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**Working Paper**

# Capital Asset Issues for the Farm Financial Standards Task Force

Staff Paper, No. SP 92-20

**Provided in Cooperation with:**
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*Suggested Citation:* LaDue, Eddy L. (1992) : Capital Asset Issues for the Farm Financial Standards Task Force, Staff Paper, No. SP 92-20, Cornell University, Charles H. Dyson School of Applied Economics and Management, Ithaca, NY, https://doi.org/10.22004/ag.econ.121369

This Version is available at:
https://hdl.handle.net/10419/276876

# CORNELL
# AGRICULTURAL ECONOMICS
# STAFF PAPER

## Capital Asset Issues for the Farm Financial Standards Task Force

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Staff Paper No. 92-20 December 1992

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# CAPITAL ASSET ISSUES FOR THE FARM FINANCIAL STANDARDS TASK FORCE

*Eddy L. LaDue**

The Financial Guidelines for Agricultural Producers published by the Farm Financial Standards Task Force (FFSTF) was, by necessity, a relatively brief document given the large number of issues covered. The Guidelines Report gave minimal detail on how the guidelines were to be interpreted and how they could be incorporated into financial statements. The objective of this paper is to provide a more detailed discussion of three capital asset issues: (1) raised breeding livestock, (2) capital leases, and (3) depreciation methods. It is expected that, after modifications are made in response to Task Force reviews and public comment, this paper will become part of an appendix to the Guidelines Report.

## RAISED BREEDING STOCK

The FFSTF recommends the use of one of three approaches for the handling of raised breeding stock.

1. Quantity Based Market Value.
2. Base Value.
3. Base Value with Full Revenue Recognition.

With each of these methods, net income includes the change in value of livestock resulting from increased raised replacements and sale of animals. Changes in the value of the herd due to changes in market prices of livestock are excluded from income.

### Quantity-Based Market Value

Balance Sheet Treatment

Animals are entered on the balance sheet at their market value. Separate values for individual animals are acceptable. Listing animals by approximately homogeneous groups is also acceptable. Values are the current market value for the animals listed. For example, balance sheet listings might appear as shown in Tables 1 and 2. Raised animals have a zero tax basis. Thus, the cost value of these animals is zero.

Income Statement Treatment

Changes in the quantity of the raised breeding herd are included in the income statement as an adjustment to cash sales of breeding livestock. Changes in inventory due to price changes are included in valuation equity in the statement of owner equity.

Separation of the change due to quantity from that due to price is accomplished by determining the value of the end of year (19x1) quantity of livestock at beginning of year prices. That is, determine what the end of year market value would have been if prices had not changed during the year. The difference between the actual beginning of year market value and the end of year value, calculated under the assumption that prices did not change, is the change due to

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* Professor of Agricultural Finance, Cornell University. This report was presented at the Farm Financial Standards Task Force meeting October 14-15, 1992, Minneapolis, MN. This report benefited considerably from comments by other members of Technical Workgroup 2: Bradley Brolsma, Farm Credit Leasing Services Corporation, Minneapolis, MN; Stephen McWilliams, Metropolitan Life Insurance Company, West Des Moines, IA; Trenna Grabowski CPA, Mt. Vernon, IL; Jeff Plagge, First State Bank, Webster, IA; John Meyer, Continental Grain Co., Chicago, IL, and James M. McGrann, Texas A&M University, College Station, TX.

quantity. The remainder of the change between beginning and end of year is due to price. This is determined by subtracting the value of the end of year quantity, valued at beginning of year prices from the actual end of year market value.

**Table 1.** **Balance Sheet, December 31, 19x0**
**Raised Breeding Livestock Schedule**

| Number | Description | Price | Market Value |
|---|---|---|---|
| 20 | Calves (birth to 6 months) | $ 150 | $ 3,000 |
| 35 | Open heifers (6 mo. to breeding) | 500 | 17,500 |
| 25 | Bred heifers | 900 | 22,500 |
| 100 | Cows | 1,100 | 110,000 |
| | TOTAL | | $153,000 |

**Table 2.** **Balance Sheet, December 31, 19x1**
**Raised Breeding Livestock Schedule**

| Number | Description | Price | Market Value |
|---|---|---|---|
| 25 | Calves (birth to 6 months) | $ 140 | $ 3,500 |
| 30 | Open heifers (6 mo. to breeding) | 475 | 14,250 |
| 28 | Bred heifers | 925 | 25,900 |
| 110 | Cows | 1,150 | 126,500 |
| | TOTAL | | $170,150 |

An example of these calculations for the balance sheet entries in Tables 1 and 2 is illustrated in Table 3.

