		I 166.36	I 155.52	I 150.10	I 144.68	I 139.26	I 128.42	I 3.
		I 159.11	I 149.42	I 144.57	I 139.72	I 134.87	I 125.18	I 6.
		I 152.41	I 143.65	I 139.27	I 134.89	I 130.51	I 121.74	I 9.
		I 146.24	I 138.25	I 134.26	I 130.27	I 126.27	I 118.28	I 12.
		I 140.59	I 133.25	I 129.57	I 125.90	I 122.23	I 114.89	I 15.
	12.	I 175.78	I 163.32	I 157.10	I 150.87	I 144.64	I 132.18	I 0.
		I 167.95	I 156.93	I 151.42	I 145.91	I 140.40	I 129.38	I 3.
		I 160.64	I 150.78	I 145.85	I 140.91	I 135.98	I 126.12	I 6.
		I 153.88	I 144.96	I 140.50	I 136.04	I 131.58	I 122.66	I 9.
		I 147.65	I 139.52	I 135.45	I 131.39	I 127.32	I 119.18	I 12.
		I 141.94	I 134.47	I 130.73	I 126.99	I 123.25	I 115.77	I 15.
	14.	I 179.11	I 166.26	I 159.84	I 153.41	I 146.99	I 134.14	I 0.
		I 171.14	I 159.76	I 154.07	I 148.37	I 142.68	I 131.30	I 3.
		I 163.70	I 153.50	I 148.40	I 143.30	I 138.20	I 128.00	I 6.
		I 156.81	I 147.58	I 142.97	I 138.35	I 133.74	I 124.51	I 9.
		I 150.48	I 142.05	I 137.84	I 133.62	I 129.41	I 120.99	I 12.
		I 144.66	I 136.91	I 133.04	I 129.16	I 125.29	I 117.54	I 15.

Discount Rate (Percent)

CREDIT PURCHASE PLAN 2

700 hours per year

		<u>Tax Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate</u> (Percent)	8.	I 131.74	I 114.71	I 106.20	I 97.68	I 89.17	I 72.14	I 0.
		I 123.60	I 108.60	I 101.11	I 93.61	I 86.12	I 71.12	I 3.
		I 116.52	I 103.18	I 96.52	I 89.85	I 83.18	I 69.84	I 6.
		I 110.34	I 98.36	I 92.38	I 86.39	I 80.40	I 68.43	I 9.
		I 104.91	I 94.06	I 88.64	I 83.22	I 77.80	I 66.96	I 12.
	9.	I 100.11	I 90.22	I 85.27	I 80.33	I 75.38	I 65.49	I 15.
		I 132.93	I 115.76	I 107.18	I 98.59	I 90.01	I 72.84	I 0.
		I 124.74	I 109.61	I 102.05	I 94.49	I 86.93	I 71.81	I 3.
		I 117.61	I 104.15	I 97.43	I 90.70	I 83.97	I 70.51	I 6.
		I 111.39	I 99.30	I 93.26	I 87.21	I 81.17	I 69.08	I 9.
	10.	I 105.91	I 94.97	I 89.49	I 84.02	I 78.55	I 67.60	I 12.
		I 101.08	I 91.09	I 86.10	I 81.10	I 76.11	I 66.12	I 15.
		I 134.12	I 116.81	I 108.16	I 99.50	I 90.85	I 73.54	I 0.
		I 125.87	I 110.62	I 103.00	I 95.37	I 87.75	I 72.50	I 3.
		I 118.70	I 105.13	I 98.34	I 91.55	I 84.76	I 71.19	I 6.
	11.	I 112.43	I 100.24	I 94.14	I 88.04	I 81.94	I 69.74	I 9.
		I 106.92	I 95.87	I 90.35	I 84.82	I 79.30	I 68.25	I 12.
		I 102.05	I 91.96	I 86.92	I 81.88	I 76.83	I 66.75	I 15.
		I 135.31	I 117.86	I 109.14	I 100.41	I 91.69	I 74.24	I 0.
		I 127.01	I 111.63	I 103.94	I 96.25	I 88.56	I 73.18	I 3.
	12.	I 119.79	I 106.10	I 99.25	I 92.40	I 85.55	I 71.86	I 6.
		I 113.48	I 101.17	I 95.02	I 88.86	I 82.71	I 70.40	I 9.
		I 107.93	I 96.77	I 91.20	I 85.62	I 80.04	I 68.89	I 12.
		I 103.02	I 92.84	I 87.74	I 82.65	I 77.56	I 67.38	I 15.
I 136.50		I 118.91	I 110.12	I 101.32	I 92.53	I 74.94	I 0.	
14.	I 128.15	I 112.64	I 104.89	I 97.13	I 89.38	I 73.87	I 3.	
	I 120.89	I 107.07	I 100.16	I 93.25	I 86.35	I 72.53	I 6.	
	I 114.53	I 102.11	I 95.90	I 89.69	I 83.48	I 71.06	I 9.	
	I 108.94	I 97.68	I 92.05	I 86.42	I 80.79	I 69.53	I 12.	
	I 103.99	I 93.71	I 88.57	I 83.43	I 78.29	I 68.01	I 15.	
	I 138.88	I 121.01	I 112.08	I 103.14	I 94.21	I 76.34	I 0.	
	I 130.43	I 114.66	I 106.78	I 98.89	I 91.01	I 75.24	I 3.	
	I 123.07	I 109.01	I 101.99	I 94.96	I 87.93	I 73.87	I 6.	
	I 116.62	I 103.98	I 97.66	I 91.34	I 85.02	I 72.37	I 9.	
	I 110.95	I 99.48	I 93.75	I 88.02	I 82.29	I 70.82	I 12.	
	I 105.93	I 95.45	I 90.22	I 84.98	I 79.74	I 69.27	I 15.	

Discount Rate (Percent)

CREDIT PURCHASE PLAN 2

0000 hours per year

		<u>Tax Rate</u> (Percent)							
		15.	25.	30.	35.	40.	50.		
<u>Interest Rate</u> (Percent)	8.	I 116.12 I	I 100.33 I	I 92.44 I	I 84.55 I	I 76.66 I	I 60.87 I	I 0.	<u>Discount Rate</u> (Percent)
		I 106.81 I	I 93.28 I	I 86.51 I	I 79.75 I	I 72.98 I	I 59.44 I	I 3.	
		I 98.86 I	I 87.11 I	I 81.24 I	I 75.36 I	I 69.49 I	I 57.74 I	I 6.	
		I 92.04 I	I 81.72 I	I 76.57 I	I 71.41 I	I 66.25 I	I 55.93 I	I 9.	
		I 86.16 I	I 77.01 I	I 72.43 I	I 67.86 I	I 63.28 I	I 54.13 I	I 12.	
		I 81.06 I	I 72.87 I	I 68.77 I	I 64.68 I	I 60.58 I	I 52.39 I	I 15.	
	9.	I 117.70 I	I 101.73 I	I 93.75 I	I 85.76 I	I 77.77 I	I 61.80 I	I 0.	
		I 108.19 I	I 94.50 I	I 87.66 I	I 80.81 I	I 73.97 I	I 60.28 I	I 3.	
		I 100.08 I	I 88.20 I	I 82.26 I	I 76.32 I	I 70.38 I	I 58.49 I	I 6.	
		I 93.14 I	I 82.70 I	I 77.49 I	I 72.27 I	I 67.05 I	I 56.62 I	I 9.	
		I 87.15 I	I 77.90 I	I 73.27 I	I 68.64 I	I 64.02 I	I 54.76 I	I 12.	
		I 81.97 I	I 73.69 I	I 69.55 I	I 65.40 I	I 61.26 I	I 52.98 I	I 15.	
	10.	I 119.28 I	I 103.13 I	I 95.05 I	I 86.97 I	I 78.89 I	I 62.73 I	I 0.	
		I 109.57 I	I 95.73 I	I 88.80 I	I 81.88 I	I 74.96 I	I 61.11 I	I 3.	
		I 101.31 I	I 89.29 I	I 83.28 I	I 77.27 I	I 71.26 I	I 59.24 I	I 6.	
		I 94.23 I	I 83.68 I	I 78.41 I	I 73.13 I	I 67.86 I	I 57.31 I	I 9.	
		I 88.14 I	I 78.79 I	I 74.11 I	I 69.43 I	I 64.75 I	I 55.40 I	I 12.	
		I 82.88 I	I 74.51 I	I 70.32 I	I 66.13 I	I 61.94 I	I 53.57 I	I 15.	
	11.	I 120.87 I	I 104.52 I	I 96.35 I	I 88.18 I	I 80.01 I	I 63.67 I	I 0.	
		I 110.96 I	I 96.95 I	I 89.95 I	I 82.95 I	I 75.94 I	I 61.94 I	I 3.	
		I 102.53 I	I 90.38 I	I 84.30 I	I 78.22 I	I 72.15 I	I 59.99 I	I 6.	
		I 95.32 I	I 84.66 I	I 79.33 I	I 73.99 I	I 68.66 I	I 58.00 I	I 9.	
		I 89.14 I	I 79.68 I	I 74.95 I	I 70.22 I	I 65.49 I	I 56.03 I	I 12.	
		I 83.79 I	I 75.32 I	I 71.09 I	I 66.86 I	I 62.62 I	I 54.16 I	I 15.	
12.	I 122.45 I	I 105.92 I	I 97.66 I	I 89.39 I	I 81.13 I	I 64.60 I	I 0.		
	I 112.34 I	I 98.17 I	I 91.09 I	I 84.01 I	I 76.93 I	I 62.77 I	I 3.		
	I 103.75 I	I 91.46 I	I 85.32 I	I 79.18 I	I 73.03 I	I 60.75 I	I 6.		
	I 96.42 I	I 85.64 I	I 80.25 I	I 74.86 I	I 69.46 I	I 58.68 I	I 9.		
	I 90.13 I	I 80.57 I	I 75.79 I	I 71.01 I	I 66.23 I	I 56.67 I	I 12.		
	I 84.70 I	I 76.14 I	I 71.86 I	I 67.58 I	I 63.31 I	I 54.75 I	I 15.		
14.	I 125.62 I	I 108.71 I	I 100.26 I	I 91.81 I	I 83.36 I	I 66.46 I	I 0.		
	I 115.10 I	I 100.62 I	I 93.38 I	I 86.15 I	I 78.91 I	I 64.43 I	I 3.		
	I 106.19 I	I 93.64 I	I 87.36 I	I 81.08 I	I 74.81 I	I 62.25 I	I 6.		
	I 98.61 I	I 87.59 I	I 82.09 I	I 76.58 I	I 71.07 I	I 60.06 I	I 9.		
	I 92.11 I	I 82.35 I	I 77.47 I	I 72.58 I	I 67.70 I	I 57.94 I	I 12.		
	I 86.51 I	I 77.78 I	I 73.41 I	I 69.04 I	I 64.67 I	I 55.93 I	I 15.		

