



11. ACQUIRING MACHINERY

CHAPTER OBJECTIVES:

- ❖ *To introduce the reader to the different options that is available for acquiring machinery;*
- ❖ *To describe the self-financing of machinery purchases;*
- ❖ *To describe the different forms of outside financing;*
- ❖ *To explain the alternatives for financing machinery;*
- ❖ *To discuss the influence of tax on the acquiring decision.*

Acquiring farm machinery services means gaining control of a machine long enough to accomplish some tasks in the farm business. It is the final step in the process of selecting machinery for the farm. After the farmer decided what type of machine he needs and how large it should be, he should answer the following questions before deciding how to acquire its services:

- Does he have the ability, tools, and extra labor to operate the machine properly and maintain it in an efficient and reliable condition?
- How much risk is involved in purchasing the machine? For example, how likely is he going to change production practices in the near future and no longer need the machine? Are current technological developments likely to make the machine obsolete before the farmer will be ready to sell it?
- How much capital will be needed to purchase the machine? Is the investment affordable? Can the farmer make the payments? What will the cost be to own and operate the machine? Is investment capital needed in other areas of the farm business? What will it earn there?
- What other ways are available to acquire the machine's services. How much capital will they require? What is the expected cost? Are there advantages or disadvantages involved compared to ownership? What is the after-tax cost of each method?

11.1. ACQUIRING OPTIONS

There are five general methods of acquiring farm machinery. Each method has advantages, disadvantages, and a unique set of costs associated with it. Every one of these methods should be considered whenever additional machinery services are needed, because no single method will be best for all farm businesses or for each situation on a particular farm.

Long-term control can be gained through ownership or leasing. Short-term control can be accomplished through custom hire, rental, or exchange work with a neighbor.

11.1.1. OWNERSHIP

Ownership is the most popular method of acquiring long-term control of farm machinery. By owning a machine, the farmer:

- Gain complete control over its use and has all the responsibilities that goes with it;
- Provide labor to operate it;
- Assume responsibility for repairs and maintenance;
- Assume responsibility for liquidation and obsolescence.

Some of the investment capital available for use in the farm business will no longer be available for other uses when they are invested in machinery. The farmer does however gain complete control over machine scheduling and the quality of its performance. As long as the machine will be profitable over its economic life and if there are no competing high return uses for capital elsewhere in the farm business, ownership will probably be the most profitable method of acquiring machine services, if the necessary capital is available. On the other hand, if the farm business is expanding and there are alternative uses with a higher return for the available capital, machinery ownership may not be the most profitable use for that capital.

The responsibility for investment, repairs, and labor can be shared with someone else by way of joint ownership. It may generate enough use to make

a machine profitable, where it would not have been profitable for either party alone. The two parties may then be able to make the payments together without either party having a short-term cash flow deficit. The participants must however approve of each other's work habits and care of the machine, scheduling between farms should be worked out ahead of time, and responsibility for operating labor and repairs should be agreed upon. A written agreement should be signed by both parties with exact details of how the co-ownership will be dissolved in case of disagreement, termination of farming by one party or death of one party, and with the method of determining the machine's value at the time of dissolution.

Used machinery ownership should be considered when the credit or cash flow is not able to support the purchase of a new machine. Repair and maintenance cost of farm machinery normally increase as they get older and accumulate more hours of use. Therefore, when the farmer purchase a used machine, he must know its repair and maintenance costs will probably be higher than those of a new machine and that a used machine may have a higher probability of breaking down than a new machine.

The purchase cost of a used machine will on the other hand result in the ownership cost being lower. The secret of successful used machinery ownership is therefore to balance the higher repair and maintenance cost with lower fixed cost by reducing the purchase price.

11.1.2. EXCHANGE WORK

Exchange work with a neighbor may be the oldest form of acquiring farm machinery on the short-term. Two or more farmers, working together to share their labor and equipment, can reduce their individual investments in machinery and still have access to a complete system. Exchange work may be particularly attractive to young farmers starting their operations with an older neighbor as one needs machinery and the other needs labor.

It does however require some organization if exchange work is done very frequently, and the parties involved must be compatible. The following questions should be asked before entering into exchange work:

- Whose farm is first when a machine is going to be used on more than one farm?