**Table 3.** **Income Statement Schedule, December 31, 19x1**
**Breeding Livestock Inventory Change**

| (a) Description | (b) Number End of Year | (c) Price Beg. of Year | (d) End Value w/o Price Change (bxc) |
|---|---|---|---|
| Calves | 25 | 150 | 3750 |
| O. heifers | 30 | 500 | 15,000 |
| B. heifers | 28 | 900 | 25,200 |
| Cows | 110 | 1100 | 121,000 |
| | | | |
| | | Total | 164,950 |

| | | |
|---|---|---|
| End of year market value | 170,150 | |
| End value w/o price change | 164,950 | 164,950 |
| Beg. of yr. market value | | 153,000 |
| Change due to quantity | | 11,950 |
| Change due to price | 5200 | |

The $11,950 is included in the income statement as an adjustment to breeding livestock sales. The total value of animals sold is also included as income. The $5,200 is included as the change in valuation equity for livestock in the statement of owner equity.

In cases where an animal or group of animals did not appear in the beginning of year inventory, a beginning of year price must be established. If the animals were raised, use the beginning of year value for animals similar to those in inventory at end of year. For example, a new heifer raising operation may have only calves in inventory at the beginning of the year, but will have open heifers at end of year. The beginning of year value to use for open heifers is the value of open heifers at the beginning of the year.

Although the FFSTF report did not specifically address changes in the quality of livestock, quality changes should be included with quantity changes and not allowed to fall into price change effects. If the quality of animals changes, the beginning of year value to use, in calculating the value of the end of year quantity at beginning of year prices, is the beginning of year value of animals of quality similar to the quality that exists at the end of the year. For example, assume bred heifers were valued at $900 at the beginning of the year and $950 at the end of the year. If the heifers in the end of year inventory were of better quality due to better breeding and improved rearing practices (and say, were bigger), the beginning of year price to use is the value of the better animals at the beginning of the year. If animals of similar quality would have been valued an $925 at the beginning of the year, that value should be used in calculating the change in inventory due to quantity vs. price illustrated in Table 3.

When Some Animals are Purchased

When all animals are purchased, it is feasible to handle livestock like machinery. In this case, the market value of the animals is listed on the market value balance sheet and the undepreciated balance is listed as the cost value of livestock. On the income statement, the depreciation is included as an expense and the gain or loss on the sale is included as an adjustment to income.

When some animals are purchased and some are raised, the purchased animals can be handled in the same manner as indicated above for cases when all are purchased. In this case, the balance sheet entries would have to separate the purchased animals from the raised animal. Also, purchased animals sold would have to be separated from raised animals sold and the value received for purchased animals excluded from revenue. The gain or loss on the sale of purchased animals would be included in income instead.

An alternate procedure for handling breeding livestock where some are raised and some are purchased, is to handle all animals as shown in Tables 1 and 2 in the market value balance sheet. The cost value is the undepreciated balance of the purchased animals taken from the tax (or other) depreciation schedule.

For the income statement, total sales of breeding livestock are included as income, total purchases of breeding livestock are included as an expense, and the change in inventory due to quantity is included as an adjustment to breeding livestock sales. The depreciation used for tax purposes is not included on the income statement. Depreciation is implicit as the difference between; (1) the heifer raising costs, plus the cost of animals purchased, and (2) the value of animals sold, adjusted for quantity changes in livestock inventory. Depreciation of purchased animals is handled the same as raised animals for income statement purposes.

If purchased animals are handled in this manner, the beginning of year value of types of animals that were not on the beginning of year balance sheet may have to be determined. There are two important situations:

1. The animals were purchased during the year and have not changed in character. In this case, use the purchase price of the animals. For example, if 10 cows were purchased in November, and there were no cows in inventory at the beginning of the year, use the purchase price as the beginning of year value.

2. The animals were purchased during the year and have changed in character. In this case, use the value of animals of similar character at the time of the purchase. For example, if a herd bull is purchased during the year for $5,000, he turns sterile during the year, and is valued at $800 (beef price) at end of year, the beginning of year price to use is the price of beef bulls at the time the bull was purchased.

Advantages of Quantity-Based Market Value

1. No base value for raised animals need be established.

2. Records of the number of animals sold or died, and their base values, are not required.

3. Changes in the market value of the existing herd are not reflected in income. Market value only influences the valuation of increases or decreases in inventories in that they are valued at current market value.

4. If purchased animals are handled like raised animals, no separation of data on purchased and raised animals is necessary (other than that required for tax purposes).

5. Economic depreciation of animals is represented in the income statement rather than an arbitrary allocation of the value of the animal over its life which occurs with depreciation schedules.

Disadvantages of Quantity-Based Market Value

1. Zero cost basis of raised animals underrepresents cost based investment if ROA or other income measures are to be calculated on a cost basis.

## Base Value

With this approach a base value is used as the cost value of animals. This cost value is used in determining net income. The market value of animals is included in the market value balance sheet and changes in market value are disclosed on the statement of owner equity.

Balance Sheet Treatment

1. ***Selection of Base Value.*** The base value is designed to represent the cost of raising the animal to its current status. For example, the base rate for cows would be the cost of raising heifers to freshening. The base value of a bred heifer would be the cost of raising an animal to breeding age. The value can be based on the actual or estimated cost of raising the animal to its current status, the market value of such animals, "safe harbor" values provided by IRS or other conventional practices followed by the business.