LEASE PLAN 1

500 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
Interest Rate (Percent)	8.	308.81	272.48	254.32	236.15	217.99	181.66	0.
		264.78	234.69	219.65	204.60	189.56	159.47	3.
		229.56	204.34	191.72	179.11	166.50	141.27	6.
		201.08	179.68	168.99	158.29	147.60	126.21	9.
		177.79	159.46	150.29	141.13	131.97	113.64	12.
		158.55	142.70	134.77	126.84	118.92	103.06	15.
	9.	311.67	275.01	256.67	238.34	220.01	183.34	0.
		267.23	236.86	221.69	206.50	191.31	160.95	3.
		231.69	206.23	193.50	180.77	168.04	142.58	6.
		202.94	181.35	170.55	159.76	148.96	127.38	9.
		179.43	160.93	151.69	142.44	133.19	114.69	12.
		160.02	144.02	136.02	128.02	120.02	104.01	15.
	10.	314.53	277.53	259.03	240.53	222.02	185.02	0.
		269.68	239.04	223.71	208.39	193.07	162.42	3.
		233.81	208.12	195.27	182.43	169.58	143.88	6.
		204.80	183.01	172.12	161.22	150.33	128.54	9.
		181.08	162.41	153.08	143.74	134.41	115.74	12.
		161.49	145.34	137.27	129.19	121.12	104.97	15.
	11.	317.39	280.05	261.38	242.71	224.04	186.70	0.
		272.14	241.21	225.75	210.29	194.82	163.90	3.
		235.94	210.01	197.05	184.08	171.12	145.19	6.
		206.66	184.68	173.68	162.69	151.70	129.71	9.
		182.73	163.89	154.47	145.05	135.63	116.79	12.
		162.96	146.66	138.52	130.37	122.22	105.92	15.
	12.	320.25	282.58	263.74	244.90	226.06	188.38	0.
		274.59	243.38	227.78	212.18	196.58	165.38	3.
		238.06	211.90	198.82	185.74	172.66	146.50	6.
		208.52	186.34	175.25	164.16	153.06	130.88	9.
		184.37	165.36	155.86	146.36	136.85	117.85	12.
		164.43	147.98	139.76	131.54	123.32	106.88	15.
	14.	325.97	287.62	268.45	249.27	230.10	191.75	0.
		279.49	247.73	231.85	215.97	200.09	168.33	3.
		242.32	215.69	202.37	189.06	175.74	149.12	6.
		212.25	189.67	178.38	167.09	155.80	133.22	9.
		187.66	168.32	158.64	148.97	139.30	119.95	12.
		167.36	150.63	142.26	133.89	125.52	108.79	15.

Discount Rate (Percent)

LEASE PLAN 1

700 hours per year

		15.	25.	30.	35.	40.	50.		
Interest Rate (Percent)	8.	I 220.60	I 194.64	I 181.67	I 168.69	I 155.71	I 129.76	I 0.	Discount Rate (Percent)
		I 189.14	I 167.65	I 156.90	I 146.15	I 135.41	I 113.91	I 3.	
		I 163.98	I 145.96	I 136.95	I 127.94	I 118.93	I 100.91	I 6.	
		I 143.63	I 128.35	I 120.71	I 113.07	I 105.43	I 90.15	I 9.	
		I 127.00	I 113.91	I 107.36	I 100.81	I 94.27	I 81.17	I 12.	
		I 113.26	I 101.93	I 96.27	I 90.61	I 84.95	I 73.62	I 15.	
	9.	I 222.64	I 196.44	I 183.35	I 170.25	I 157.16	I 130.96	I 0.	
		I 190.89	I 169.20	I 158.35	I 147.51	I 136.66	I 114.97	I 3.	
		I 165.50	I 147.31	I 138.22	I 129.13	I 120.03	I 101.85	I 6.	
		I 144.96	I 129.54	I 121.83	I 114.12	I 106.41	I 90.99	I 9.	
		I 128.17	I 114.96	I 108.35	I 101.75	I 95.14	I 81.93	I 12.	
		I 114.31	I 102.88	I 97.16	I 91.45	I 85.73	I 74.30	I 15.	
	10.	I 224.68	I 198.25	I 185.03	I 171.81	I 158.60	I 132.16	I 0.	
		I 192.64	I 170.75	I 159.81	I 148.86	I 137.91	I 116.02	I 3.	
		I 167.02	I 148.67	I 139.49	I 130.31	I 121.13	I 102.78	I 6.	
		I 146.29	I 130.73	I 122.95	I 115.17	I 107.39	I 91.82	I 9.	
		I 129.35	I 116.01	I 109.35	I 102.68	I 96.01	I 82.68	I 12.	
		I 115.36	I 103.82	I 98.05	I 92.29	I 86.52	I 74.98	I 15.	
	11.	I 226.72	I 200.05	I 186.71	I 173.38	I 160.04	I 133.37	I 0.	
		I 194.39	I 172.30	I 161.26	I 150.21	I 139.17	I 117.08	I 3.	
		I 168.54	I 150.02	I 140.76	I 131.50	I 122.24	I 103.72	I 6.	
		I 147.62	I 131.92	I 124.07	I 116.21	I 108.36	I 92.66	I 9.	
		I 130.53	I 117.07	I 110.34	I 103.61	I 96.89	I 83.43	I 12.	
		I 116.41	I 104.77	I 98.95	I 93.13	I 87.30	I 75.66	I 15.	
	12.	I 228.77	I 201.85	I 188.39	I 174.94	I 161.48	I 134.57	I 0.	
		I 196.14	I 173.86	I 162.71	I 151.57	I 140.42	I 118.13	I 3.	
		I 170.06	I 151.37	I 142.02	I 132.68	I 123.34	I 104.65	I 6.	
		I 148.95	I 133.11	I 125.18	I 117.26	I 109.34	I 93.49	I 9.	
		I 131.70	I 118.12	I 111.34	I 104.55	I 97.76	I 84.18	I 12.	
		I 117.46	I 105.71	I 99.84	I 93.96	I 88.09	I 76.35	I 15.	
	14.	I 232.85	I 205.46	I 191.76	I 178.06	I 164.37	I 136.97	I 0.	
		I 199.65	I 176.96	I 165.62	I 154.27	I 142.93	I 120.24	I 3.	
		I 173.09	I 154.07	I 144.56	I 135.05	I 125.54	I 106.52	I 6.	
		I 151.61	I 135.48	I 127.42	I 119.36	I 111.29	I 95.16	I 9.	
		I 134.05	I 120.23	I 113.32	I 106.41	I 99.50	I 85.68	I 12.	
		I 119.55	I 107.60	I 101.62	I 95.64	I 89.66	I 77.71	I 15.	

LEASE PLAN 1

1000 hours per year

		<u>Tax Rate</u> (Percent)							
		15.	25.	30.	35.	40.	50.		
<u>Interest Rate</u> (Percent)	8.	I 154.41 I	I 136.24 I	I 127.16 I	I 118.08 I	I 108.99 I	I 90.83 I	I 0.	<u>Discount Rate</u> (Percent)
		I 132.39 I	I 117.35 I	I 109.82 I	I 102.30 I	I 94.78 I	I 79.73 I	I 3.	
		I 114.78 I	I 102.17 I	I 95.86 I	I 89.55 I	I 83.25 I	I 70.63 I	I 6.	
		I 100.54 I	I 89.84 I	I 84.49 I	I 79.15 I	I 73.80 I	I 63.10 I	I 9.	
		I 88.89 I	I 79.73 I	I 75.15 I	I 70.56 I	I 65.98 I	I 56.82 I	I 12.	
		I 79.28 I	I 71.35 I	I 67.39 I	I 63.42 I	I 59.46 I	I 51.53 I	I 15.	
	9.	I 155.84 I	I 137.50 I	I 128.34 I	I 119.17 I	I 110.00 I	I 91.67 I	I 0.	
		I 133.62 I	I 118.43 I	I 110.84 I	I 103.25 I	I 95.66 I	I 80.47 I	I 3.	
		I 115.84 I	I 103.11 I	I 96.75 I	I 90.38 I	I 84.02 I	I 71.29 I	I 6.	
		I 101.47 I	I 90.67 I	I 85.28 I	I 79.88 I	I 74.48 I	I 63.69 I	I 9.	
		I 89.72 I	I 80.47 I	I 75.84 I	I 71.22 I	I 66.59 I	I 57.34 I	I 12.	
		I 80.01 I	I 72.01 I	I 68.01 I	I 64.01 I	I 60.01 I	I 52.01 I	I 15.	
	10.	I 157.27 I	I 138.76 I	I 129.51 I	I 120.26 I	I 111.01 I	I 92.51 I	I 0.	
		I 134.84 I	I 119.52 I	I 111.86 I	I 104.20 I	I 96.53 I	I 81.21 I	I 3.	
		I 116.91 I	I 104.06 I	I 97.64 I	I 91.21 I	I 84.79 I	I 71.94 I	I 6.	
		I 102.40 I	I 91.51 I	I 86.06 I	I 80.61 I	I 75.17 I	I 64.27 I	I 9.	
		I 90.54 I	I 81.21 I	I 76.54 I	I 71.87 I	I 67.20 I	I 57.87 I	I 12.	
		I 80.75 I	I 72.67 I	I 68.63 I	I 64.60 I	I 60.56 I	I 52.48 I	I 15.	
	11.	I 158.70 I	I 140.03 I	I 130.69 I	I 121.36 I	I 112.02 I	I 93.35 I	I 0.	
		I 136.07 I	I 120.61 I	I 112.87 I	I 105.14 I	I 97.41 I	I 81.95 I	I 3.	
		I 117.97 I	I 105.01 I	I 98.52 I	I 92.04 I	I 85.56 I	I 72.60 I	I 6.	
		I 103.33 I	I 92.34 I	I 86.84 I	I 81.35 I	I 75.85 I	I 64.86 I	I 9.	
		I 91.36 I	I 81.94 I	I 77.23 I	I 72.52 I	I 67.82 I	I 58.40 I	I 12.	
		I 81.48 I	I 73.33 I	I 69.26 I	I 65.18 I	I 61.11 I	I 52.96 I	I 15.	
12.	I 160.13 I	I 141.29 I	I 131.87 I	I 122.45 I	I 113.03 I	I 94.19 I	I 0.		
	I 137.29 I	I 121.69 I	I 113.89 I	I 106.09 I	I 98.29 I	I 82.69 I	I 3.		
	I 119.03 I	I 105.95 I	I 99.41 I	I 92.87 I	I 86.33 I	I 73.25 I	I 6.		
	I 104.26 I	I 93.17 I	I 87.62 I	I 82.08 I	I 76.53 I	I 65.44 I	I 9.		
	I 92.19 I	I 82.68 I	I 77.93 I	I 73.18 I	I 68.43 I	I 58.92 I	I 12.		
	I 82.21 I	I 73.99 I	I 69.88 I	I 65.77 I	I 61.66 I	I 53.44 I	I 15.		
14.	I 162.99 I	I 143.81 I	I 134.22 I	I 124.64 I	I 115.05 I	I 95.87 I	I 0.		
	I 139.74 I	I 123.86 I	I 115.92 I	I 107.98 I	I 100.04 I	I 84.16 I	I 3.		
	I 121.16 I	I 107.84 I	I 101.19 I	I 94.53 I	I 87.87 I	I 74.56 I	I 6.		
	I 106.12 I	I 94.83 I	I 89.19 I	I 83.54 I	I 77.90 I	I 66.61 I	I 9.		
	I 93.83 I	I 84.16 I	I 79.32 I	I 74.49 I	I 69.65 I	I 59.98 I	I 12.		
	I 83.68 I	I 75.31 I	I 71.13 I	I 66.95 I	I 62.76 I	I 54.39 I	I 15.		

