How To Analyze An Investment In Agricultural Chemical And Fertilizer Application Equipment

Farm Business Management Reports
HOW TO ANALYZE AN INVESTMENT IN AGRICULTURAL CHEMICAL AND FERTILIZER APPLICATION EQUIPMENT

by

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INTRODUCTION

This publication illustrates how to analyze a proposed investment in the equipment needed to apply fertilizer and agricultural chemicals. The analysis procedure determines the before- and after-tax profitability of the equipment investment and the number of years to recapture any debt used to finance the equipment. Also, when purchase of the equipment makes it possible to buy fertilizer/chemicals at a reduced price, the price discount required for a break-even investment is determined. A worksheet is provided to help make the calculations.

In many areas, farmers have the choice of using the application equipment provided by their fertilizer/chemical supplier or purchasing their own equipment and having the flexibility to choose between different material suppliers. Suppliers offering equipment for use by their customers also typically provide support/related management services such as soil testing, pest monitoring, pesticide recommendations, farm delivery of materials and calibration of sprayers. Other fertilizer/chemical suppliers furnish only the materials (that is, they do not provide application equipment nor associated management services). Since these latter firms provide fewer services, they have lower costs which is typically reflected in lower material prices. Thus, in evaluating whether to invest in application equipment, the farmer must weigh the added capital investment plus the added costs of obtaining related services (including management) elsewhere against the savings from lower fertilizer/chemical prices.

In analyzing an investment in fertilizer/chemical equipment, growers should focus on three financial issues: (1) profitability, (2) cash flow, and (3) risk.

PROFITABILITY should be the initial concern. If the investment has little chance of being profitable, there is little point in examining the cash flow and risk issues. To be profitable, an investment in fertilizer/chemical equipment must generate enough cost savings to cover all investment-related costs, including the cost of the capital used to finance the equipment.

Respectively, the authors are Extension Economist, Pullman, and Whitman County Agents, Colfax, Cooperative Extension, Washington State University.
The CASH FLOW analysis determines whether or not the equipment investment will generate sufficient cash returns to retire debt as it comes due. Even though an investment may be profitable, it may have an unacceptable cash flow if it is heavily financed with debt capital utilizing an abbreviated repayment schedule. If the time required to recover the debt exceeds the loan repayment period, the cash flow position of the overall business may deteriorate, since funds must be diverted from other areas of the business to retire equipment debt in a timely manner.

The third consideration is the impact of the equipment investment on the grower's RISK-bearing position. Typically, substantial debt will be used to finance the equipment investment, thereby putting additional strain on the grower's cash flow. Fixed principal and interest payments, coupled with variability in price discounts received on fertilizer/chemicals purchased from limited-service firms, may increase the risk of financial loss beyond a level the grower/lender is willing to assume.

**BENEFITS OF EQUIPMENT OWNERSHIP**

*Reduced Material Costs*

Suppliers who do not provide product support typically sell fertilizer and chemicals at reduced prices. Such reductions are possible because these suppliers do not incur the added costs of providing a wide range of grower services. However, in determining the dollar amount of cost savings, growers should figure material costs from competing suppliers net of all discounts (for example, discounts for cash payment, volume purchases, and u-haul of materials). These discounts vary between suppliers and can substantially lower the cost of buying fertilizer and chemicals.

*Reduced Application Equipment Rental Fee*

Suppliers providing application equipment for use by the grower often charge a rental fee. There often is a maximum fee (for example, $1,000 on a chemical sprayer) above which charges are waived. Thus, growers using their own equipment will realize reduced equipment rental fees.

**COSTS OF EQUIPMENT OWNERSHIP**

The grower who is thinking about investing in fertilizer/chemical application equipment should consider several additional costs which must be weighed against the benefits (of ownership).
Equipment Investment and Related Costs

Growers buying materials from a limited-service supplier will find it necessary to invest in fertilizer/chemical storage, transfer, and application equipment. Annual costs associated with this investment are depreciation, interest, property taxes, and insurance.

1. Depreciation.

Instead of charging the entire cost of this equipment off in the year it is purchased, it is proper to spread the cost over the years the equipment will be used. Depreciation is the appropriate annual charge and it is computed by the following formula:

\[
\text{Depreciation} = \frac{\text{New Cost} - \text{Salvage Value}}{\text{Years of Use}}
\]

Depreciation is the annual decline in the value of the equipment due to age, wear and tear, and obsolescence. Stated alternatively, it is the amount of money that must be set aside annually to permit replacement of the equipment at the end of its useful life. Depreciation, as calculated in this publication, is based on economic life and may not correspond to that allowed under the federal income tax law.