- Who operates the machine?
- Who pays repair cost when the machine breaks down and someone other than the owner is using it?
- How many hours of labor are equivalent to an hour of machine time?

11.1.3. CUSTOM HIRE

Custom hiring is a popular method of gaining short-term control of farm machinery, particularly of fertilizer and pesticide application equipment and harvesting machinery. Custom operation may be available from a neighbor, a local fertilizer and pesticide dealer, or a business that specializes in custom farming.

There are several advantages of custom hiring:

- The farmer gets a machine and an operator. That means he is not responsible for operating the machine or taking care of it, giving him time to perform other tasks while the machine is operating. This may be the most important advantage for young farmers without extra labor, particularly during planting and harvesting seasons.
- The farmer has no long-term capital commitment in the machine. Costs of custom hiring can come from operating capital.
- All custom hiring costs are tax deductible as ordinary farm expenses.
- The farmer has no responsibility or costs for machine repairs.
- The farmer has no responsibility for liquidation of the machine if he changes his production practices and no longer needs it.
- The farmer knows exactly what the costs will be so he can budget and project his cash flow accurately.
- The machine will probably be fairly new, in good mechanical condition, and it may have more capacity than he could afford to own.

Custom hiring may have some disadvantages:

- **Availability:** There may not be a competent operator and machine for hire.
- **Quality:** The farmer will not be operating the machine so he will not have complete control over the quality of the job performed. However, in a survey of central Iowa corn combines, custom operators had lower field losses than owner-operators.
- **Timeliness:** The custom operator may not get to the farm during the optimum time for the crop because of scheduling problems.

Custom hiring is particularly useful for specialized machines that are expensive to purchase and used only seasonally. This method is also attractive for beginning farm operators with limited capital and labor resources, for farm operators who are expanding their farm business and for small-scale farmers.

11.1.4. RENTAL OR OPERATING LEASE

An operating lease or rental is another method of short-term machinery acquisition. Rental differs from custom hire because:

- A machine operator is not furnished. The responsibility is on the farmer to operate the machine and take care of it on a daily basis.
- In most cases, the farmer has to carry liability insurance and property damage insurance on the machine, depending on the type of rental contract.
- The farmer is responsible for daily maintenance, and may also be responsible for major repairs on longer-term contracts.
- The quality disadvantage of custom hiring is not available. As the farmer operates the machine, he controls the quality of the job. After obtaining the machine, he can operate whenever he wants to during the rental period. However, availability may still be a problem if there are no dealers with rental programs available. This may result in a timeliness disadvantage.

Short-term rental of farm machinery from an established dealer offers a method of obtaining the use of a machine for a short period of time without having to purchase it. It should be considered if the farmer:

- Needs an expensive machine such as a tractor for only a short period of time each year;
- Wants to supplement his present machinery system temporarily during a late season or emergency, for example:
 - A custom operator is not available;
 - Capital is limited;
 - Trying out an expensive machine on the farm before buying it.
 - Trying out a new production practice without investing too heavily in new machinery.

11.1.5. FINANCIAL LEASE

Leasing as a way of acquiring machinery has not grown as rapidly in agriculture as in other industries. Leasing is a method of acquiring machinery for the long-term. Like ownership, leasing gives complete control of the machine for the period of the lease. The farmer is responsible for operating labor, repair and maintenance costs, and other operating expenses. At the end of the lease period, the machine is returned to the lessor.

Financial leasing has the following advantages:

- Leasing is a hedge against inflation. Leasing payments are determined at the time the lease is signed; so future payments are locked in regardless of any inflation or variations in interest rates that may occur.
- Leasing transfers some of the risk of obsolescence and liquidation to the lessor, who owns the used machine at the end of the lease.
- Leasing may conserve investment capital for other uses in the farm business. Lessors may be able to acquire investment funds at lower rates than farmers.

- The machine is paid out of earnings that it self is generating.
- Farmers in low income tax brackets may benefit from letting the lessor "use" their depreciation in exchange for lower lease payments.

11.2. SELF-FINANCING

Self-financing is certainly the most favorable type of financing, assuming that own capital is available. Although there seems to be no interest cost on these loans, there is an opportunity cost resulting from the missing interest that could have been earned by investing the capital elsewhere.

Self-financing involves several advantages:

- Liquidity aspects are left untouched because there are no frequent installment payments;
- There is no need for collateral;
- Capital is not committed for other purposes.