   It is expected that in most cases the base value will remain constant for a number of years. However, if the cost value of the business developed using the base value is to be maintained at a reasonable value, periodic changes will need to be made. If the group value approach (discussed below) is used, net income of the business will be influenced in the year of the

change. The longer the period between changes, the greater the effect of the change on income in the year of the change. The frequency and magnitude of changes should consider the trade-off between the effect on net income and the desire for a constant value.

2. There are two approaches to maintaining base values. One, which we will refer to as the "individual animal approach", maintains a value for each animal. The second, which we will refer to as the "group value approach" maintains base values for each breeding animal group but makes no attempt to keep tract of individual animals.

   a. ***Individual Animal Approach.*** Under the individual animal approach, a base value is established for each animal at the time it enters a group. Base values for an individual animal are changed only when an animal enters a new group. For example, assume the base value assigned calves is $240, one to two year old heifers is $625, heifers over two years old is $950, and cows is $1,000. A calf is assigned a base value of $240 when it is born, when it reaches one year of age, the base value is raised to $625, when it reaches two years of age, the base is raised to $950, when it freshens, the base value is raised to $1,000. It maintains that $1,000 basis until it is sold. It would not be unusual for individual cows in a herd to have different base values at any one point in time.

   When base values change, the new values are used only for animals that move into a new group. For example, if base values changed to $250, $650, $1,000 and $1,050, respectively, at the time the animal listed above was a two year old, but before freshening, it would be assigned the new base value for cows ($1,050) when it freshened. If the change occurred after the animal freshened, its base value would not change from the $1,000 value. If the base value of an animal is changed, the change must be counted as income (or loss).

   The individual animal data is summarized by the groups that are desired for the balance sheet, frequently by groups that would be assigned the same market value (as shown in Table 4). If market values are also maintained for each animal, the values for all breeding animals could be totaled directly from the base value record and entered directly on the balance sheet (schedules like those shown in Table 4 could be omitted).

**Table 4. Balance Sheet, December 31, 19x0**
**Raised Breeding Stock**

| No. | Description | Market Value Price | Market Value Total | Existing Cost Value Value | Existing Cost Value Total | New Cost Value[a] Value | New Cost Value[a] Total |
|---|---|---|---|---|---|---|---|
| 40 | Calves <1 yr. | $ 250 | $ 10,000 | $ 240 | $ 9,600 | $ | $ |
| 38 | Heifers 1-2 yr. | 600 | 22,800 | 625 | 23,750 | | |
| 5 | Heifers >2 yr. | 1,000 | 5,000 | 950 | 4,750 | | |
| 100 | Cows | 1,100 | 110,000 | 1,000 | 100,000 | | |
| | TOTAL | | $147,800 | | $138,100 | | |

[a] Complete only in years when base values change.

The main disadvantage with this approach is the large amount of record-keeping required to maintain data on individual animals. The record-keeping can be limited considerably by

handling all animals born in one year (or other period) as a group and using a first in, first out procedure for assigning deaths, sales and moves into the next group.

This procedure has the advantage that base values can be changed frequently without requiring any calculation of the effect of the change on net income. The change in base value is reflected as animals move into new groups. The effect on net income is gradual and occurs automatically. No calculation of the effect of the change in base value need to be made when base values are changed. Raised breeding livestock schedules like those shown in Tables 4 and 5 could be used, but the columns for the new cost value would be omitted.

**Table 5. Balance Sheet, December 31, 19x1**
**Raised Breeding Stock**

| No. | Description | Market Value Price | Market Value Total | Existing Cost Value Value | Existing Cost Value Total | New Cost Value[a] Value | New Cost Value[a] Total |
|---|---|---|---|---|---|---|---|
| 44 | Calves <1 yr. | $ 260 | $ 11,440 | $ 240 | $ 10,560 | $ | $ |
| 39 | Heifers 1-2 yr. | 625 | 24,375 | 625 | 24,375 | | |
| 6 | Heifers >2 yr. | 975 | 5,850 | 950 | 5,700 | | |
| 110 | Cows | 1,150 | 126,500 | 1,000 | 110,000 | | |
| | TOTAL | | $168,165 | | $150,635 | | |

[a] Complete only in years when base values change.

b. ***Group Value Approach.*** Under the group value approach, breeding animals in the herd are assigned base values at the time the balance sheet is prepared. No attempt is made to follow individual animals. The income effect of a change in base value is included in net income.