Equipment life is difficult to predict because it varies depending on the extent of annual use and the rate at which new technology is developed. For planning purposes, a life of 5-10 years is suggested with a salvage value of about 20-25% of the initial equipment investment. The use of a longer life (for example, 10 years), should recognize the cost of periodic equipment upgrading if state-of-the-art technology is desired.

2. Interest on equipment investment.

Purchase of equipment ties up capital; consequently, a capital cost should be assigned to the investment. If capital is borrowed to finance the equipment, that cost should be at least large enough to cover the interest paid on the loan. Furthermore, an equity capital investment has an opportunity cost (the foregone earnings that could have been realized by investing in the next best similar risk alternative). In the analysis to follow, the annual interest charge is computed by multiplying the appropriate interest rate times the average annual equipment investment. The average investment is computed by the following formula:

\[
\text{Average Investment} = \frac{\text{New Cost} + \text{Salvage Value}}{2}
\]
3. Property taxes.

Washington farmers must pay property taxes on owned equipment. The amount of the tax is highly variable, depending on the valuation procedure and levy used by individual tax districts.

4. Insurance.

Farmers often choose to insure their capital investment in machinery from losses due to fire, theft, vandalism, etc. Consequently, the cost of the insurance (premium payments) should be charged against the equipment. A rate of 0.6% times the average investment is suggested.

Other Added Costs

In addition to the above investment-related costs, the following outlays should be considered:

1. Repairs.

Repair and maintenance costs on tanks, pumps, cultivator kits, drill kits, etc., are added costs associated with ownership. Chemicals and fertilizer tend to be corrosive and repair costs can be sizable. While the cost will vary with equipment use, an estimate may be obtained by multiplying the initial equipment investment by 3-4%. Alternatively, repairs/maintenance can be estimated at 1.5 to 2.25% of total fertilizer/chemical costs.

2. Labor.

Full-service suppliers typically deliver materials and equipment to the field, calibrate sprayers, clean equipment, pump water, adjust equipment to apply different materials, etc. In contrast, the farmer must perform these tasks if he buys materials from a supplier that does not provide these services. Consequently, farmers should estimate the time required to complete these tasks and assess the current wage rate.

3. Management.

Soil sampling, interpretation of soil tests, monitoring pests, and making recommendations for fertilizer and pesticide applications are management functions normally provided by product support suppliers. A farmer personally assumes the responsibility for these tasks if material is purchased from a supplier who does not provide management services. If an alternative productive use of time exists, the farmer should place a value on that effort and charge it against the equipment investment. Also, if management services are hired, the cost of that service should be assigned to the investment.
Other Issues

Farmers should compare the operational characteristics of purchased equipment with the equipment provided by the product supplier. Unless a yield impact resulting from equipment design can be estimated with confidence, the economic analysis of buying the equipment will be more valid to the extent the equipment is equally effective in materials application.

Owning or leasing application equipment may have an effect on the flexibility and/or timeliness of field operations. The grower with only one application unit obviously cannot perform more than one chemical/fertilizer application at a time. In contrast, more than one piece of application equipment may be obtained from a product support supplier, a feature that may be attractive to farmers with the personnel and equipment to support the simultaneous operation of multiple application units. However, farmers who own or lease the equipment have greater control of the equipment and may be able to use that advantage to obtain improved timeliness. To the extent there is a difference between the two alternatives in the timeliness of field operations and this, in turn, has an impact on crop yield/quality, a penalty or premium should be assigned to the appropriate option.

Many of the risks associated with the handling of chemicals/fertilizer (for example, crop damage, environmental contamination, and personal injury) are assumed by the product support supplier. The grower who invests in application equipment must either assume these risks or transfer them through the purchase of insurance.

THE ANALYSIS PROCEDURE

To facilitate the analysis of a proposed investment in application equipment, a worksheet has been constructed. The worksheet provides step-by-step directions about the required information and computations. Provided the user has the necessary information, completion of the worksheet provides an indication of the before-and-after-tax profitability of the equipment investment, the break-even materials' price discount, and the number of years required to recover any debt used to finance the equipment. The worksheet may also be used to evaluate leasing the equipment.