LEASE PLAN 2

500 hours per year

		<u>Tax Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate</u> (Percent)	8.	I 269.31	I 243.18	I 230.11	I 217.05	I 203.99	I 177.86	I 0.
		I 248.54	I 225.66	I 214.22	I 202.78	I 191.34	I 168.46	I 3.
		I 229.86	I 209.66	I 199.56	I 189.46	I 179.35	I 159.15	I 6.
		I 213.09	I 195.11	I 186.13	I 177.14	I 168.15	I 150.18	I 9.
		I 198.02	I 181.92	I 173.87	I 165.82	I 157.78	I 141.68	I 12.
		I 184.46	I 169.96	I 162.71	I 155.46	I 148.21	I 133.71	I 15.
	9.	I 271.19	I 244.84	I 231.66	I 218.49	I 205.31	I 178.97	I 0.
		I 250.28	I 227.20	I 215.66	I 204.12	I 192.59	I 169.51	I 3.
		I 231.48	I 211.10	I 200.91	I 190.72	I 180.53	I 160.14	I 6.
		I 214.59	I 196.46	I 187.39	I 178.32	I 169.26	I 151.12	I 9.
		I 199.42	I 183.18	I 175.06	I 166.94	I 158.82	I 142.58	I 12.
		I 185.78	I 171.15	I 163.83	I 156.52	I 149.20	I 134.57	I 15.
	10.	I 273.07	I 246.50	I 233.21	I 219.93	I 206.64	I 180.07	I 0.
		I 252.02	I 228.75	I 217.11	I 205.47	I 193.83	I 170.56	I 3.
		I 233.10	I 212.54	I 202.26	I 191.98	I 181.70	I 161.14	I 6.
		I 216.10	I 197.80	I 188.66	I 179.51	I 170.36	I 152.07	I 9.
		I 200.83	I 184.44	I 176.25	I 168.06	I 159.86	I 143.48	I 12.
I 187.10		I 172.33	I 164.95	I 157.57	I 150.19	I 135.42	I 15.	
11.	I 274.95	I 248.16	I 234.76	I 221.37	I 207.97	I 181.18	I 0.	
	I 253.76	I 230.29	I 218.55	I 206.82	I 195.08	I 171.61	I 3.	
	I 234.71	I 213.98	I 203.61	I 193.24	I 182.87	I 162.14	I 6.	
	I 217.60	I 199.15	I 189.92	I 180.70	I 171.47	I 153.01	I 9.	
	I 202.23	I 185.70	I 177.44	I 169.17	I 160.91	I 144.38	I 12.	
	I 188.41	I 173.52	I 166.07	I 158.62	I 151.17	I 136.28	I 15.	
12.	I 276.84	I 249.82	I 236.32	I 222.81	I 209.30	I 182.29	I 0.	
	I 255.51	I 231.83	I 220.00	I 208.16	I 196.33	I 172.65	I 3.	
	I 236.33	I 215.42	I 204.96	I 194.50	I 184.04	I 163.13	I 6.	
	I 219.11	I 200.49	I 191.19	I 181.88	I 172.57	I 153.96	I 9.	
	I 203.64	I 186.96	I 178.63	I 170.29	I 161.95	I 145.27	I 12.	
	I 189.73	I 174.70	I 167.19	I 159.67	I 152.16	I 137.13	I 15.	
14.	I 280.60	I 253.14	I 239.42	I 225.69	I 211.96	I 184.50	I 0.	
	I 258.99	I 234.92	I 222.89	I 210.85	I 198.82	I 174.75	I 3.	
	I 239.56	I 218.29	I 207.66	I 197.02	I 186.39	I 165.12	I 6.	
	I 222.12	I 203.19	I 193.72	I 184.25	I 174.78	I 155.85	I 9.	
	I 206.45	I 189.48	I 181.00	I 172.52	I 164.04	I 147.07	I 12.	
	I 192.36	I 177.07	I 169.43	I 161.78	I 154.13	I 138.84	I 15.	

		<u>Discount Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate</u> (Percent)	8.	I 269.31	I 243.18	I 230.11	I 217.05	I 203.99	I 177.86	I 0.
		I 248.54	I 225.66	I 214.22	I 202.78	I 191.34	I 168.46	I 3.
		I 229.86	I 209.66	I 199.56	I 189.46	I 179.35	I 159.15	I 6.
		I 213.09	I 195.11	I 186.13	I 177.14	I 168.15	I 150.18	I 9.
		I 198.02	I 181.92	I 173.87	I 165.82	I 157.78	I 141.68	I 12.
		I 184.46	I 169.96	I 162.71	I 155.46	I 148.21	I 133.71	I 15.
	9.	I 271.19	I 244.84	I 231.66	I 218.49	I 205.31	I 178.97	I 0.
		I 250.28	I 227.20	I 215.66	I 204.12	I 192.59	I 169.51	I 3.
		I 231.48	I 211.10	I 200.91	I 190.72	I 180.53	I 160.14	I 6.
		I 214.59	I 196.46	I 187.39	I 178.32	I 169.26	I 151.12	I 9.
		I 199.42	I 183.18	I 175.06	I 166.94	I 158.82	I 142.58	I 12.
		I 185.78	I 171.15	I 163.83	I 156.52	I 149.20	I 134.57	I 15.
	10.	I 273.07	I 246.50	I 233.21	I 219.93	I 206.64	I 180.07	I 0.
		I 252.02	I 228.75	I 217.11	I 205.47	I 193.83	I 170.56	I 3.
		I 233.10	I 212.54	I 202.26	I 191.98	I 181.70	I 161.14	I 6.
		I 216.10	I 197.80	I 188.66	I 179.51	I 170.36	I 152.07	I 9.
		I 200.83	I 184.44	I 176.25	I 168.06	I 159.86	I 143.48	I 12.
I 187.10		I 172.33	I 164.95	I 157.57	I 150.19	I 135.42	I 15.	
11.	I 274.95	I 248.16	I 234.76	I 221.37	I 207.97	I 181.18	I 0.	
	I 253.76	I 230.29	I 218.55	I 206.82	I 195.08	I 171.61	I 3.	
	I 234.71	I 213.98	I 203.61	I 193.24	I 182.87	I 162.14	I 6.	
	I 217.60	I 199.15	I 189.92	I 180.70	I 171.47	I 153.01	I 9.	
	I 202.23	I 185.70	I 177.44	I 169.17	I 160.91	I 144.38	I 12.	
	I 188.41	I 173.52	I 166.07	I 158.62	I 151.17	I 136.28	I 15.	
12.	I 276.84	I 249.82	I 236.32	I 222.81	I 209.30	I 182.29	I 0.	
	I 255.51	I 231.83	I 220.00	I 208.16	I 196.33	I 172.65	I 3.	
	I 236.33	I 215.42	I 204.96	I 194.50	I 184.04	I 163.13	I 6.	
	I 219.11	I 200.49	I 191.19	I 181.88	I 172.57	I 153.96	I 9.	
	I 203.64	I 186.96	I 178.63	I 170.29	I 161.95	I 145.27	I 12.	
	I 189.73	I 174.70	I 167.19	I 159.67	I 152.16	I 137.13	I 15.	
14.	I 280.60	I 253.14	I 239.42	I 225.69	I 211.96	I 184.50	I 0.	
	I 258.99	I 234.92	I 222.89	I 210.85	I 198.82	I 174.75	I 3.	
	I 239.56	I 218.29	I 207.66	I 197.02	I 186.39	I 165.12	I 6.	
	I 222.12	I 203.19	I 193.72	I 184.25	I 174.78	I 155.85	I 9.	
	I 206.45	I 189.48	I 181.00	I 172.52	I 164.04	I 147.07	I 12.	
	I 192.36	I 177.07	I 169.43	I 161.78	I 154.13	I 138.84	I 15.	

Discount Rate (Percent)