( i) ***Age Groupings***. Effective use of the group base value method requires that the number of animals that move from one breeding animal group to the next be identified. One of the easiest ways to accomplish this for youngstock is to have the age groupings of animals represent equal portions of a year. For example, a dairy herd could be divided into six month age groups such as:

| | |
|---|---|
| Calves | under 6 months |
| Open heifers | 6 months to 1 year |
| Heifers | 1 year to 18 months |
| Heifers | 18 months to 2 years |
| Bred heifers | over 2 years |
| Cows | |

A simpler approach, but one that might be more difficult for which to establish values, would involve annual groupings:

| | |
|---|---|
| Calves | under 1 year |
| Heifers | 1 to 2 years |
| Old bred heifers | over 2 years |
| Cows | |

For a beef herd, this might be simplified to:

| | |
|---|---|
| Replacement stock | under 1 year |
| Breeding stock | 1 to 2 years |
| Cows | |

If the groupings used are not equal portions of a year, accurate records of the number of animals moving into and out of each group during the year are required.

(ii) ***Example Entries***. Entries are made for both market and base values. For example see Tables 4 and 5. In most cases entries will need to be made only for one (the existing) base. In any year when the base values are changed, the animals will need to be valued at both the existing base value and the new base value. In our example, it was decided that base values needed to be changed in 19x2 (Table 6).

**Table 6. Balance Sheet, December 31, 19x2**
**Raised Breeding Stock**

| No. | Description | Market Value Price | Market Value Total | Existing Cost Value Value | Existing Cost Value Total | New Cost Value[a] Value | New Cost Value[a] Total |
|---|---|---|---|---|---|---|---|
| 48 | Calves <1 yr. | $ 275 | $ 13,200 | $ 240 | $ 11,520 | $ 260 | $ 12,480 |
| 42 | Heifers 1-2 yr. | 650 | 27,300 | 625 | 26,250 | 650 | 27,300 |
| 7 | Heifers >2 yr. | 1,000 | 7,000 | 950 | 6,650 | 1,000 | 7,000 |
| 115 | Cows | 1,150 | 132,250 | 1,000 | 115,000 | 1,100 | 126,500 |
| | TOTAL | | $179,750 | | $159,420 | | $173,280 |

[a] Complete only in years when base values change.

Income Statement Treatment

1. ***Raised Replacement Revenue***. With the base value approach, the gross revenue from raising replacements is explicitly recognized. This revenue is calculated by determining the number of animals that entered the breeding inventory or moved to an older, higher value, age group and valuing that change.

If the individual animal approach is used, determining the raised replacement revenue involves adding up the increases in base value that have been assigned to individual animals.

With this group value approach, having age groups that are equal portions of a year makes determination of raised replacement revenue easier. The number of animals transferred to the next higher level is the number on hand at the beginning of the year minus the number sold and the number that died. In our example for the 19x1 income statement, the number of calves in the beginning of year inventory was 40. One of those animals died, leaving 39 to be transferred to the one to two year age group at end of year (see Table 7). This can be checked by comparing the number of animals transferred to the end of year number of animals in the one to two year group. Heifers in the one to two year group at the beginning of year may be in the >2 year group or in the cow group. Since these groups have different values, they must be separated. The number that went into the >2 year group can be determined from the end of year inventory. The remainder that

were not sold or did not die must have become cows. The number of calves that were raised is taken from the end of year inventory. Since these animals were not in the beginning of year inventory, their entire value represents product produced this year. The number of animals multiplied by their base value is part of the raised replacement revenue.

**Table 7. Raised Replacement Revenue**

| Description | Number of Animals: Beg. of Yr. | Sold | Died | Trans-ferred | Base Value Difference[a] | Raised Replacement Revenue |
|---|---|---|---|---|---|---|
| Calves <1 yr. | 40 | | 1 | 39 | $385 | $15,015 |
| Heifers 1-2 yr. | 38 | 1 | | 37 | | |
| To >2 yr. | | | | 6 | 325 | 1,950 |
| To cows | | | | 31 | 375 | 11,625 |
| Heifers >2 yr. | 5 | | | 5 | 50 | 250 |
| End of year number of calves <1 yr. | | | | 44 | 240 | 10,560 |
| TOTAL | | | | | | $39,400 |

[a] Difference between the base value of beginning of year group and the end of year group into which the animal was transferred.

2. ***Base Value Change.*** If the group value approach is used for record-keeping and the base value is changed as of any balance sheet, the gain or loss connected with that change is included in the income statement. In our example, the base value was changed in 19x2. The total base value of the raised herd was $159,420 at the existing (old) base value (Table 6). At the new base value, the value of the breeding herd is $173,280. The difference of $14,860 is included on the 19x2 income statement along with the gain or loss from the sale of raised animals. Since this is not an occurrence that is expected to happen every year, this income is not included in the revenue section of net income and, thus, is not part of net income from farm operations. It is, however, part of net income.

Adjusting net income for differences in the base value insures that the current base value of animals has been counted as income at all times. That is, in our example, the base value of all cows is $1,100 after 19x2, and that base value has been counted as income. All cows sold at any time have had their current base value counted as income.

Raised replacement revenue is included in the revenue section of the income statement.