The two following case farm situations illustrate how to use the worksheet. While the two examples utilize many similar assumptions, the differences are substantial enough to change an unprofitable investment (case farm one) to a profitable one (case farm two). The second example utilizes a larger farm and the same application equipment investment. The resulting economies of size are a major reason why there is a change in the outcome. This underlines the importance of each grower conducting an analysis using assumptions that reflect the particular situation.
Case Farm One

A grower has an operation which includes 1,000 acres of crop land used to grow a rotation of winter wheat, spring barley, and dry peas. The farmer has been buying fertilizer/chemicals from a nearby supplier who has been providing the application equipment. However, the farmer is considering buying the necessary application/storage/transfer equipment. It is suggested that the farmer collect the following information and then analyze the investment using the worksheet (page 13).

1. Investment in equipment for handling liquid materials (line 1, worksheet) = $30,000.

   The $30,000 includes the sales tax and outlays for a field-ready 1,000 gallon sprayer and attachments, transfer pumps, cultivator kit, drill kit, 2,000 gallon nurse tank, and two 7,000-gallon storage tanks.

2. Number of years equipment will be used in business (line 2, worksheet) = 5 years.

   This should correspond to the years the equipment will be used in the business which may differ from the period used to calculate depreciation for income tax purposes.

3. Value of purchased equipment when replaced (line 3, worksheet) = $6,000.

   The salvage value is estimated to be 20% of the $30,000 purchase price.

4. Interest rate on investment (line 4, worksheet) = .14 (14%).

   Most of the money used to finance the equipment will be borrowed funds carrying a 14% interest rate. Also, the grower feels he could do that well with his own money if it were invested in the next best similar risk alternative.

5. Marginal income tax rate (line 5, worksheet) = .22 (22%).

   This is the tax rate that applies to any change in taxable income resulting from the investment.

6. Annual cost of repairs, casualty insurance, and property taxes (line 9, worksheet) = $1,298.

   This figure was estimated in the following manner:

   Repairs: $57,700 fert./chemical cost from supplier providing application equipment x .015 = $866

   Casualty insurance: $30,000 New Cost + $6,000 Salvage
EB 1376 - Page 7

\[ x \cdot 0.006 = 108 \]

Property taxes:
\[ \frac{30,000 \text{ New Cost} + 6,000 \text{ Salvage}}{2} \]

\[ x \cdot 0.018 = 324 \]

7. Annual cost of soil tests, consulting service, operator management, and operator labor (line 10, worksheet) = $2,000.

In developing this estimate, the grower assumed it would take an additional 100 hours of labor to haul materials, adjust equipment, move equipment, pump water, clean equipment, etc. Labor is assumed to cost $8 per hour. A management consultant would be hired to run soil tests, monitor pests and make fertilizer/chemical recommendations on a representative field of wheat. This service will cost $1,200 per year.

8. Applicator rental fee and water pumping/hauling cost (line 12, worksheet) = $1,000.

The supplier the grower has been using charges $1.45 per acre rental fee for an application unit with a maximum charge of $1,000. Purchase of the application equipment will eliminate the $1,000 rental fee. The grower does not have a water pumping station and will continue using the supplier's water pumping/hauling services with no reduction in cost.

9. Annual cost of materials:

Supplier No. 1: Application Equipment Provided

Fertilizer (line 13) = $35,280
Chemicals (line 14) = 22,420

Supplier No. 2: No Services Provided

Fertilizer (line 15) = 29,730
Chemicals (line 16) = 19,900

These costs were obtained after selecting a soil nutrient/pest control program for each crop and then obtaining cost estimates from several suppliers. All costs are net of cash and volume discounts.

10. Equipment financing:

If the equipment is purchased, it will be financed with a 25% down payment (= $7,500) and a $22,500 loan (line 24, worksheet). The loan will carry a 14% interest rate and must be repaid in four equal annual principal and interest payments.
After collecting the above data, the grower completes the worksheet (see following page).

Summary: Case Farm One

The analysis indicates the equipment investment is projected to reduce annual after-tax net income by $607 (line 22). Benefits realized in the form of reduced sprayer rental fees and lower fertilizer/chemical costs fall short of the added costs associated with buying the equipment and obtaining comparable support/management services from another source. To justify purchasing the equipment in this example, the grower must obtain fertilizer/chemicals at a cost that is more than 15.6% (line 23) below the cost (net of all discounts) quoted by the supplier providing the equipment. The cash flow analysis indicates that it will take 5.0 years to recover the $22,500 loan used to help finance the equipment. Since the loan is scheduled to be paid off over a four-year period, the equipment investment will not generate the cash flow needed to service the debt as it comes due. Accordingly, investing in the equipment will cause a deterioration in the grower's cash flow, as well as reduce business earnings.