LEASE PLAN 2

700 hours per year

		<u>Tax Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
Interest Rate (Percent)	8.	I 173.92	I 152.86	I 142.33	I 131.80	I 121.26	I 100.20	I 0.
		I 159.80	I 141.57	I 132.45	I 123.33	I 114.21	I 95.98	I 3.
		I 147.41	I 131.46	I 123.49	I 115.52	I 107.55	I 91.60	I 6.
		I 136.48	I 122.42	I 115.39	I 103.36	I 101.32	I 87.26	I 9.
		I 126.82	I 114.31	I 108.06	I 101.81	I 95.56	I 83.06	I 12.
		I 118.23	I 107.04	I 101.44	I 95.84	I 90.25	I 79.06	I 15.
		I 175.16	I 153.95	I 143.35	I 132.74	I 122.14	I 100.93	I 0.
		I 160.95	I 142.59	I 133.40	I 124.22	I 115.04	I 96.67	I 3.
		I 148.48	I 132.42	I 124.39	I 116.35	I 108.32	I 92.26	I 6.
		I 137.48	I 123.31	I 116.23	I 109.14	I 102.06	I 87.89	I 9.
	9.	I 127.75	I 115.15	I 108.85	I 102.56	I 96.26	I 83.66	I 12.
		I 119.11	I 107.83	I 102.19	I 96.55	I 90.91	I 79.63	I 15.
		I 176.40	I 155.04	I 144.37	I 133.69	I 123.02	I 101.66	I 0.
		I 162.10	I 143.60	I 134.36	I 125.11	I 115.86	I 97.36	I 3.
		I 149.55	I 133.37	I 125.28	I 117.19	I 109.10	I 92.92	I 6.
		I 138.48	I 124.21	I 117.07	I 109.93	I 102.79	I 88.52	I 9.
		I 128.69	I 115.99	I 109.65	I 103.30	I 96.95	I 84.26	I 12.
		I 119.98	I 108.62	I 102.93	I 97.25	I 91.57	I 80.20	I 15.
		I 177.64	I 156.14	I 145.39	I 134.64	I 123.89	I 102.39	I 0.
		I 163.25	I 144.62	I 135.31	I 126.00	I 116.68	I 98.06	I 3.
	10.	I 150.62	I 134.32	I 126.17	I 118.03	I 109.88	I 93.58	I 6.
		I 139.48	I 125.10	I 117.91	I 110.72	I 103.53	I 89.14	I 9.
		I 129.62	I 116.83	I 110.44	I 104.04	I 97.65	I 84.85	I 12.
		I 120.86	I 109.41	I 103.68	I 97.95	I 92.23	I 80.77	I 15.
		I 178.88	I 157.23	I 146.41	I 135.59	I 124.77	I 103.12	I 0.
		I 164.40	I 145.64	I 136.27	I 126.89	I 117.51	I 98.75	I 3.
		I 151.69	I 135.28	I 127.07	I 118.86	I 110.65	I 94.24	I 6.
		I 140.48	I 125.99	I 118.75	I 111.50	I 104.26	I 89.77	I 9.
		I 130.56	I 117.67	I 111.23	I 104.78	I 98.34	I 85.45	I 12.
		I 121.74	I 110.20	I 104.43	I 98.66	I 92.88	I 81.34	I 15.
	11.	I 181.36	I 159.42	I 148.45	I 137.48	I 126.52	I 104.58	I 0.
		I 166.70	I 147.68	I 138.17	I 128.66	I 119.15	I 100.14	I 3.
		I 153.83	I 137.18	I 128.86	I 120.53	I 112.21	I 95.56	I 6.
		I 142.48	I 127.78	I 120.43	I 113.08	I 105.73	I 91.03	I 9.
		I 132.43	I 119.35	I 112.81	I 106.27	I 99.73	I 86.65	I 12.
		I 123.50	I 111.78	I 105.92	I 100.06	I 94.20	I 82.48	I 15.
		I 178.88	I 157.23	I 146.41	I 135.59	I 124.77	I 103.12	I 0.
		I 164.40	I 145.64	I 136.27	I 126.89	I 117.51	I 98.75	I 3.
		I 151.69	I 135.28	I 127.07	I 118.86	I 110.65	I 94.24	I 6.
		I 140.48	I 125.99	I 118.75	I 111.50	I 104.26	I 89.77	I 9.
	12.	I 130.56	I 117.67	I 111.23	I 104.78	I 98.34	I 85.45	I 12.
		I 121.74	I 110.20	I 104.43	I 98.66	I 92.88	I 81.34	I 15.
		I 181.36	I 159.42	I 148.45	I 137.48	I 126.52	I 104.58	I 0.
		I 166.70	I 147.68	I 138.17	I 128.66	I 119.15	I 100.14	I 3.
		I 153.83	I 137.18	I 128.86	I 120.53	I 112.21	I 95.56	I 6.
		I 142.48	I 127.78	I 120.43	I 113.08	I 105.73	I 91.03	I 9.
		I 132.43	I 119.35	I 112.81	I 106.27	I 99.73	I 86.65	I 12.
		I 123.50	I 111.78	I 105.92	I 100.06	I 94.20	I 82.48	I 15.
		I 181.36	I 159.42	I 148.45	I 137.48	I 126.52	I 104.58	I 0.
		I 166.70	I 147.68	I 138.17	I 128.66	I 119.15	I 100.14	I 3.
	14.	I 153.83	I 137.18	I 128.86	I 120.53	I 112.21	I 95.56	I 6.
		I 142.48	I 127.78	I 120.43	I 113.08	I 105.73	I 91.03	I 9.
		I 132.43	I 119.35	I 112.81	I 106.27	I 99.73	I 86.65	I 12.
		I 123.50	I 111.78	I 105.92	I 100.06	I 94.20	I 82.48	I 15.
		I 181.36	I 159.42	I 148.45	I 137.48	I 126.52	I 104.58	I 0.
		I 166.70	I 147.68	I 138.17	I 128.66	I 119.15	I 100.14	I 3.
		I 153.83	I 137.18	I 128.86	I 120.53	I 112.21	I 95.56	I 6.
		I 142.48	I 127.78	I 120.43	I 113.08	I 105.73	I 91.03	I 9.
		I 132.43	I 119.35	I 112.81	I 106.27	I 99.73	I 86.65	I 12.
		I 123.50	I 111.78	I 105.92	I 100.06	I 94.20	I 82.48	I 15.

LEASE PLAN 2

1000 hours per year

		<u>Tax Rate</u> (Percent)							
		15.	25.	30.	35.	40.	50.		
<u>Interest Rate</u> (Percent)	8.	I 182.13	I 160.60	I 149.84	I 139.07	I 128.31	I 106.78	I 0.	<u>Discount Rate</u> (Percent)
		I 158.10	I 140.20	I 131.25	I 122.30	I 113.35	I 95.45	I 3.	
		I 138.93	I 123.84	I 116.29	I 108.74	I 101.20	I 86.10	I 6.	
		I 123.43	I 110.54	I 104.10	I 97.65	I 91.21	I 78.32	I 9.	
		I 110.73	I 99.60	I 94.03	I 88.47	I 82.90	I 71.77	I 12.	
		I 100.21	I 90.50	I 85.64	I 80.78	I 75.92	I 66.21	I 15.	
	9.	I 183.47	I 161.78	I 150.93	I 140.09	I 129.25	I 107.56	I 0.	
		I 159.26	I 141.22	I 132.21	I 123.19	I 114.17	I 96.14	I 3.	
		I 139.94	I 124.73	I 117.13	I 109.53	I 101.93	I 86.72	I 6.	
		I 124.32	I 111.34	I 104.85	I 98.36	I 91.86	I 78.88	I 9.	
		I 111.53	I 100.32	I 94.71	I 89.10	I 83.50	I 72.28	I 12.	
		I 100.94	I 91.15	I 86.26	I 81.36	I 76.47	I 66.68	I 15.	
	10.	I 184.80	I 162.95	I 152.03	I 141.11	I 130.19	I 108.34	I 0.	
		I 160.41	I 142.24	I 133.16	I 124.08	I 115.00	I 96.83	I 3.	
		I 140.95	I 125.63	I 117.98	I 110.32	I 102.66	I 87.34	I 6.	
		I 125.22	I 112.14	I 105.60	I 99.06	I 92.52	I 79.44	I 9.	
		I 112.34	I 101.04	I 95.39	I 89.74	I 84.09	I 72.79	I 12.	
		I 101.66	I 91.80	I 86.87	I 81.94	I 77.01	I 67.15	I 15.	
	11.	I 186.13	I 164.13	I 153.13	I 142.13	I 131.13	I 109.13	I 0.	
		I 161.56	I 143.26	I 134.12	I 124.97	I 115.82	I 97.53	I 3.	
		I 141.96	I 126.53	I 118.82	I 111.10	I 103.39	I 87.97	I 6.	
		I 126.11	I 112.94	I 106.35	I 99.76	I 93.13	I 80.00	I 9.	
		I 113.14	I 101.76	I 96.07	I 90.38	I 84.69	I 73.31	I 12.	
		I 102.39	I 92.45	I 87.49	I 82.52	I 77.55	I 67.62	I 15.	
	12.	I 187.46	I 165.30	I 154.22	I 143.15	I 132.07	I 109.91	I 0.	
		I 162.71	I 144.28	I 135.07	I 125.86	I 116.65	I 98.22	I 3.	
I 142.97		I 127.43	I 119.66	I 111.89	I 104.12	I 88.59	I 6.		
I 127.00		I 113.74	I 107.10	I 100.47	I 93.83	I 80.56	I 9.		
I 113.94		I 102.47	I 96.74	I 91.01	I 85.28	I 73.82	I 12.		
I 103.11		I 93.11	I 88.10	I 83.10	I 78.10	I 68.09	I 15.		
14.	I 190.12	I 167.65	I 156.42	I 145.18	I 133.95	I 111.48	I 0.		
	I 165.01	I 146.33	I 136.98	I 127.64	I 118.29	I 99.61	I 3.		
	I 144.98	I 129.23	I 121.35	I 113.47	I 105.59	I 89.83	I 6.		
	I 128.79	I 115.33	I 108.60	I 101.88	I 95.15	I 81.69	I 9.		
	I 115.54	I 103.91	I 98.10	I 92.28	I 86.47	I 74.84	I 12.		
	I 104.56	I 94.41	I 89.33	I 84.26	I 79.18	I 69.03	I 15.		

LEASE PLAN 3

500 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
Interest Rate (Percent)	8.	I 358.80	I 316.58	I 295.48	I 274.37	I 253.27	I 211.06	I 0.
		I 307.94	I 272.95	I 255.45	I 237.95	I 220.46	I 185.46	I 3.
		I 267.23	I 237.87	I 223.18	I 208.50	I 193.82	I 164.45	I 6.
		I 234.28	I 209.36	I 196.89	I 184.43	I 171.97	I 147.05	I 9.
		I 207.32	I 185.94	I 175.26	I 164.57	I 153.88	I 132.51	I 12.
		I 185.03	I 166.53	I 157.23	I 148.03	I 138.78	I 120.27	I 15.
	9.	I 361.68	I 319.13	I 297.85	I 276.58	I 255.30	I 212.75	I 0.
		I 310.41	I 275.14	I 257.50	I 239.86	I 222.23	I 186.95	I 3.
		I 269.37	I 239.77	I 224.97	I 210.17	I 195.37	I 165.77	I 6.
		I 236.15	I 211.03	I 198.47	I 185.91	I 173.35	I 148.22	I 9.
		I 208.97	I 187.43	I 176.66	I 165.89	I 155.11	I 133.57	I 12.
	10.	I 186.51	I 167.86	I 158.54	I 149.21	I 139.88	I 121.23	I 15.
		I 364.56	I 321.67	I 300.22	I 273.78	I 257.33	I 214.44	I 0.
		I 312.88	I 277.33	I 259.55	I 241.77	I 223.99	I 188.44	I 3.
		I 271.51	I 241.68	I 226.76	I 211.84	I 196.92	I 167.09	I 6.
		I 238.03	I 212.71	I 200.05	I 187.38	I 174.72	I 149.40	I 9.
	11.	I 210.63	I 188.92	I 178.06	I 167.20	I 156.35	I 134.63	I 12.
		I 187.99	I 169.19	I 159.79	I 150.39	I 140.99	I 122.19	I 15.
		I 367.44	I 324.21	I 302.59	I 280.98	I 259.37	I 216.14	I 0.
		I 315.35	I 279.51	I 261.60	I 243.68	I 225.76	I 189.93	I 3.
		I 273.66	I 243.58	I 228.55	I 213.51	I 198.48	I 168.40	I 6.
	12.	I 239.90	I 214.38	I 201.62	I 188.86	I 176.10	I 150.58	I 9.
		I 212.29	I 190.40	I 179.46	I 168.52	I 157.58	I 135.69	I 12.
		I 189.47	I 170.52	I 161.05	I 151.58	I 142.10	I 123.16	I 15.
		I 370.32	I 326.75	I 304.97	I 283.18	I 261.40	I 217.83	I 0.
		I 317.82	I 281.70	I 263.64	I 245.59	I 227.53	I 191.41	I 3.
	13.	I 275.80	I 245.49	I 230.34	I 215.18	I 200.03	I 169.72	I 6.
		I 241.78	I 216.06	I 203.20	I 190.34	I 177.48	I 151.75	I 9.
		I 213.95	I 191.89	I 180.86	I 169.83	I 158.81	I 136.75	I 12.
		I 190.95	I 171.85	I 162.31	I 152.76	I 143.21	I 124.12	I 15.
		I 376.07	I 331.83	I 309.71	I 287.59	I 265.46	I 221.22	I 0.
	14.	I 322.76	I 286.08	I 267.74	I 249.40	I 231.06	I 194.39	I 3.
		I 280.08	I 249.30	I 233.91	I 218.52	I 203.13	I 172.36	I 6.
		I 245.53	I 219.41	I 206.35	I 193.29	I 180.23	I 154.11	I 9.
		I 217.26	I 194.87	I 183.67	I 172.47	I 161.27	I 138.87	I 12.
		I 193.91	I 174.52	I 164.82	I 155.12	I 145.43	I 126.04	I 15.
	15.	I 376.07	I 331.83	I 309.71	I 287.59	I 265.46	I 221.22	I 0.
		I 322.76	I 286.08	I 267.74	I 249.40	I 231.06	I 194.39	I 3.
		I 280.08	I 249.30	I 233.91	I 218.52	I 203.13	I 172.36	I 6.
		I 245.53	I 219.41	I 206.35	I 193.29	I 180.23	I 154.11	I 9.
		I 217.26	I 194.87	I 183.67	I 172.47	I 161.27	I 138.87	I 12.