Compared to other sectors of the economy, the formation of own capital is difficult in agriculture as a result of relatively low profitability. Additionally, the farmer should be aware of the opportunity cost that occurs by bounding the own capital in financing new machines. Because of these limitations a small share of the financing is commonly self-financed while outside financing is used for the bigger remaining share.

11.3. OUTSIDE FINANCING

Although there are numerous options for financing agricultural machinery worldwide, agricultural enterprises have only limited access to most of them. From the farmer's point of view, flexibility is preferably desired, which allows the manager to adjust his machinery capacity according to his specific demands. Often appropriate strategies are only possible on the basis of external resources

because of the high capital demand involved. Experience shows that most farmers prefer a combination of self-financing and outside financing. In order to find the appropriate financing, it is necessary to assess the future liquidity of the farming business accurately. The particular financing form must be identified according to the cash flow of the farm business and must then be optimally adjusted to the farmer's own needs.

The farmer needs to shop around for the best deal in terms of interest rate and conditions like arrangement fees, charges, insurance cover etc, while applying for a loan. When comparing the cost of term loans or any form of finance between different banks, the farmer should determine the effective annual percentage rate of interest. This is the only true comparison as it takes into account the different ways the interest rate may be calculated.

A lender will not normally grant the full cost of a new machine where the purchase is financed by a term loan. The farmer may be asked to fund part of the cost from his own resources. Term loan interest rates can also vary during the period of a term loan unless a fixed interest loan contract is arranged.

Most lenders will also require some form of collateral for a loan. If the farmer is an existing customer of the lender they may already hold the deeds to his farm, which could be adequate for the additional amount he is borrowing.

Lenders, for the share of outside financing, are usually banks, machinery manufactures or dealers. They are normally flexible in offering conditions specifically tailored for the individual farmer. There is no unique ranking of the different outside-financing options because of the differing individual situations and basic conditions of the particular farming business.

11.3.1. ANNUITY LOANS

Annuity loans are characterized by a fixed installment for the complete term. During that time the share of repayment and interest shifts in favor of the capital repayment. It is possible to agree upon special repayments on qualifying dates thus reducing the remaining interest costs. Favorable dates for the special repayments are the periods after harvesting. The advantage of annuity loans is the constant liability over the contract period. The value of the installment can be calculated as:

$$PMT = PV \times \frac{(1+i)^n \times i}{(1+i)^n - 1}$$

[11.1]

Where:

- **PMT** is the value of the installment;
- **PV** is the present value of the loan;
- **i** is the interest rate;
- **n** is the repayment period;

This calculation can be demonstrated with an example of buying a machine for \$100,000.00 and financing it over 5 years at an interest rate of 10%. Using formula 11.1, the installment is calculated as follows:

$$\begin{aligned} PMT &= PV \times \frac{(1+i)^n \times i}{(1+i)^n - 1} \\ &= \$100000 \times \frac{(1+0.1)^5 \times 0.1i}{(1+0.1)^5 - 1} \\ &= \$26,380.00 \end{aligned}$$

The amortization of the annuity loan is shown in Table 11.1.

TABLE 11.1: AMORTIZATION OF AN ANNUITY LOAN

Time in years	Capital balance	Annual interest	Capital payment	Total payment
	\$	\$	\$	\$
Year 1	100000	10000	16380	26380
Year 2	83620	8362	18018	26380
Year 3	65603	6560	19819	26380
Year 4	45783	4578	21801	26380
Year 5	23982	2398	23982	26380
TOTAL		31899	100000	131899

According to Table 11.1, the total repayment for financing the purchase price with an annuity loan will be \$131,899.00. The total interest for the repayment period will be \$31,899.00. There will be five equal installments of \$26,380.00 each.

11.3.2. REDEEMING LOAN

Redeeming loans are characterized by a fixed capital repayment rate all over the term of the loan. The division of the total amount of the loan by the number of intervals gives the value of the equal capital repayments. The interest payments correspond to the remaining debt. Thus the interest cost is reducing as well as the total installment. Here it is also possible to agree upon special repayments. An advantage of this kind of loan is that there is no constant liability over the contract period as the installments decrease during the contract period.