3. ***Gain or Loss on Sale.*** The base value of each raised animal in the breeding herd has been counted as revenue at the time it was raised. To count the sale value as income would be double counting. The income from sale is the difference between the value received and the base value of the animal at time of the sale. If the individual animal approach is used, the base value of animals sold is summed from the individual records. If the group value approach is used, the base value of animals sold or died can be calculated using a procedure like that shown in Table 8. For our example, the base value of animals sold or died is $26,865.

**Table 8. Base Value of Raised Breeding Livestock Sold or Died**

| Beginning of Year Description | Number of Animals Sold | Died | Total | Beginning of Year Base Value | Base Value of Animals Sold |
|---|---|---|---|---|---|
| Calves <1 yr. | | 1 | 1 | $ 240 | $ 240 |
| Heifers 1-2 yr. | 1 | | 1 | 625 | 625 |
| Heifers >2 yr. | | | | 950 | 0 |
| Cows | 24 | 2 | 26 | 1,000 | 26,000 |
| TOTAL | | | | | $26,865 |

The gain or loss on the sale of raised replacements is determined by subtracting the base value of raised animals sold from the sales of raised breeding livestock. For our example, the gain or loss would be:

| | |
|---|---|
| Raised Breeding Livestock Sold | $ 12,500 |
| Base Value of Raised Breeding Livestock Sold | (-) 26,865 |
| Gain or (loss) on Sale of Breeding Livestock | $(14,365) |

The gain or loss is included on the income statement as an adjustment to net farm income from operations. Under this option, it is not included as part of revenue, but is part of net income.

When Some Animals are Purchased

When all animals are purchased, it is feasible to handle livestock like machinery. In this case, the market value of the animals is listed on the market value balance sheet and the undepreciated balance is listed as the cost value of livestock. On the income statement, the depreciation is included as an expense and the gain or loss on the sale is included as an adjustment to income.

When some animals are purchased and some are raised, the purchased animals can be handled in the same manner as indicated for cases when all are purchased. In this case, the balance sheet entries require separation of purchased animals and raised animals. Data on the number of purchased animals sold and died would have to be separated from raised animals sold and died. The gain or loss on the sale of purchased animals would be included in income with the gain or loss on the sale of raised breeding livestock.

An alternate procedure for handling breeding livestock where some are raised and some are purchased is to handle all the animals as if they were raised. The procedures described above would then be used for all animals. The depreciation calculations used for tax purposes would be ignored for preparation of the financial statements. Purchased breeding livestock costs would be included in the expenses, along with the raised livestock costs.

This alternative has the advantage that raised and purchased breeding livestock do not have to be separated on the statements. The revenue from raising animals that are part raised and part purchased (i.e., purchase of an open heifer), is recognized. It also avoids treating purchased and raised cattle in a basically different way on the income statement. The depreciation on purchased cattle results in the cost of the animal being counted as an expense over the life of the asset. The base value of raised animals is held constant over the period the animal is in the herd, resulting in all of the implied depreciation on the animal occurring in the year of sale. If the numbers of animals

purchased, sold, and raised are about constant through time, net income will be little affected. If herd size is changing, income could be influenced. For example, assume herd size is increased by 50 cows in one year. If the animals are purchased, depreciation expense occurs each year after purchase. If the increase were accomplished with raised replacements, implied depreciation would occur only when animals were sold. Only if culling rates were similar for each year after purchase would the depreciation be similar to that achieved with purchased animal (such may be the case for many dairy herds). Entering the purchased livestock with raised has the disadvantage that some of these calculations are required for tax purposes and purchased animals would have two cost values.

An Alternate: Only one Transfer Point

One alternate approach for handling raised breeding livestock involves including all youngstock with the market livestock until they are transferred into the breeding herd. For example, all beef or dairy youngstock would be listed with the market animals until an animal freshens or is used for breeding service. A base value is used only for the breeding herd. In our example, only the cows would have a base value. Since young breeding stock would be valued at market value on the balance sheet, part of the revenue from raising replacements is reflected through that change in market value. The difference between the base value of animals at the time they enter the breeding herd and their value on the preceding balance represents revenue for this year. This revenue is reflected by including both the transfer value of the breeding animals and the change in the value of market livestock in revenue. For example, an animal valued at $600 in the beginning of year inventory with a base value of $1,000 will have an raised replacement income of $1,000 and a decrease in inventory of market livestock of $600 resulting in a net revenue of the $400, which is the increase in the value of the animal.