Discount Rate (Percent)

LEASE PLAN 3

700 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
Interest Rate (Percent)	8.	I 266.59	I 235.23	I 219.55	I 203.87	I 188.18	I 156.82	I 0.
		I 228.76	I 202.76	I 189.77	I 176.77	I 163.77	I 137.78	I 3.
		I 198.49	I 176.67	I 165.77	I 154.86	I 143.96	I 122.14	I 6.
		I 173.99	I 155.48	I 146.23	I 136.97	I 127.72	I 109.21	I 9.
		I 153.96	I 138.08	I 130.15	I 122.21	I 114.28	I 98.40	I 12.
		I 137.41	I 123.67	I 116.80	I 109.93	I 103.05	I 89.31	I 15.
	9.	I 268.65	I 237.04	I 221.24	I 205.44	I 189.64	I 158.03	I 0.
		I 230.52	I 204.33	I 191.23	I 178.13	I 165.03	I 138.84	I 3.
		I 200.01	I 178.04	I 167.05	I 156.06	I 145.07	I 123.09	I 6.
		I 175.33	I 156.68	I 147.35	I 138.03	I 128.70	I 110.05	I 9.
		I 155.14	I 139.15	I 131.15	I 123.15	I 115.16	I 99.16	I 12.
	10.	I 138.46	I 124.62	I 117.69	I 110.77	I 103.85	I 90.00	I 15.
		I 270.71	I 238.86	I 222.94	I 207.01	I 191.09	I 159.24	I 0.
		I 232.29	I 205.89	I 192.69	I 179.49	I 166.30	I 139.90	I 3.
		I 201.54	I 179.40	I 168.32	I 157.25	I 146.17	I 124.03	I 6.
		I 176.67	I 157.87	I 148.48	I 139.08	I 129.68	I 110.89	I 9.
	11.	I 156.32	I 140.21	I 132.15	I 124.09	I 116.03	I 99.92	I 12.
		I 139.52	I 125.57	I 118.59	I 111.62	I 104.64	I 90.69	I 15.
		I 272.76	I 240.67	I 224.63	I 208.58	I 192.54	I 160.45	I 0.
		I 234.05	I 207.45	I 194.16	I 180.86	I 167.56	I 140.96	I 3.
		I 203.07	I 180.76	I 169.60	I 158.44	I 147.28	I 124.97	I 6.
	12.	I 178.01	I 159.07	I 149.60	I 140.13	I 130.67	I 111.73	I 9.
		I 157.51	I 141.27	I 133.15	I 125.03	I 116.91	I 100.68	I 12.
		I 140.58	I 126.52	I 119.49	I 112.46	I 105.43	I 91.37	I 15.
		I 274.82	I 242.49	I 226.32	I 210.16	I 193.99	I 161.66	I 0.
		I 235.81	I 209.02	I 195.62	I 182.22	I 168.82	I 142.02	I 3.
	13.	I 204.60	I 182.12	I 170.88	I 159.63	I 148.39	I 125.91	I 6.
		I 179.35	I 160.27	I 150.73	I 141.19	I 131.65	I 112.57	I 9.
		I 158.69	I 142.33	I 134.15	I 125.97	I 117.79	I 101.43	I 12.
		I 141.63	I 127.47	I 120.39	I 113.30	I 106.22	I 92.06	I 15.
		I 278.94	I 246.12	I 229.71	I 213.30	I 196.90	I 164.08	I 0.
	14.	I 239.34	I 212.14	I 198.54	I 184.95	I 171.35	I 144.15	I 3.
		I 207.66	I 184.84	I 173.43	I 162.02	I 150.61	I 127.79	I 6.
		I 182.03	I 162.66	I 152.98	I 143.30	I 133.61	I 114.25	I 9.
		I 161.06	I 144.46	I 136.15	I 127.85	I 119.55	I 102.95	I 12.
		I 143.74	I 129.37	I 122.18	I 114.99	I 107.81	I 93.43	I 15.
	15.	I 281.18	I 248.04	I 231.18	I 214.59	I 198.18	I 165.00	I 0.
		I 241.18	I 213.04	I 199.18	I 185.59	I 171.18	I 144.00	I 3.
		I 209.18	I 186.04	I 175.18	I 163.59	I 152.18	I 127.00	I 6.
		I 185.18	I 164.04	I 155.18	I 145.59	I 136.18	I 114.00	I 9.
		I 163.18	I 144.04	I 136.18	I 128.59	I 121.18	I 102.00	I 12.

Discount Rate (Percent)

LEASE PLAN 3

1000 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate (Percent)</u>	8.	I 197.48	I 174.25	I 162.63	I 151.02	I 139.40	I 116.17	I 0.
		I 169.43	I 150.18	I 140.55	I 130.92	I 121.30	I 102.04	I 3.
		I 146.99	I 130.84	I 122.76	I 114.69	I 106.61	I 90.46	I 6.
		I 128.84	I 115.13	I 108.28	I 101.43	I 94.57	I 80.87	I 9.
		I 114.00	I 102.24	I 96.37	I 90.49	I 84.62	I 72.86	I 12.
		I 101.74	I 91.56	I 86.48	I 81.39	I 76.30	I 66.13	I 15.
	9.	I 198.92	I 175.52	I 163.82	I 152.12	I 140.42	I 117.01	I 0.
		I 170.67	I 151.27	I 141.58	I 131.88	I 122.18	I 102.79	I 3.
		I 148.06	I 131.79	I 123.66	I 115.52	I 107.39	I 91.12	I 6.
		I 129.78	I 115.97	I 109.07	I 102.17	I 95.26	I 81.46	I 9.
		I 114.83	I 102.99	I 97.07	I 91.15	I 85.23	I 73.39	I 12.
		I 102.48	I 92.23	I 87.11	I 81.98	I 76.86	I 66.61	I 15.
	10.	I 200.36	I 176.79	I 165.00	I 153.22	I 141.43	I 117.86	I 0.
		I 171.90	I 152.37	I 142.60	I 132.83	I 123.07	I 103.53	I 3.
		I 149.13	I 132.75	I 124.55	I 116.36	I 108.16	I 91.77	I 6.
		I 130.71	I 116.81	I 109.86	I 102.90	I 95.95	I 82.04	I 9.
		I 115.65	I 103.73	I 97.77	I 91.81	I 85.85	I 73.92	I 12.
		I 103.22	I 92.89	I 87.73	I 82.57	I 77.41	I 67.09	I 15.
	11.	I 201.80	I 178.06	I 166.19	I 154.32	I 142.45	I 118.71	I 0.
		I 173.14	I 153.46	I 143.62	I 133.79	I 123.95	I 104.28	I 3.
		I 150.20	I 133.70	I 125.45	I 117.19	I 108.94	I 92.43	I 6.
		I 131.65	I 117.65	I 110.64	I 103.64	I 96.64	I 82.63	I 9.
		I 116.48	I 104.47	I 98.47	I 92.47	I 86.46	I 74.45	I 12.
		I 103.96	I 93.56	I 88.36	I 83.16	I 77.97	I 67.57	I 15.
	12.	I 203.24	I 179.33	I 167.38	I 155.42	I 143.46	I 119.55	I 0.
		I 174.37	I 154.56	I 144.65	I 134.74	I 124.83	I 105.02	I 3.
		I 151.27	I 134.65	I 126.34	I 118.03	I 109.72	I 93.09	I 6.
		I 132.59	I 118.48	I 111.43	I 104.38	I 97.33	I 83.22	I 9.
		I 117.31	I 105.22	I 99.17	I 93.12	I 87.08	I 74.98	I 12.
		I 104.69	I 94.23	I 88.99	I 83.76	I 78.52	I 68.05	I 15.
	14.	I 206.12	I 181.87	I 169.75	I 157.62	I 145.50	I 121.25	I 0.
		I 176.84	I 156.74	I 146.70	I 136.65	I 126.60	I 106.51	I 3.
		I 153.42	I 136.56	I 128.13	I 119.70	I 111.27	I 94.41	I 6.
		I 134.47	I 120.16	I 113.01	I 105.86	I 98.70	I 84.40	I 9.
		I 118.97	I 106.71	I 100.57	I 94.44	I 88.31	I 76.04	I 12.
		I 106.17	I 95.56	I 90.25	I 84.94	I 79.63	I 69.01	I 15.

Discount Rate (Percent)

LEASE PLAN 4

500 hours per year

		<u>Tax Rate</u> (Percent)							
		15.	25.	30.	35.	40.	50.		
Interest Rate (Percent)	8.	I 263.08	I 232.37	I 217.01	I 201.65	I 186.30	I 155.58	I 0.	<u>Discount Rate</u> (Percent)
		I 232.17	I 206.13	I 193.10	I 180.08	I 167.06	I 141.02	I 3.	
		I 206.34	I 184.04	I 172.89	I 161.74	I 150.59	I 128.29	I 6.	
		I 184.62	I 165.35	I 155.72	I 146.09	I 136.46	I 117.19	I 9.	
		I 166.23	I 149.45	I 141.06	I 132.67	I 124.28	I 107.49	I 12.	
		I 150.57	I 135.84	I 128.47	I 121.11	I 113.74	I 99.01	I 15.	
		I 265.23	I 234.26	I 218.78	I 203.30	I 187.81	I 156.85	I 0.	
		I 234.05	I 207.79	I 194.66	I 181.54	I 168.41	I 142.15	I 3.	
		I 208.00	I 185.52	I 174.28	I 163.04	I 151.80	I 129.31	I 6.	
		I 186.10	I 166.67	I 156.96	I 147.25	I 137.54	I 118.12	I 9.	
Interest Rate (Percent)	9.	I 167.56	I 150.64	I 142.18	I 133.72	I 125.26	I 108.34	I 12.	<u>Discount Rate</u> (Percent)
		I 151.76	I 136.91	I 129.49	I 122.06	I 114.64	I 99.79	I 15.	
		I 267.38	I 236.16	I 220.55	I 204.94	I 189.33	I 158.11	I 0.	
		I 235.93	I 209.46	I 196.23	I 182.99	I 169.75	I 143.28	I 3.	
		I 209.66	I 187.00	I 175.67	I 164.33	I 153.00	I 130.34	I 6.	
		I 187.57	I 167.99	I 158.20	I 148.41	I 138.62	I 119.04	I 9.	
		I 168.88	I 151.82	I 143.29	I 134.77	I 126.24	I 109.18	I 12.	
		I 152.96	I 137.99	I 130.50	I 123.02	I 115.53	I 100.56	I 15.	
		I 269.53	I 238.06	I 222.32	I 206.58	I 190.85	I 159.37	I 0.	
		I 237.81	I 211.13	I 197.79	I 184.44	I 171.10	I 144.42	I 3.	
Interest Rate (Percent)	10.	I 211.32	I 188.48	I 177.05	I 165.63	I 154.20	I 131.36	I 6.	<u>Discount Rate</u> (Percent)
		I 189.05	I 169.31	I 159.44	I 149.58	I 139.71	I 119.97	I 9.	
		I 170.20	I 153.01	I 144.41	I 135.82	I 127.22	I 110.03	I 12.	
		I 154.15	I 139.06	I 131.52	I 123.97	I 116.43	I 101.34	I 15.	
		I 271.68	I 239.95	I 224.09	I 208.23	I 192.37	I 160.64	I 0.	
		I 239.69	I 212.80	I 199.35	I 185.90	I 172.45	I 145.55	I 3.	
		I 212.98	I 189.95	I 178.44	I 166.92	I 155.41	I 132.38	I 6.	
		I 190.53	I 170.63	I 160.68	I 150.74	I 140.79	I 120.90	I 9.	
		I 171.52	I 154.20	I 145.53	I 136.87	I 128.20	I 110.87	I 12.	
		I 155.34	I 140.13	I 132.53	I 124.93	I 117.32	I 102.11	I 15.	
Interest Rate (Percent)	11.	I 275.98	I 243.75	I 227.63	I 211.52	I 195.40	I 163.17	I 0.	<u>Discount Rate</u> (Percent)
		I 243.46	I 216.13	I 202.47	I 188.80	I 175.14	I 147.81	I 3.	
		I 216.30	I 192.91	I 181.21	I 169.51	I 157.82	I 134.42	I 6.	
		I 193.48	I 173.27	I 163.17	I 153.06	I 142.96	I 122.75	I 9.	
		I 174.17	I 156.57	I 147.77	I 138.97	I 130.17	I 112.57	I 12.	
		I 157.73	I 142.28	I 134.56	I 126.83	I 119.11	I 103.66	I 15.	