The installments of redeeming loans can be calculated according to the calculation of debt per installment:

$$PMT_x = \frac{PV}{n} + PV_x \times i^x \tag{11.2}$$

Where:

- PMT_1 is the value of the installment for year x ;
- PV is the present value of the loan;
- PV_x is the remaining value of the loan in year x ;
- i is the interest rate;
- n is the repayment period;
- x is the year for which the payment is calculated

This calculation can be demonstrated with an example of buying a machine for \$100,000.00 and financing it over 5 years at an interest rate of 10%. Using formula 11.2, the installment for the first period is calculated as follows:

$$\begin{aligned}
 PMT_1 &= \frac{PV}{n} + PV_1 \times i^1 \\
 &= \frac{\$100000}{5} + \$100000 \times 0.1^1 \\
 &= \$30,000.00
 \end{aligned}$$

The rest of the installments can be calculated in the same way and the amortization of the redeeming loan is shown in Table 11.2.

TABLE 11.2: AMORTIZATION OF A REDEEMING LOAN

Time in years	Capital balance	Annual interest	Capital payment	Total payment
	\$	\$	\$	\$
Year 1	100000	10000	20000	30000
Year 2	80000	8000	20000	28000
Year 3	60000	6000	20000	26000
Year 4	40000	4000	20000	24000
Year 5	20000	2000	20000	22000
TOTAL		30000	100000	130000

Table 11.2 shows that the total repayment over a period of five years will be \$130,000.00 if the purchase price is financed with a redeeming loan. The total interest for the loan will be \$30,000.00. The installments will decrease every period from the initial amount of \$30,000.00 to a final payment of \$22,000.00.

11.3.3. REPAYMENT LOAN

In contrast to the annuity loan and the redeeming loan, where the repayment of the loan is starting with the first installment, the repayment loan is characterized by paying only the interest cost during the loan period and then

repays the loan in one sum at the end of the term. The advantage of this type of loan is the very low installments during the loan period but the total cost are higher than in the other cases because of paying the fixed interest for the total loan during the full period. Another disadvantage is the paying of the large amount of capital at the end of the term, which assumes that at this stage sufficient capital must be available.

Postponing the repayment of the loan into the future involves a high risk. This type of financing can be favorable in the case of establishing a permanent culture like a fruit plantation and no considerable profits is expected during the unproductive growth period. This kind of loan should rather be an exception than the rule when financing new machinery.

The installments of a repayment loan can be calculated according to the interest payments for all the intervals before the final repayment, plus the capital repayment at the end of the term:

$$\begin{aligned}PMT_{1 \text{ to } n-1} &= PV \times i \\PMT_n &= (PV \times i) + PV\end{aligned}\tag{11.3}$$

Where:

- $PMT_{1 \text{ to } n-1}$ is the value of the installment for the years that only the interest is being paid;
- PMT_n is the repayment in the final year;
- PV is the present value of the loan;
- i is the interest rate;
- n is the repayment period;

The amortization of the redeeming loan is shown in Table 11.3.

TABLE 11.3: AMORTIZATION OF A REPAYMENT LOAN

Time in years	Capital balance	Annual interest	Capital payment	Total Payment
	\$	\$	\$	\$
Year 1	100000	10000	0	10000
Year 2	100000	10000	0	10000
Year 3	100000	10000	0	10000
Year 4	100000	10000	0	10000
Year 5	100000	10000	100000	110000
TOTAL		50000	100000	150000

The total repayment according to Table 11.3 is \$150,000.00. The interest cost over the repayment period for this loan is \$50,000.00. The installments will be \$10,000.00 for the first four years as only interest is repaid. The final installment of \$110,000.00 includes the initial capital and further interest for one year.

11.3.4. COMPARING THE LOAN TYPES

The three main types of loans can be compared according to the influence they will have on the cash flow of the farmer and according to the cost they will have in terms of interest.

Cash flow

The different effects the three loans have on cash flow are shown in Figure 11.1, by using the same information as in the previous section.