Since there is only one class of breeding stock, the change in the cost value of the breeding stock represents the net effect of transfers to breeding livestock and sales of breeding livestock. For example, a herd with a base value of $1,000 per animal, 100 animals at the beginning of the year and 110 animals at end of year, has a change in cost value of breeding livestock of $10,000. This could result from transfer of 30 animals and sale of 20 animals. Thus, the value of transferred animals minus the change in cost inventory gives the base value of raised animals sold. For our example:

| | |
|---|---|
| Transfer Value of Breeding Livestock | $ 30,000 |
| (-) Change in Cost Value Inventory | 10,000 |
| (=) Base Value of Raised Animals Sold | $ 20,000 |

This value is then subtracted from the value of raised breeding stock sold to determine the gain or loss on the sale of raised breeding livestock.

| | |
|---|---|
| Raised Breeding Livestock Sold | $ 12,500 |
| Base Value of Raised Breeding Livestock Sold | (-) 20,000 |
| Gain or (loss) on Sale of Breeding Livestock | $( 7,500) |

This procedure has the advantage that; (1) only one base value must be established, (2) herds where a significant proportion of the youngstock are sold (primarily meat animals), do not have to separate breeding animals from market livestock until they enter the breeding herd, and (3) it is simpler to apply.

This procedure has the disadvantage that no separation of the animals being held for breeding, or actually bred, may appear on the balance sheet. This might cover up changes in management practices that would be important to a lender or other financial analyst. Separate identification of these values could, of course, be maintained. Also, all changes in the market prices of breeding youngstock are included in revenue. Only changes in the prices of the breeding herd (cows in our example) would be excluded from net income.

Advantages of Base Value Approach

1. A cost value is provided for raised livestock that is similar to the cost of other assets. This allows calculation of rates of return on a cost basis that are more accurate than is accomplished by using only the tax basis of livestock as the cost basis.

2. Farm income is not influenced by changes in market values of assets for which a base value is established (unless market value is used as the basis for establishing base values).

Disadvantages of the Base Value Approach

1. The implicit depreciation of the livestock which is represented by the difference between the base value and the sale value is not reflected as part of the net farm income from operations. On farms where this is likely to represent a significant negative number (i.e., on dairy farms), this procedure inflates revenues and net farm income from operations.

2. Net income is influenced by changes in the base value. Since such changes are usually kept to a minimum, the income or loss resulting from a base value change will represent a significant adjustment to net income in the year of the change. Part of this adjustment likely should be attributed to past year's net income. For example, if inflation causes gradual, but uneven, increases in the cost of raising a replacement, a true reflection of costs would require frequent, possibly annual, changes in base values.

3. The calculated cost basis of the livestock is not exactly comparable to the costs of other assets. The cost calculated for the livestock represents a before tax value. The costs are not accumulated and then depreciated. These costs have been used as deductions for tax purposes. While the cost investment in other assets is with after tax funds.

4. Base values must be established.

**Base Value with Full Value Recognition**

This method is the same as the base value approach discussed above, except that any gain or loss that results when animals are sold, or the base value is changed, is included in gross revenues rather than in gain or loss on the sale of capital assets.

The values entered on the balance sheet are the same as with the base value approach. The same values are entered on the income statement. Net farm income is the same. Income statement values are just entered at a different place.

Under this approach the sale of breeding stock is treated as part of the ongoing operation of the business. Breeding stock are expected to be sold each year (usually as culls). Income from these sales is counted as part of normal (gross) income, and thus, is included in net income from farm operations. The example below illustrates the difference. In the example, there is no gain or loss from the sale of machinery or real estate.

*Base Value Approach*:

| | |
|---|---|
| All Nonraised-Livestock Revenues | $ 100,000 |
| Gross Revenue | 100,000 |
| Total Expenses | 80,000 |
| Net Income from Farm Operations | 20,000 |
| Gain (loss) on Sale of Capital Items | (10,000) |
| Gain (loss) From Change in Base Values | 0 |
| Net Income | $ 10,000 |

*Base Value with Full Value Recognition Approach*:

| | |
|---|---|
| All Nonraised-Livestock Revenues | $100,000 |
| Gain (loss) on Sale of Breeding Livestock | (10,000) |
| Gain (loss) from Change in Base Values | 0 |
| Gross Revenue | 90,000 |
| Total Expenses | 80,000 |
| Net Income from Farm Operations | 10,000 |
| Gain (loss) on Sale of Capital Items | 0 |
| Net Income | $ 10,000 |

Advantages of Full Value Recognition

1. All the advantages listed for base value.

2. Sale of cull breeding stock are treated as a normal ongoing part of the business. Since most of the economic depreciation of livestock occurs at (just before) sale time, this procedure forces the losses (or gain) attendant with sale into the normal profitability calculations for the business. This is likely most important for dairy operations where the sale value is normally at least $400-$600 below the base value and the implied depreciation is a significant cost. It would be of little importance for beef operations where the base value and the cull values are similar.

Disadvantages of Full Value Recognition

1. All the disadvantages listed for base value.

2. If base values are set at unrealistic values or changed to influence income, net farm income from operations as well as net income is affected.