LEASE PLAN 4

700 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
Interest Rate (Percent)	8.	I 198.06	I 175.16	I 163.71	I 152.26	I 140.81	I 117.91	I 0.
		I 174.38	I 154.93	I 145.21	I 135.49	I 125.77	I 106.33	I 3.
		I 154.71	I 138.05	I 129.71	I 121.38	I 113.05	I 96.39	I 6.
		I 138.26	I 123.85	I 116.64	I 109.43	I 102.23	I 87.81	I 9.
		I 124.39	I 111.82	I 105.54	I 99.25	I 92.97	I 80.40	I 12.
		I 112.61	I 101.57	I 96.05	I 90.53	I 85.01	I 73.97	I 15.
	9.	I 199.48	I 176.41	I 164.88	I 153.34	I 141.81	I 118.74	I 0.
		I 175.62	I 156.04	I 146.25	I 136.46	I 126.67	I 107.08	I 3.
		I 155.82	I 139.03	I 130.64	I 122.25	I 113.86	I 97.07	I 6.
		I 139.25	I 124.73	I 117.47	I 110.22	I 102.96	I 88.44	I 9.
		I 125.28	I 112.62	I 106.29	I 99.96	I 93.63	I 80.97	I 12.
		I 113.43	I 102.30	I 96.74	I 91.18	I 85.62	I 74.49	I 15.
	10.	I 200.89	I 177.66	I 166.04	I 154.42	I 142.81	I 119.57	I 0.
		I 176.87	I 157.15	I 147.29	I 137.42	I 127.56	I 107.84	I 3.
		I 156.93	I 140.02	I 131.57	I 123.12	I 114.66	I 97.75	I 6.
		I 140.25	I 125.62	I 118.31	I 111.00	I 103.69	I 89.06	I 9.
		I 126.18	I 113.43	I 107.05	I 100.68	I 94.30	I 81.55	I 12.
		I 114.24	I 103.03	I 97.43	I 91.83	I 86.23	I 75.02	I 15.
	11.	I 202.31	I 178.91	I 167.21	I 155.51	I 143.81	I 120.41	I 0.
		I 178.12	I 158.26	I 148.32	I 138.39	I 128.46	I 108.59	I 3.
		I 158.04	I 141.01	I 132.50	I 123.98	I 115.47	I 98.44	I 6.
		I 141.24	I 126.51	I 119.15	I 111.78	I 104.42	I 89.69	I 9.
		I 127.08	I 114.23	I 107.81	I 101.39	I 94.96	I 82.12	I 12.
	12.	I 115.05	I 103.76	I 98.12	I 92.48	I 86.84	I 75.55	I 15.
		I 203.73	I 180.16	I 168.38	I 156.59	I 144.81	I 121.24	I 0.
		I 179.37	I 159.36	I 149.36	I 139.35	I 129.35	I 109.34	I 3.
		I 159.15	I 142.00	I 133.42	I 124.85	I 116.27	I 99.12	I 6.
		I 142.23	I 127.40	I 119.98	I 112.56	I 105.15	I 90.31	I 9.
		I 127.97	I 115.03	I 108.57	I 102.10	I 95.63	I 82.69	I 12.
		I 115.86	I 104.50	I 98.81	I 93.13	I 87.45	I 76.08	I 15.
	14.	I 206.56	I 182.66	I 170.71	I 158.76	I 146.81	I 122.91	I 0.
		I 181.87	I 161.58	I 151.43	I 141.29	I 131.14	I 110.85	I 3.
		I 161.37	I 143.98	I 135.28	I 126.58	I 117.88	I 100.49	I 6.
		I 144.22	I 129.18	I 121.65	I 114.13	I 106.61	I 91.56	I 9.
		I 129.76	I 116.64	I 110.08	I 103.52	I 96.96	I 83.84	I 12.
	15.	I 117.49	I 105.96	I 100.19	I 94.43	I 88.66	I 77.14	I 15.
		I 206.56	I 182.66	I 170.71	I 158.76	I 146.81	I 122.91	I 0.
		I 181.87	I 161.58	I 151.43	I 141.29	I 131.14	I 110.85	I 3.
		I 161.37	I 143.98	I 135.28	I 126.58	I 117.88	I 100.49	I 6.
		I 144.22	I 129.18	I 121.65	I 114.13	I 106.61	I 91.56	I 9.
		I 129.76	I 116.64	I 110.08	I 103.52	I 96.96	I 83.84	I 12.
		I 117.49	I 105.96	I 100.19	I 94.43	I 88.66	I 77.14	I 15.
	16.	I 206.56	I 182.66	I 170.71	I 158.76	I 146.81	I 122.91	I 0.
		I 181.87	I 161.58	I 151.43	I 141.29	I 131.14	I 110.85	I 3.
		I 161.37	I 143.98	I 135.28	I 126.58	I 117.88	I 100.49	I 6.
		I 144.22	I 129.18	I 121.65	I 114.13	I 106.61	I 91.56	I 9.
		I 129.76	I 116.64	I 110.08	I 103.52	I 96.96	I 83.84	I 12.

Discount Rate (Percent)

LEASE PLAN 4

1000 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
Interest Rate (Percent)	8.	I 181.47	I 160.12	I 149.45	I 138.77	I 128.10	I 106.75	I 0.
		I 155.88	I 138.17	I 129.31	I 120.45	I 111.60	I 93.88	I 3.
		I 135.35	I 120.48	I 113.04	I 105.61	I 98.17	I 83.30	I 6.
		I 118.71	I 106.08	I 99.77	I 93.45	I 87.14	I 74.51	I 9.
		I 105.03	I 94.24	I 88.83	I 83.41	I 78.00	I 67.16	I 12.
		I 93.79	I 84.41	I 79.73	I 75.04	I 70.35	I 60.97	I 15.
	9.	I 182.71	I 161.21	I 150.47	I 139.72	I 128.97	I 107.48	I 0.
		I 156.94	I 139.11	I 130.19	I 121.27	I 112.36	I 94.52	I 3.
		I 136.28	I 121.30	I 113.81	I 106.32	I 98.84	I 83.86	I 6.
		I 119.52	I 106.80	I 100.45	I 94.09	I 87.73	I 75.02	I 9.
		I 105.79	I 94.88	I 89.43	I 83.98	I 78.52	I 67.62	I 12.
		I 94.43	I 84.99	I 80.27	I 75.54	I 70.82	I 61.38	I 15.
	10.	I 183.95	I 162.31	I 151.49	I 140.67	I 129.85	I 108.20	I 0.
		I 158.00	I 140.05	I 131.07	I 122.09	I 113.12	I 95.16	I 3.
		I 137.20	I 122.12	I 114.58	I 107.04	I 99.50	I 84.43	I 6.
		I 120.33	I 107.52	I 101.12	I 94.72	I 88.32	I 75.52	I 9.
		I 106.50	I 95.52	I 90.03	I 84.54	I 79.05	I 68.07	I 12.
		I 95.07	I 85.56	I 80.81	I 76.05	I 71.30	I 61.79	I 15.
	11.	I 185.19	I 163.40	I 152.51	I 141.61	I 130.72	I 108.93	I 0.
		I 159.06	I 140.99	I 131.95	I 122.91	I 113.88	I 95.80	I 3.
		I 138.12	I 122.94	I 115.35	I 107.76	I 100.17	I 84.99	I 6.
		I 121.13	I 108.25	I 101.80	I 95.36	I 88.92	I 76.03	I 9.
		I 107.22	I 96.16	I 90.64	I 85.11	I 79.58	I 68.53	I 12.
		I 95.70	I 86.13	I 81.35	I 76.56	I 71.78	I 62.21	I 15.
	12.	I 186.43	I 164.49	I 153.53	I 142.56	I 131.59	I 109.66	I 0.
		I 160.13	I 141.93	I 132.33	I 123.73	I 114.64	I 96.44	I 3.
		I 139.04	I 123.76	I 116.12	I 108.48	I 100.84	I 85.56	I 6.
		I 121.94	I 108.97	I 102.48	I 95.99	I 89.51	I 76.54	I 9.
		I 107.93	I 96.80	I 91.24	I 85.68	I 80.11	I 68.99	I 12.
		I 96.34	I 86.70	I 81.89	I 77.07	I 72.25	I 62.62	I 15.
	14.	I 188.90	I 166.68	I 155.57	I 144.45	I 133.34	I 111.12	I 0.
		I 162.25	I 143.81	I 134.59	I 125.38	I 116.16	I 97.72	I 3.
		I 140.88	I 125.40	I 117.66	I 109.92	I 102.18	I 86.69	I 6.
		I 123.55	I 110.41	I 103.84	I 97.26	I 90.69	I 77.55	I 9.
		I 109.35	I 98.08	I 92.44	I 86.81	I 81.17	I 69.90	I 12.
		I 97.61	I 87.85	I 82.97	I 78.09	I 73.21	I 63.45	I 15.