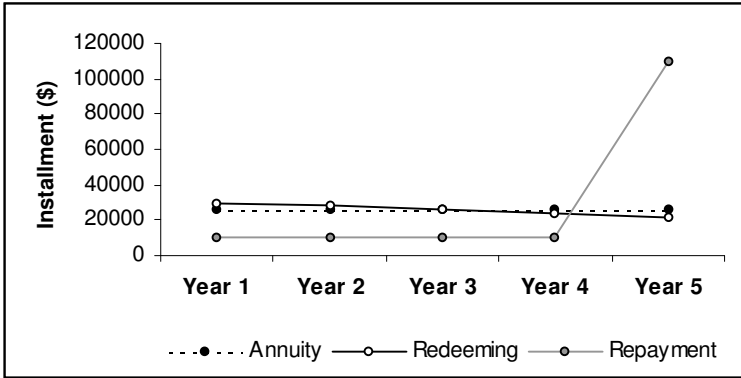


FIGURE 11.1: CASH FLOW COMPARISON OF THE THREE MAIN TYPES OF LOANS

Figure 11.1 shows that although the repayment loan has the least effect on cash flow during the first four years, it has a severe impact during the fifth year when all the capital has to be repaid in one instalment. There is not much difference between the effect on cash flow of the annuity loan and the redeeming loan. While the annuity loan has a constant cash outflow, the redeeming loan starts off with a slightly higher instalment but then the repayments decline towards the end.

Interest cost

The different effects that the three main types of loans have on interest cost are shown in Figure 11.2, by using the same information as in the previous section.

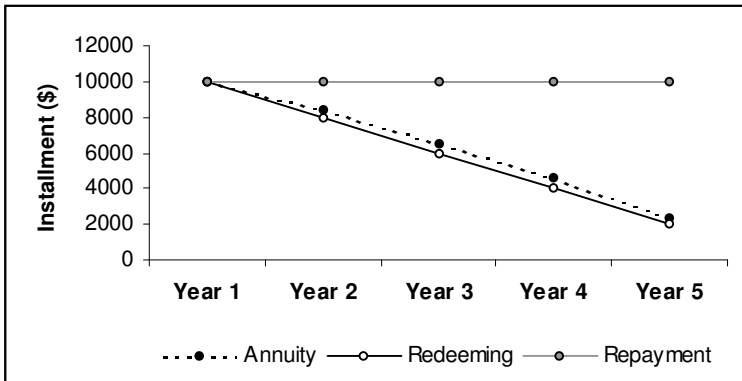


FIGURE 11.2: INTEREST COMPARISON OF THE THREE MAIN FORMS OF LOANS

According to Figure 11.2, the loan with the least interest cost is the redeeming loan. The annuity loan is marginally more costly than the redeeming loan. The repayment loan is the most expensive type of loan.

11.4. ALTERNATIVE FINANCING

Most farm machinery is still acquired under a conventional purchase plan. The capital may come from the purchaser's own funds, a third party lender, or a company financing plan. Recently, more and more major machinery items are being leased or acquired with a rollover purchase.

11.4.1. LEASING

Leasing a machine is a contract for a fixed term with the option or obligation to purchase the machine at the end of the contract period for a fixed remaining value, negotiated in advance. Manufacturers, dealers and financing institutions, offer leasing contracts. When comparing a leasing contract, including purchasing the machine at the end of the contract period, with other financing options, all contract conditions have to be considered such as handling

charges, mode of payment (monthly, quarterly or annually), prepayment and remaining value. The farmer as the lessee usually carries the costs of insurance and maintenance as well as the taxes. Leasing contracts, which include the cost of maintenance, also exist. The leased machine remains the legal ownership of the leasing company until the remaining value is paid.

The lease contract gives the right to use farm machinery that is the property of a leasing company. Leasing increases the financial flexibility of the farming business. It is particularly characterized by the fact that there is usually no need for collateral as in the case of other outside-financed loans and the installments are generally tax deductible. Furthermore, the farmer is able to plan better for the future, as the leasing object can be purchased at the end of the contract term for a fixed remaining value.

The two types of leases have different financial implications:

- **Finance leases:** This is the most common form of leasing for farm machinery. The lessee pays for the full cost of the machine together with a return on the finance provided by the finance company.
- **Operating leases:** The lessee pays a rental to the finance company for the hire of an asset for a period of time, which is normally substantially less than the useful economic life of the asset.

11.4.2. ROLLOVER PURCHASE

Another option is the rollover purchase plan, in which the operator purchases a new or nearly new machine from a dealer with the expectation that it will be exchanged for another model after one year or one season. The purchase is often financed with a company loan that accrues no interest until the date to trade. At that point a cash payment is made, sometimes based on the hours of use accumulated on the model being returned.