## CAPITAL LEASES

### Capital vs. Operating Leases

For financial statement purposes, leases can be divided into two categories: capital leases and operating leases. Operating leases are also called rental arrangements. Operating leases usually have periods much shorter than the life of the asset being leased. For example, a tractor for a month, land for a year, or a backhoe for three days. Operating leases are not entered on the balance sheet as assets or liabilities. Operating leases should appear as a note to the balance sheet to indicate the source of an asset or a commitment. For example, a three year lease on land might appear as a note.

A capital lease is a direct substitute for purchase of the asset with borrowed money. It is a noncancelable contract to make a series of payments in return for use of an asset for a specified period of time. In some cases, the farmer effectively has an ownership interest. For example, if the asset transfers to the farmer at the end of the lease or the farmer can buy the asset at the end of the lease for a bargain price, the asset is effectively being purchased and the farmer has an ownership type interest in the asset.

For other capital leases, including tax leases, the farmer does not have any ownership interest. The lease conveys only the right to use the asset for a specified period of time. The farmer gets the asset at the end of the lease only upon paying the market value of the item at that time. However, the most likely substitute for such leases would be purchase of the asset with borrowed money.

Generally Accepted Accounting Principles (GAAP) include four test criteria that can be applied to determine if a lease is a capital lease. According to GAAP, a lease is a capital lease if it meets any one of the following criteria:

1. At the end of the lease term, the farmer owns the asset.

2. The farmer can purchase the asset for a bargain price at the end of the lease.

3. The term of the lease is as least 75 percent of the expected economic life of the asset.

4. The present value of the minimum lease payments at the inception of the lease equals or exceeds 90 percent of the market value of the leased property.

Any lease that meets any one of these criteria is a capital lease and should be entered on the balance sheet. However, the FFSTF recommends that any other lease that is a substitute for purchase (i.e., purchase is the logical alternative) also be treated as a capital lease. For example, tractors could be leased for four to seven years with a 20 to 40 percent residual value and a fair market value purchase option. Such tractors may not meet any of the four criteria, but the lease substitutes for purchase of the item and represents a debt-like commitment. Thus, such leases should be treated as capital leases on the financial statements. Such leases represent noncancelable commitments that should be reflected on the financial statements. A more inclusive definition of capital leases will avoid many lender surprises (i.e., replacement items which are leased that the lender thought were covered by the security agreement).

## Accounting for Capital Leases - Using GAAP Procedures

The FFSTF recommends that reporting of capital leases follow GAAP procedures. Under GAAP, the lease payments are capitalized and amortized over the term of the lease, rather than expensed during each lease period for financial statement purposes. Basically, this involves handling the lease like a purchase and a loan.

Basic Procedure - Annual Payments

The basic procedure involves determining the capitalized value of the lease, depreciating that value over the life of the lease to determine asset values and amortizing that value over the life of the lease to determine liability values.

1. ***The Interest Rate.*** The first step is to establish the initial value of the lease. This value is the present value of the payments to be made over the life of the lease. Present value is determined by discounting at; (1) the farmer's incremental borrowing rate, or (2) the implicit rate on the lease.

The implicit rate is the actual rate charged by the lessor. It is the APR on the funds invested in the asset by the lessor. The contract rate on the lease may be the implicit rate if the payments are calculated using interest on the unpaid balance method, giving recognition to the actual timing of payments and the residual value. Often the contract rate is little more than the rate that will be used in some way to calculate the payments. Since the implicit rate on the lease is frequently not known by the farmer, the incremental borrowing rate or weighted average cost of capital will normally be used.

The incremental borrowing rate is the rate the farmer would have to pay to borrow a similar amount for a similar term, at the time the lease was initiated. The weighted average cost of debt capital is the average rate the farmer is paying on borrowed funds at the time the lease is initiated.

2. ***Initial Lease Value.*** The initial lease value is the present value of all payments to be made on the lease, including down payments and advance payments. The present value can be calculated using present value tables or equations. Since most leases have an advance payment due at initiation of the lease, the correct present value equation or table is a present value of an annuity due. The equations built into many calculators are for regular present value calculations where the first payment is one period (year or month) after initiation of the contract (lease). To use such regular present value procedures, calculate the present value of all nonadvance payments using the equation or table, then add the advance payment(s) to the result.

For example, a lease with five annual payments of $11,990.80 with the first payment in advance, and an interest rate of 10 percent, has a present value using a present value of an annuity due of:

$$\$11{,}990.80 \times 1 + \frac{1-(1+.10)^{-5}}{.10}$$

$$\$11{,}990.80 \times 4.16986 = \$50{,}000 = \text{present value of lease}$$

Alternately, using ordinary present value, the calculations would be:

$$\$11{,}990.80 \times \frac{1-(1+.10)^{-4}}{.10}$$

$$\$11{,}990.80 \times 3.16986 = \$38{,}009 = \text{present value of next four payments}$$

$$\$38{,}009 + 11{,}991 = \$50{,}000 = \text{present value of lease}$$

In each case, the coefficients (4.16986, 3.16986) could be taken from present value tables and the equations skipped. The ordinary present value procedure has an advantage for cases where more than one regular payment, or a down payment, is required at initiation of the lease, which is often the case with monthly payment leases.