Discount Rate (Percent)

LEASE PLAN 5

500 hours per year

		<u>Tax Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
Interest Rate (Percent)	8.	I 251.40	I 221.82	I 207.03	I 192.25	I 177.46	I 147.88	I 0.
		I 215.55	I 191.05	I 178.81	I 166.56	I 154.31	I 129.82	I 3.
		I 186.86	I 166.33	I 156.06	I 145.79	I 135.53	I 114.99	I 6.
		I 163.65	I 146.24	I 137.54	I 128.83	I 120.13	I 102.72	I 9.
		I 144.68	I 129.76	I 122.31	I 114.85	I 107.39	I 92.47	I 12.
		I 129.01	I 116.11	I 109.66	I 103.21	I 96.76	I 83.86	I 15.
	9.	I 253.24	I 223.44	I 208.55	I 193.65	I 178.76	I 148.96	I 0.
		I 217.12	I 192.45	I 180.11	I 167.78	I 155.44	I 130.77	I 3.
		I 188.23	I 167.54	I 157.20	I 146.86	I 136.52	I 115.83	I 6.
		I 164.85	I 147.31	I 138.54	I 129.78	I 121.01	I 103.47	I 9.
I 145.74		I 130.71	I 123.20	I 115.69	I 108.18	I 93.15	I 12.	
10.	I 129.95	I 116.96	I 110.46	I 103.96	I 97.47	I 84.47	I 15.	
	I 255.08	I 225.07	I 210.06	I 195.06	I 180.05	I 150.04	I 0.	
	I 218.70	I 193.85	I 181.42	I 168.99	I 156.57	I 131.72	I 3.	
	I 189.59	I 168.76	I 158.34	I 147.92	I 137.51	I 116.67	I 6.	
	I 166.05	I 148.38	I 139.55	I 130.72	I 121.99	I 104.22	I 9.	
	I 146.80	I 131.66	I 124.09	I 116.53	I 108.96	I 93.83	I 12.	
11.	I 130.90	I 117.81	I 111.26	I 104.72	I 98.17	I 85.08	I 15.	
	I 256.91	I 226.69	I 211.58	I 196.46	I 181.35	I 151.13	I 0.	
	I 220.28	I 195.24	I 182.73	I 170.21	I 157.70	I 132.67	I 3.	
	I 190.96	I 169.98	I 159.48	I 148.99	I 138.50	I 117.51	I 6.	
	I 167.24	I 149.45	I 140.56	I 131.66	I 122.76	I 104.97	I 9.	
	I 147.85	I 132.61	I 124.99	I 117.37	I 109.75	I 94.50	I 12.	
12.	I 131.64	I 118.66	I 112.07	I 105.47	I 98.88	I 85.70	I 15.	
	I 258.75	I 228.31	I 213.09	I 197.87	I 182.65	I 152.21	I 0.	
	I 221.85	I 196.64	I 184.04	I 171.43	I 158.83	I 133.62	I 3.	
	I 192.33	I 171.19	I 160.63	I 150.06	I 139.49	I 118.36	I 6.	
	I 168.44	I 150.52	I 141.56	I 132.60	I 123.64	I 105.72	I 9.	
	I 148.91	I 133.56	I 125.88	I 118.21	I 110.53	I 95.18	I 12.	
14.	I 132.79	I 119.51	I 112.87	I 106.23	I 99.59	I 86.31	I 15.	
	I 262.43	I 231.56	I 216.12	I 200.68	I 185.24	I 154.37	I 0.	
	I 225.00	I 199.44	I 186.65	I 173.87	I 161.08	I 135.51	I 3.	
	I 195.06	I 173.63	I 162.91	I 152.19	I 141.47	I 120.04	I 6.	
	I 170.84	I 152.66	I 143.57	I 134.49	I 125.40	I 107.23	I 9.	
	I 151.03	I 135.46	I 127.67	I 119.89	I 112.10	I 96.53	I 12.	
	I 134.67	I 121.21	I 114.47	I 107.74	I 101.01	I 87.54	I 15.	

		<u>Discount Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
Interest Rate (Percent)	8.	I 251.40	I 221.82	I 207.03	I 192.25	I 177.46	I 147.88	I 0.
		I 215.55	I 191.05	I 178.81	I 166.56	I 154.31	I 129.82	I 3.
		I 186.86	I 166.33	I 156.06	I 145.79	I 135.53	I 114.99	I 6.
		I 163.65	I 146.24	I 137.54	I 128.83	I 120.13	I 102.72	I 9.
		I 144.68	I 129.76	I 122.31	I 114.85	I 107.39	I 92.47	I 12.
		I 129.01	I 116.11	I 109.66	I 103.21	I 96.76	I 83.86	I 15.
	9.	I 253.24	I 223.44	I 208.55	I 193.65	I 178.76	I 148.96	I 0.
		I 217.12	I 192.45	I 180.11	I 167.78	I 155.44	I 130.77	I 3.
		I 188.23	I 167.54	I 157.20	I 146.86	I 136.52	I 115.83	I 6.
		I 164.85	I 147.31	I 138.54	I 129.78	I 121.01	I 103.47	I 9.
I 145.74		I 130.71	I 123.20	I 115.69	I 108.18	I 93.15	I 12.	
10.	I 129.95	I 116.96	I 110.46	I 103.96	I 97.47	I 84.47	I 15.	
	I 255.08	I 225.07	I 210.06	I 195.06	I 180.05	I 150.04	I 0.	
	I 218.70	I 193.85	I 181.42	I 168.99	I 156.57	I 131.72	I 3.	
	I 189.59	I 168.76	I 158.34	I 147.92	I 137.51	I 116.67	I 6.	
	I 166.05	I 148.38	I 139.55	I 130.72	I 121.99	I 104.22	I 9.	
	I 146.80	I 131.66	I 124.09	I 116.53	I 108.96	I 93.83	I 12.	
11.	I 130.90	I 117.81	I 111.26	I 104.72	I 98.17	I 85.08	I 15.	
	I 256.91	I 226.69	I 211.58	I 196.46	I 181.35	I 151.13	I 0.	
	I 220.28	I 195.24	I 182.73	I 170.21	I 157.70	I 132.67	I 3.	
	I 190.96	I 169.98	I 159.48	I 148.99	I 138.50	I 117.51	I 6.	
	I 167.24	I 149.45	I 140.56	I 131.66	I 122.76	I 104.97	I 9.	
	I 147.85	I 132.61	I 124.99	I 117.37	I 109.75	I 94.50	I 12.	
12.	I 131.64	I 118.66	I 112.07	I 105.47	I 98.88	I 85.70	I 15.	
	I 258.75	I 228.31	I 213.09	I 197.87	I 182.65	I 152.21	I 0.	
	I 221.85	I 196.64	I 184.04	I 171.43	I 158.83	I 133.62	I 3.	
	I 192.33	I 171.19	I 160.63	I 150.06	I 139.49	I 118.36	I 6.	
	I 168.44	I 150.52	I 141.56	I 132.60	I 123.64	I 105.72	I 9.	
	I 148.91	I 133.56	I 125.88	I 118.21	I 110.53	I 95.18	I 12.	
14.	I 132.79	I 119.51	I 112.87	I 106.23	I 99.59	I 86.31	I 15.	
	I 262.43	I 231.56	I 216.12	I 200.68	I 185.24	I 154.37	I 0.	
	I 225.00	I 199.44	I 186.65	I 173.87	I 161.08	I 135.51	I 3.	
	I 195.06	I 173.63	I 162.91	I 152.19	I 141.47	I 120.04	I 6.	
	I 170.84	I 152.66	I 143.57	I 134.49	I 125.40	I 107.23	I 9.	
	I 151.03	I 135.46	I 127.67	I 119.89	I 112.10	I 96.53	I 12.	
	I 134.67	I 121.21	I 114.47	I 107.74	I 101.01	I 87.54	I 15.	

Discount Rate (Percent)

LEASE PLAN 5

700 hours per year

		<u>Tax Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate</u> (Percent)	8.	I 195.38	I 172.39	I 160.90	I 149.41	I 137.92	I 114.93	I 0.
		I 167.32	I 148.31	I 138.80	I 129.29	I 119.79	I 100.77	I 3.
		I 144.88	I 128.96	I 121.00	I 113.04	I 105.08	I 89.16	I 6.
		I 126.74	I 113.26	I 106.52	I 99.77	I 93.03	I 79.55	I 9.
		I 111.92	I 100.38	I 94.61	I 88.84	I 83.07	I 71.54	I 12.
		I 99.69	I 89.72	I 84.74	I 79.75	I 74.77	I 64.80	I 15.
	9.	I 196.69	I 173.55	I 161.98	I 150.41	I 138.84	I 115.70	I 0.
		I 168.45	I 149.30	I 139.73	I 130.16	I 120.59	I 101.45	I 3.
		I 145.86	I 129.83	I 121.81	I 113.80	I 105.79	I 89.76	I 6.
		I 127.60	I 114.02	I 107.23	I 100.45	I 93.66	I 80.09	I 9.
		I 112.68	I 101.96	I 95.25	I 89.44	I 83.64	I 72.02	I 12.
		I 100.36	I 90.33	I 85.31	I 80.29	I 75.27	I 65.24	I 15.
	10.	I 198.01	I 174.71	I 163.06	I 151.42	I 139.77	I 116.47	I 0.
		I 169.57	I 150.30	I 140.67	I 131.03	I 121.40	I 102.13	I 3.
I 146.83		I 130.70	I 122.63	I 114.56	I 106.49	I 90.36	I 6.	
I 128.45		I 114.79	I 107.95	I 101.12	I 94.29	I 80.62	I 9.	
I 113.43		I 101.74	I 95.89	I 90.04	I 84.20	I 72.50	I 12.	
I 101.04		I 90.94	I 85.88	I 80.83	I 75.78	I 65.68	I 15.	
11.	I 199.32	I 175.87	I 164.15	I 152.42	I 140.70	I 117.25	I 0.	
	I 170.70	I 151.30	I 141.60	I 131.90	I 122.20	I 102.81	I 3.	
	I 147.81	I 131.57	I 123.45	I 115.32	I 107.20	I 90.96	I 6.	
	I 129.31	I 115.55	I 108.67	I 101.79	I 94.92	I 81.16	I 9.	
	I 114.19	I 102.42	I 96.53	I 90.64	I 84.76	I 72.99	I 12.	
	I 101.71	I 91.54	I 86.46	I 81.37	I 76.23	I 66.11	I 15.	
12.	I 200.63	I 177.03	I 165.23	I 153.43	I 141.62	I 118.02	I 0.	
	I 171.82	I 152.30	I 142.53	I 132.77	I 123.01	I 103.48	I 3.	
	I 148.79	I 132.44	I 124.26	I 116.09	I 107.91	I 91.56	I 6.	
	I 130.16	I 116.31	I 109.39	I 102.47	I 95.54	I 81.70	I 9.	
	I 114.94	I 103.09	I 97.17	I 91.24	I 85.32	I 73.47	I 12.	
	I 102.39	I 92.15	I 87.03	I 81.91	I 76.79	I 66.55	I 15.	
14.	I 203.26	I 179.35	I 167.39	I 155.43	I 143.48	I 119.56	I 0.	
	I 174.08	I 154.29	I 144.40	I 134.51	I 124.62	I 104.84	I 3.	
	I 150.74	I 134.17	I 125.89	I 117.61	I 109.33	I 92.76	I 6.	
	I 131.87	I 117.84	I 110.83	I 103.81	I 96.80	I 82.77	I 9.	
	I 116.46	I 104.45	I 98.45	I 92.44	I 86.44	I 74.44	I 12.	
	I 103.74	I 93.36	I 88.18	I 82.99	I 77.80	I 67.43	I 15.	
		<u>Discount Rate</u> (Percent)						