Both lease and rollover purchase plans minimize the direct cash outflows needed to acquire the use of a machine. They also guarantee that the machine will be relatively new and have little or no repair cost. However, at the end of the agreement, the operator will not have built up equity in the equipment.

11.4.3. COMPARING THE ALTERNATIVES

The two alternatives for acquiring machinery can be compared with an outright purchase over a specific period. Such a comparison with a 5-year operating lease and a yearly rollover purchase for a machine worth \$150,000 is shown in Table 11.4. The lease payments are assumed to be \$25,000 each year, and the cost to trade under the rollover plan is \$27,500 each year. Estimated repair cost are assumed to be under warranty for all years in the rollover plan, but only in year 1 for the purchase and lease plans. The cash payments are shown as negative values. The salvage value of the machine is shown as a cash inflow in year 5 for the purchase plan.

TABLE 11.4: COMPARING ALTERNATIVE FINANCING FOR ACQUIRING MACHINERY

Years	Purchase	Lease	Rollover
	\$	\$	\$
Initial	-150000	-25000	-27500
Year 1	0	-25000	-27500
Year 2	-631	-25631	-27500
Year 3	-1106	-26106	-27500
Year 4	-1600	-26600	-27500
Year 5	57890	-2110	0
TOTAL	-95447	-130447	-137500

The cash outlay for a rollover plan seems to be more expensive than the lease. It is clear that the outright purchase will be the most economical of the three alternatives.

11.5. TAX EFFECTS

While saving taxes should never be the sole reason for purchasing machinery, income tax effects do need to be taken into account. For ownership of machinery, all regular operating expenses such as fuel, normal repair and maintenance cost, property or use taxes, insurance premiums and hired labor cost can be deducted. Purchase payments have to be capitalized and recovered through a regular depreciation deduction but interest charges on credit purchase payments can be deducted as an ordinary operating expense.

For custom hiring of machinery, the custom charge paid can be deducted as an ordinary farm expense. For short-term rental or a long-term lease, all regular operating costs are deductible expenses as with ownership. Rental or lease payments are also deductible but no depreciation deduction is allowed.

11.5.1. MARGINAL TAX RATES

In general, a marginal tax rate is the amount of income-related taxes that must be paid on the last dollar of taxable profit. Because machinery decisions affect several years in the future, an expected marginal rate should be taken into account when considering the influence of tax on the type of financing of a new machine. Furthermore, because some machinery costs offset self-employment income and others offset only capital gains or depreciation recapture, it is useful to consider two marginal tax rates. The first rate includes both federal and state income tax rates. The second rate includes the self-employment tax too.

11.5.2. COST OF CAPITAL

Machinery is purchased with debt funds, own funds, or some combination of the two. There is an explicit interest charge when debt funds are used. The cost of debt funds is the rate at which machinery investment funds may be borrowed. When equity funds are used, there is an implicit charge, namely opportunity cost. That means own funds could have been used elsewhere in the operation as in expansion, or in outside investment such as in the stock market. The opportunity cost of own funds is often considered to be the average or expected rate of return on equity. Because interest is tax deductible, and because producers are ultimately interested in after-tax income, the cost of capital rate is often reduced by the marginal tax rate, making it an after-tax cost of capital rate.

11.5.3. INCOME TAX DEPRECIATION

Tax depreciation represents a method of allocating the cost of an asset as a business expense over the life of the asset. The government of a country normally determines the allowable allocation methods.

In the USA, a concept that is especially relevant for machinery is the Section 179 expense deduction. In the year that a new or used machine is acquired, a portion or even its entire basis can be deducted as a business expense. Technically, this is not part of income tax depreciation, but it is closely related to it. The maximum Section 179 annual deduction in 2003 is \$25,000 for each taxpayer. That means up to \$25,000 of current machinery purchases can be expensed in the current year as long as there is sufficient taxable income to offset it against. Therefore, the first tax decision to be made for a newly acquired machine is how much, if any, Section 179 expense to claim.

Generally speaking, it is advantageous to depreciate a machinery item as rapidly as possible. The time value of money makes it better to save taxes today and have the use of the funds longer, even if the total savings are the same in the long run.