Case Farm Two

In this example, the grower is farming 1,500 acres in a rotation including winter wheat, spring barley, and dry peas. He is interested in analyzing the costs and benefits of buying fertilizer/chemical application equipment. In preparation for the analysis, he has collected the following information:

1. Investment in equipment (line 1, worksheet) = $30,000.

   The $30,000 includes the sales tax and outlays for a field-ready 1,000 gallon sprayer and attachments; transfer pumps; cultivator kit; drill kit; 2,000-gallon nurse tank; and two, 7,000-gallon storage tanks.

2. Number of years equipment will be used in business (line 2, worksheet) = 5 years.

3. Value of purchased equipment when replaced (line 3, worksheet) = $6,000.

4. Interest rate on investment (line 4, worksheet) = .14 (14%).

5. Marginal income tax rate (line 5, worksheet) = .25 (25%).

6. Annual cost of repairs, casualty insurance, and property taxes (line 9, worksheet) = $1,730.

   Repairs: $86,550 fert./chemical cost for dealer providing application equipment x .015 = $1,298
### INVESTMENT INFORMATION (Skip Lines 1-4 if equipment is leased.)

1. Enter purchase price (including sales tax) of storage, transfer, and application equipment (tanks, pumps, cultivator/drill kits, fittings, freight, etc.) $30,000
2. Enter number of years purchased machinery will be used in the business $5
3. Enter value of purchased equipment when replaced
4. Enter interest rate on investment in purchased equipment (use interest rate on loan or return from alternative investment) (decimal) .14
5. Enter grower's marginal tax rate (decimal) .22

### ANNUAL COSTS OF ACQUIRING EQUIPMENT (Skip Lines 6 & 7 if equipment is leased.)

6. Depreciation on purchased equipment: (Line 1- Line 3) $4,900
7. Interest on investment: (Line 1 + Line 3) x .5 x Line 4 $2,520
8. If equipment is leased, enter annual fee $0
9. Enter annual cost of repairs, casualty insurance, and property taxes for purchased/leased equipment $1,298
10. Enter added annual costs of soil tests, consulting service, operator management, labor, pumping water, liability insurance, etc. $2,000
11. Total costs: (Sum of Lines 6 through 10) $10,618

### ANNUAL BENEFITS OF ACQUIRING EQUIPMENT

12. Fertilizer applicator/sprayer rental fee and water pumping/hauling cost charged by dealer $1,000
13. Cost of fertilizer with supplier providing equipment (net of applicable cash/quantity discounts) $35,280
14. Cost of chemicals with supplier providing equipment (net of applicable cash/quantity discounts) $23,420
15. Cost of fertilizer with no-service supplier (net of applicable discounts) $29,730
16. Cost of chemicals with no-service supplier (net of applicable discounts) $19,900
17. Savings in fertilizer and chemical costs: (Line 13 + Line 14 - Line 15 - Line 16) $8,070
18. Total benefits: (Line 12 + Line 17) $9,070

### FINANCIAL ANALYSIS

A. Profitability

19. Annual net income before taxes: Line 18 - Line 11 $ -1,548
20. Annual income tax: Line 5 x Line 19 $ -341
21. Average annual investment tax credit: (Line 1 x .1) ÷ Line 2 $ -600
23. Break-even fertilizer/chemical price discount from no-service supplier relative to supplier providing equipment, net of all discounts: (Line 11 - Line 12 - Line 21) ÷ (Line 13 + Line 14) 15.6%

B. Cash Flow (Complete only if debt is used to buy equipment.)

24. Enter equipment loan amount $28,500
25. Enter average annual interest paid on equipment loan (Line 24 x .66 x loan interest rate) $2,079
26. Enter Line 19 + Line 7 - Line 25 $ -1,107
27. Enter (1.00 - Line 5) x Line 26 $ -863

*The average annual loan balance is estimated by multiplying .66 times the total loan.
Casualty insurance: \( \frac{\$30,000 \text{ new cost} + \$6,000 \text{ salvage}}{2} \times 0.06 = \$108 \)