Discount Rate (Percent)

APPENDIX E

**Discounted net costs as a percent of purchase price for
Credit Purchase Plan 1 and Credit Purchase Plan 2
with a ten year depreciation period**

CREDIT PURCHASE PLAN 1 - 10 YEARS DEPRECIATION

700 hours per year

		<u>Tax Rate (Percent)</u>						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate (Percent)</u>	8.	I 136.48	I 119.24	I 110.63	I 102.01	I 93.39	I 76.16	I 0.
		I 126.74	I 111.84	I 104.39	I 96.94	I 89.49	I 74.59	I 3.
		I 118.11	I 105.07	I 98.55	I 92.04	I 85.52	I 72.48	I 6.
		I 110.45	I 98.91	I 93.14	I 87.37	I 81.61	I 70.07	I 9.
		I 103.61	I 93.30	I 88.14	I 82.99	I 77.83	I 67.52	I 12.
		I 97.48	I 88.18	I 83.53	I 78.89	I 74.24	I 64.95	I 15.
	9.	I 138.20	I 120.77	I 112.05	I 103.33	I 94.61	I 77.17	I 0.
		I 128.39	I 113.30	I 105.76	I 98.22	I 90.67	I 75.59	I 3.
		I 119.70	I 106.48	I 99.88	I 93.27	I 86.66	I 73.45	I 6.
		I 111.97	I 100.27	I 94.42	I 88.57	I 82.72	I 71.02	I 9.
		I 105.07	I 94.61	I 89.38	I 84.15	I 78.92	I 68.46	I 12.
		I 98.88	I 89.45	I 84.73	I 80.01	I 75.30	I 65.86	I 15.
	10.	I 139.93	I 122.29	I 113.47	I 104.65	I 95.83	I 78.19	I 0.
		I 130.04	I 114.77	I 107.13	I 99.49	I 91.86	I 76.58	I 3.
		I 121.28	I 107.89	I 101.20	I 94.51	I 87.81	I 74.43	I 6.
		I 113.49	I 101.63	I 95.70	I 89.77	I 83.84	I 71.98	I 9.
		I 106.53	I 95.92	I 90.61	I 85.31	I 80.00	I 69.39	I 12.
		I 100.29	I 90.72	I 85.93	I 81.14	I 76.35	I 66.78	I 15.
	11.	I 141.66	I 123.81	I 114.89	I 105.97	I 97.05	I 79.20	I 0.
		I 131.69	I 116.23	I 108.50	I 100.77	I 93.04	I 77.58	I 3.
		I 122.86	I 109.30	I 102.52	I 95.74	I 88.96	I 75.40	I 6.
		I 115.01	I 102.99	I 96.98	I 90.96	I 84.95	I 72.93	I 9.
		I 107.99	I 97.23	I 91.85	I 86.47	I 81.09	I 70.33	I 12.
		I 101.70	I 91.98	I 87.12	I 82.27	I 77.41	I 67.69	I 15.
	12.	I 143.38	I 125.33	I 116.31	I 107.29	I 98.27	I 80.22	I 0.
		I 133.35	I 117.70	I 109.87	I 102.04	I 94.22	I 78.57	I 3.
		I 124.45	I 110.71	I 103.85	I 96.98	I 90.11	I 76.38	I 6.
		I 116.53	I 104.35	I 98.25	I 92.16	I 86.07	I 73.89	I 9.
		I 109.45	I 98.54	I 93.09	I 87.63	I 82.17	I 71.26	I 12.
		I 103.11	I 93.25	I 88.32	I 83.39	I 78.46	I 68.61	I 15.
	14.	I 146.83	I 128.38	I 119.15	I 109.93	I 100.70	I 82.25	I 0.
		I 136.65	I 120.62	I 112.61	I 104.60	I 96.59	I 80.56	I 3.
		I 127.62	I 113.53	I 106.49	I 99.45	I 92.41	I 78.33	I 6.
		I 119.57	I 107.06	I 100.81	I 94.56	I 88.30	I 75.80	I 9.
		I 112.38	I 101.16	I 95.56	I 89.95	I 84.34	I 73.13	I 12.
		I 105.92	I 95.78	I 90.71	I 85.64	I 80.57	I 70.44	I 15.

Discount Rate (Percent)

CREDIT PURCHASE PLAN 2 - 10 YEARS DEPRECIATION

700 hours per year

		<u>Tax Rate</u> (Percent)						
		15.	25.	30.	35.	40.	50.	
<u>Interest Rate</u> (Percent)	8.	I 131.74	I 114.71	I 106.20	I 97.68	I 89.17	I 72.14	I 0.
		I 123.99	I 109.25	I 101.89	I 94.52	I 87.15	I 72.42	I 3.
		I 117.16	I 104.26	I 97.81	I 91.35	I 84.90	I 71.99	I 6.
		I 111.15	I 99.71	I 94.00	I 88.28	I 82.56	I 71.13	I 9.
		I 105.82	I 95.59	I 90.47	I 85.35	I 80.23	I 70.00	I 12.
		I 101.08	I 91.84	I 87.21	I 82.59	I 77.97	I 68.73	I 15.
	9.	I 132.93	I 115.76	I 107.13	I 98.59	I 90.01	I 72.84	I 0.
		I 125.12	I 110.26	I 102.83	I 95.40	I 87.97	I 73.11	I 3.
		I 118.26	I 105.23	I 98.72	I 92.20	I 85.69	I 72.67	I 6.
		I 112.20	I 100.65	I 94.88	I 89.11	I 83.33	I 71.79	I 9.
		I 106.83	I 96.49	I 91.32	I 86.15	I 80.98	I 70.64	I 12.
		I 102.05	I 92.71	I 88.04	I 83.37	I 78.70	I 69.36	I 15.
	10.	I 134.12	I 116.81	I 108.16	I 99.50	I 90.85	I 73.54	I 0.
		I 126.26	I 111.27	I 103.78	I 96.28	I 88.78	I 73.79	I 3.
I 119.35		I 106.20	I 99.63	I 93.06	I 86.48	I 73.34	I 6.	
I 113.24		I 101.59	I 95.76	I 89.93	I 84.10	I 72.44	I 9.	
I 107.83		I 97.39	I 92.17	I 86.95	I 81.73	I 71.29	I 12.	
I 103.02		I 93.58	I 88.86	I 84.14	I 79.42	I 69.99	I 15.	
11.	I 135.31	I 117.86	I 109.14	I 100.41	I 91.69	I 74.24	I 0.	
	I 127.40	I 112.28	I 104.72	I 97.16	I 89.60	I 74.48	I 3.	
	I 120.44	I 107.17	I 100.54	I 93.91	I 87.28	I 74.01	I 6.	
	I 114.29	I 102.52	I 96.64	I 90.75	I 84.87	I 73.10	I 9.	
	I 108.84	I 98.30	I 93.02	I 87.75	I 82.48	I 71.93	I 12.	
	I 103.99	I 94.45	I 89.69	I 84.92	I 80.15	I 70.62	I 15.	
12.	I 136.50	I 118.91	I 110.12	I 101.32	I 92.53	I 74.94	I 0.	
	I 128.54	I 113.29	I 105.66	I 98.04	I 90.41	I 75.16	I 3.	
	I 121.53	I 108.15	I 101.45	I 94.76	I 88.07	I 74.68	I 6.	
	I 115.34	I 103.46	I 97.52	I 91.58	I 85.64	I 73.76	I 9.	
	I 109.85	I 99.20	I 93.87	I 88.55	I 83.23	I 72.58	I 12.	
	I 104.96	I 95.33	I 90.51	I 85.69	I 80.88	I 71.25	I 15.	
14.	I 138.88	I 121.01	I 112.08	I 103.14	I 94.21	I 76.34	I 0.	
	I 130.82	I 115.31	I 107.55	I 99.80	I 92.05	I 76.54	I 3.	
	I 123.71	I 110.09	I 103.28	I 96.46	I 89.65	I 76.03	I 6.	
	I 117.44	I 105.33	I 99.28	I 93.23	I 87.18	I 75.08	I 9.	
	I 111.86	I 101.01	I 95.58	I 90.15	I 84.72	I 73.86	I 12.	
	I 106.90	I 97.07	I 92.16	I 87.25	I 82.33	I 72.51	I 15.	
		<u>Discount Rate</u> (Percent)						

LEASING VS. PURCHASING OF FARM MACHINERY IN KANSAS

by

BARRY KURT CHILDS

B. S., Kansas State University, 1976

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Agricultural Economics

KANSAS STATE UNIVERSITY
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The purpose of this study was to determine the extent that farm machinery and equipment are leased in Kansas, determine the different leasing arrangements used, and evaluate leasing as a viable alternative to purchasing of farm machinery and equipment.

Questionnaires sent to Kansas farm machinery dealers revealed 16 percent of the dealers and approximately 0.7 percent of the farmers in Kansas were leasing farm machinery. Lack of machinery and lack of demand by farmers were the major reasons dealers were not leasing. Other reasons included unprofitable for the farmer, the farmer not interested, too much capital required for the dealer, unprofitable for the dealer, and too much paperwork required.

More advantageous from a cash flow situation was the major reason farmers were leasing. Lessees generally were larger farmers, associated with their dealer at least seven years, and 30 percent of their farmland was irrigated.

Three types of arrangements were found from interviews with several leasing dealers: 1. Lease-Purchase Plan - leasing the machine for a specified number of years (less than ten years) and then purchasing it (most common in Kansas), 2. Continuous-Lease Plan - leasing a machine for a specified time period at the end of which the machine is returned and a new machine is leased, 3. Long-Term Lease - ten year lease period and at termination the lessee purchases the machine.

Eight acquisition methods, five leasing and three purchasing arrangements, were compared on a discounted cash

flow basis for a ten year period. Discounted net costs (the sum of cash yearly outlays minus tax savings discounted to present value and expressed as a percent of purchase price) were calculated for each arrangement as the discount, tax, interest rates, and annual use varied.

Holding those variables constant at near average values the purchasing arrangements had a distinct cost advantage, while of the lease plans the Long-Term Lease (ten year lease) had the least cost, and the Continuous-Lease (re-lease a new machine) had the highest cost to the farmer.

Inverse relationships were found between costs and the discount rate, tax rate, and annual use, and a direct relationship with the interest rate. Changes in the tax rate, interest rate and annual use had no appreciable affect on the least cost alternative to the farmer, while an increase in the discount rate decreased the advantage of the purchase plans.

Comparisons show that with high discount rate, high tax rate, high annual use, and low interest rate, the two-year continuous-lease was essentially equal to the credit purchase.

These cost comparisons demonstrate that farmers with high return to capital invested (discount rate), in a high tax bracket, and use their machines above average hours per year could find leasing the most economical method of obtaining the service of machinery.