Farm machinery in the USA falls into the 7-year class life Modified Accelerated Cost Recovery System (MACRS) depreciation category. Farmers can also choose the alternative MACRS depreciation schedule, in which the machine has a 10-year life and is depreciated over 11 tax years. Table 11.5 compares the annual depreciation rates allowed for regular and alternative MACRS schedules.

TABLE 11.5: ANNUAL TAX DEPRECIATION RATES FOR FARM MACHINERY

Tax years	Regular MACRS	Alternative MACRS
	%	%
Year 1	10.71	7.50
Year 2	19.13	13.88
Year 3	15.03	11.79
Year 4	12.25	10.02
Year 5	12.25	8.74
Year 6	12.25	8.74
Year 7	12.25	8.74
Year 8	6.13	8.74
Year 9	-	8.74
Year 10	-	8.74
Year 11	-	4.37

Because the Internal Revenue Service allows only a partial year of depreciation to be claimed in the first and last year, it actually takes eight tax years to fully depreciate the item under regular MACRS and eleven years under the modified MACRS.

11.5.4. RECAPTURING DEPRECIATION

Because the timing of tax depreciation rarely matches the timing of economic depreciation, the basis of the tax value is affected. In its simplest form, basis is the amount of cash paid for a machine that has not yet been assigned as a tax-deductible expense. When a trade-in is involved in a machine purchase, the basis for the newly acquired machine is the sum of the cash boot paid and any remaining basis in the machine traded in. When a machine is sold before it is totally depreciated, a basis is said to remain.

The difference between the selling price and the basis has tax implications. If that difference is less than the amount of total depreciation taken, it is considered depreciation recapture and is taxed as ordinary income. The portion of the difference that is greater than total depreciation already taken is considered a capital gain, and is taxed at capital gains tax rates. If a machine is sold at less than its basis, a capital loss results.

Although capital and ordinary gains and losses are sometimes treated differently under tax laws, capital gains for the most part are taxed at the same rate as ordinary income. The important distinction is that, unlike such costs as fuel and repairs, neither depreciation recapture nor capital gains affect self-employment income. Thus, it is helpful to think of the difference between selling price and tax basis as simply gain, not distinguishing between actual capital gain and depreciation recapture.

11.5.5. DEDUCTIONS FOR LEASES

With an operating lease, a fixed annual or semi-annual payment is made for several years, after which the machine can be returned to the dealer or leasing company or purchased for a predetermined price. The lease payments are tax deductible as ordinary operating expenses.

A finance lease is similar to an operating lease, but the operator is considered to be the owner of the machine, and is entitled to take depreciation deductions.

The operator still can choose to keep the machine at the end of the lease period or return it. The final buyout price can be quite variable. In effect, the finance lease is equivalent to a conditional sales contract with a balloon payment at the end.

11.6. CONCLUSION

Farming businesses have numerous options to finance the purchase of machines. Facing an increasing competition, the habit of purchasing machines is decreasing in favor of renting or leasing machines. The financing of purchasing as well as renting or leasing usually relies on a combination of self-financing and outside financing.

None of these options is at all times and under all circumstances preferable. This strongly depends on the specific conditions of the farming business. Nevertheless, the farm manager has to consider the particular periodic payments affecting the cash flow of the enterprise as well as the total cost applying to the viability of the investment. The latter should always determine the decision but in reality the cash flow usually controls the decision, as lower annual cost are preferred. This is especially true if short-term investments are demanded and available collateral is not sufficient.

There is a fine balance between cash flow and interest cost when deciding on the type of loan to finance a machinery purchase. Farm businesses with a continuous high cash flow can select loan options with regular short-term repayments.

Income tax considerations are especially important in machinery replacement. It will firstly influence the decision to either purchase the machine or to make use of an alternative method of acquiring the machine. After this initial decision, the type of loan or the type of alternative acquisition will influence the tax burden even further.

The main choice for farmers is to decide between an outright purchase with cash, a term loan from a lender or a lease contract with a finance or leasing company. The right choice of financing is important, as it will determine the moment of ownership, as well as the taxation and financial charges. Owning the machine will give the farmer full control but can be more costly. On the other hand, rental or leasing goes with less control but can be more beneficial to cash flow or cost.

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