Property taxes: \( \frac{\$30,000 \text{ new cost} + \$6,000 \text{ salvage}}{2} \times 0.018 = \$324 \)

7. Annual cost of soil tests, consulting service, operator management, labor (line 10, worksheet) = $2,800.
   Labor: 125 hours of labor @ $8/hr. = $1,000
   Management: Consulting service = $1,800

8. Applicator rental fee and water pumping/hauling cost (line 12, worksheet) = $2,995.
   Applicator fee: $1,000 maximum
   Water pumping/hauling: 33,250 gal. @ 6¢/gal.
   = $1,995

9. Annual cost of materials:
   Supplier No. 1: Application Equipment Provided
   Fertilizer (line 13) = $52,920
   Chemicals (line 14) = 33,630
   Supplier No. 2: No Services Provided
   Fertilizer (line 15) = 42,336
   Chemicals (line 16) = 26,904

10. Equipment financing:
    The $30,000 equipment outlay will be financed with a 25% downpayment (= $7,500) and a $22,500 loan (line 24, worksheet). The loan will carry a 14% interest rate and must be repaid in four equal annual principal and interest payments.

**Summary: Case Farm Two**

A completed worksheet using the above data appears on the following page.
INVESTMENT INFORMATION (Skip Lines 1-4 if equipment is leased.)
1. Enter purchase price (including sales tax) of storage, transfer, and application equipment (tanks, pumps, cultivator/drill kits, fittings, freight, etc.) $30,000
2. Enter number of years purchased machinery will be used in the business .................................................. 30
3. Enter value of purchased equipment when replaced $5,000
4. Enter interest rate on investment in purchased equipment (use interest rate on loan or return from alternative investment) (decimal) .14
5. Enter grower's marginal tax rate (decimal) .25

ANNUAL COSTS OF ACQUIRING EQUIPMENT (Skip Lines 6 & 7 if equipment is leased.)
6. Depreciation on purchased equipment: (Line 1- Line 3) $2,975
7. Interest on investment: (Line 1 + Line 3) x .5 x Line 4 $2,520
8. If equipment is leased, enter annual fee $0
9. Enter annual cost of repairs, casualty insurance, and property taxes for purchased/leased equipment $1,730
10. Enter added annual costs of soil tests, consulting service, operator management, labor, pumping water, liability insurance, etc.) $2,800
11. Total costs: (Sum of Lines 6 through 10) $11,250

ANNUAL BENEFITS OF ACQUIRING EQUIPMENT
12. Fertilizer applicator/sprayer rental fee and water pumping/hauling cost charged by dealer $2,975
13. Cost of fertilizer with supplier providing equipment (net of applicable cash/quantity discounts) $52,920
14. Cost of chemicals with supplier providing equipment (net of applicable cash/quantity discounts) $33,630
15. Cost of fertilizer with no-service supplier (net of applicable discounts) $49,900
16. Cost of chemicals with no-service supplier (net of applicable discounts) $26,336
17. Savings in fertilizer and chemical costs: (Line 13 + Line 14 - Line 15 - Line 16) $17,310
18. Total benefits: (Line 12 + Line 17) $20,585

FINANCIAL ANALYSIS
A. Profitability
19. Annual net income before taxes: Line 18 - Line 11 $8,155
20. Annual income tax: Line 5 x Line 19 $2,119
21. Average annual investment tax credit: (Line 1 x .1) ÷ Line 2 $400
22. Annual net income after-taxes: Line 19 - Line 20 + Line 21 $6,041
23. Break-even fertilizer/chemical price discount from no-service supplier relative to supplier providing equipment, net of all discounts: (Line 11 - Line 12 - Line 21) ÷ (Line 13 + Line 14) 9.5 %

B. Cash Flow (Complete only if debt is used to buy equipment.)
24. Enter equipment loan $23,500
25. Enter average annual interest paid on equipment loan (Line 24 x .66 x loan interest rate) $2,079
26. Enter Line 19 + Line 7 - Line 25 $8,896
27. Enter (1.00 - Line 5) x Line 26 $16,672
29. Equipment debt recovery period: Line 24 ÷ Line 28 1.9 yrs.

* The average annual loan balance is estimated by multiplying .66 times the total loan.
As indicated on the worksheet, the equipment investment is profitable. The grower will increase his annual after-tax net income by an estimated $6,941 (line 22) through purchase of the equipment and buying his materials from supplier number 2. The analysis also indicates that the move will be profitable as long as materials can be purchased for 9.5% less than from supplier number 1 (line 23). It will take 1.9 years (line 29) for the investment to generate enough earnings to recover the $22,500 of debt used to finance the equipment. Since the debt recovery period (1.9 years) is less than the loan repayment period (4 years), the farm's cash flow will be strengthened by the investment. The grower may wish to obtain a loan with a two-year repayment period. This would match the investment's cash flow with the loan repayment period and save loan interest costs.

A CAUTIONARY NOTE

It should be emphasized that the outcomes of the above example analyses are not recommendations for or against the acquisition of fertilizer/chemical application equipment or the purchase of materials from certain suppliers. Instead, the intent has been to use the examples to illustrate an analysis procedure. The basis for good decision making is an appropriate analysis using assumptions specific to the case at hand. Accordingly, growers and their advisors are encouraged to use a blank worksheet and their own assumptions to analyze potential equipment investments.

*/ This program is being developed for the IBM PC. Contact the Bulletin Office, Cooperative Extension, Washington State University, Pullman, WA 99164-5912, for additional information.
**WORKSHEET**

**Analysis of Investment in Fertilizer/Chemical Application Equipment**

### INVESTMENT INFORMATION (Skip Lines 1-4 if equipment is leased.)

1. Enter purchase price (including sales tax) of storage, transfer, and application equipment (tanks, pumps, cultivator/drill kits, fittings, freight, etc.) $ __________ __

2. Enter number of years purchased machinery will be used in the business

3. Enter value of purchased equipment when replaced $ __________ __

4. Enter interest rate on investment in purchased equipment (use interest rate on loan or return from alternative investment) (decimal)

### ANNUAL COSTS OF ACQUIRING EQUIPMENT (Skip Lines 6 & 7 if equipment is leased.)

6. Depreciation on purchased equipment: (Line 1 - Line 3) ÷ Line 2 $ __________ __

7. Interest on investment: (Line 1 + Line 3) x .5 x Line 4 $ __________ __

8. If equipment is leased, enter annual fee $ __________ __

9. Enter annual cost of repairs, casualty insurance, and property taxes for purchased/leased equipment

10. Enter added annual costs of soil tests, consulting service, operator management, labor, pumping water, liability insurance, etc. $ __________ __

11. Total costs: (Sum of Lines 6 through 10) $ __________ __

### ANNUAL BENEFITS OF ACQUIRING EQUIPMENT

12. Fertilizer applicator/sprayer rental fee and water pumping/hauling cost charged by dealer $ __________ __

13. Cost of fertilizer with supplier providing equipment (net of applicable cash/quantity discounts) $ __________ __

14. Cost of chemicals with supplier providing equipment (net of applicable cash/quantity discounts) $ __________ __

15. Cost of fertilizer with no-service supplier (net of applicable discounts) $ __________ __

16. Cost of chemicals with no-service supplier (net of applicable discounts) $ __________ __

17. Savings in fertilizer and chemical costs: (Line 13 + Line 14 - Line 15 - Line 16) $ __________ __

18. Total benefits: (Line 12 + Line 17) $ __________ __

### FINANCIAL ANALYSIS

#### A. Profitability

19. Annual net income before taxes: Line 18 - Line 11 $ __________ __

20. Annual income tax: Line 5 x Line 19 $ __________ __

21. Average annual investment tax credit: (Line 1 x .1) ÷ Line 2 $ __________ __

22. Annual net income after-taxes: Line 19 - Line 20 + Line 21 $ __________ __

23. Break-even fertilizer/chemical price discount from no-service supplier relative to supplier providing equipment, net of all discounts: (Line 11 - Line 12 - Line 21) ÷ (Line 13 + Line 14) %

#### B. Cash Flow (Complete only if debt is used to buy equipment.)

24. Enter equipment loan $ __________ __

25. Enter average annual interest paid on equipment loan (Line 24 x .66 x loan interest rate) $ __________ __

26. Enter Line 19 + Line 7 - Line 25 $ __________ __

27. Enter (1.00 - Line 5) x Line 26 $ __________ __

28. Annual after-tax cash available for retirement of principal on equipment loan: Line 6 + Line 27 + Line 21 $ __________ __


* The average annual loan balance is estimated by multiplying .66 times the total loan.