3. ***Asset Value.*** The present value of all lease payments is the initial value (capitalized value) used for determining both the asset and the liability entries. This value is depreciated over the life of the lease to provide asset entries. It is amortized over the life of the lease to determine liability entries.

The asset value is calculated using any depreciation method that is consistent with the methods used on similar owned assets. While many methods could be used, it is recommended that straight-line depreciation be used. Straight-line is easier to understand and calculate than other methods, it often conforms roughly to the use of the asset and the method selected does not influence tax depreciation. A half-year or monthly convention can be used if deemed appropriate.

For our example, under the assumptions that the item was leased on April 1st and that the monthly convention is appropriate, the depreciation calculations would be:

| | | | |
|---|---|---|---|
| 19x1 | $50,000 / 5 x 9/12 | = | $ 7,500 |
| 19x2 - 19x5 | 50,000 / 5 | = | 10,000 |
| 19x6 | 50,000 / 5 x 3/12 | = | $ 2,500 |

The asset values to use on the balance sheet are illustrated in Table 9.

**Table 9.** **Balance Sheet Values**

| Balance Sheet Date | Asset Value |
|---|---|
| 12/31/x1 | $42,500 |
| 12/31/x2 | 32,500 |
| 12/31/x3 | 22,500 |
| 12/31/x4 | 12,500 |
| 12/31/x5 | 2,500 |

4. ***Liability Values.*** The liability values are determined by amortizing the initial value of the lease over the life of the lease. It is suggested that the effective interest method be used. That is the interest rate used in the amortization calculations is the same as that used to determine the present value of the payments. If the same rate is used, principal and interest payments obtained by amortization will equal the actual lease payments made. The principal remaining at any point in time is the value of the liability connected with the lease.

   For our example, amortizing the $50,000 at 10 percent results in Table 10.

**Table 10.** **Amortization of Lease**
**$50,000 Lease, 10 Percent Interest, 5 Years**

| Year | Beginning Balance | Total Payments | Interest Portion | Principal Portion | Ending Balance |
|---|---|---|---|---|---|
| 19x1 | 50,000 | 11,991 | 0 | 11,991 | 38,009 |
| 19x2 | 38,009 | 11,991 | 3,800.92 | 8,190 | 29,819 |
| 19x3 | 29,819 | 11,991 | 2,981.93 | 9,009 | 20,810 |
| 19x4 | 20,810 | 11,991 | 2,081.05 | 9,910 | 10,901 |
| 19x5 | 10,901 | 11,991 | 1,090.07 | 10,901 | 0 |

The ending balance for each year indicates the liability connected with the lease. However, since the liability has to be divided into that due within the next 12 months and that due beyond 12 months, the values for the balance sheet are taken from the values listed for the following year. So, at the end of year 19x1, the liability connected with the lease is $38,009. This is entered on the balance sheet as a noncurrent tractor lease liability of $29,819 (from 19x2 values) and a current portion of the tractor lease of $8,190 (from principal portion to be paid in 19x2).

Accrued interest on the lease must also be listed as a current liability. The accrued interest is interest on the entire liability at the rate used in amortization. For our example, the accrued interest is:

$38,009 x .10 x 9/12 = $2,851

5. ***Income Statement Values.*** The income statement values are taken from the balance sheet values and calculations. The depreciation calculated to determine the asset value of the lease is included in depreciation. The interest portion of the lease payment from the amortization table is included in the interest. The accrued interest is included in the change in accrued interest calculated from the balance sheet entries. The cash lease payment is excluded from expenses on the income statement.

   For our example, the income statement values for 19x1 would be:

| | |
|---|---|
| Depreciation Expense | $7,500 |
| Interest Expense (cash portion) | 0 |
| Interest Expense (accrual adjustment) | $2,851 |

Once the depreciation and amortization calculations are made, they should be kept with the balance sheet. If they are not, they will have to be recalculated, at least down to the year for which the balance sheet is being prepared, each time a set of financial statements are developed.

Since most farmers are cash basis tax filers, this procedure results in a different expense being attributed to lease for the income statement than is used for income tax purposes (Table 11).

**Table 11. Comparison of Income Statement and Tax Values**

| | Income Statement Values | | | | |
|---|---|---|---|---|---|
| Year | Depreciation | Interest (Cash) | Interest (Accrual Adjustment) | Total | Tax Purposes[a] |
| 19x1 | $ 7,500 | $ 0 | $2,851 | $10,350 | $11,991 |
| 19x2 | 10,000 | 3,801 | - 615 | 13,186 | 11,991 |
| 19x3 | 10,000 | 2,982 | - 675 | 12,307 | 11,991 |
| 10x4 | 10,000 | 2,081 | - 743 | 11,338 | 11,991 |
| 19x5 | 10,000 | 1,090 | - 818 | 10,272 | 11,991 |
| 19x6 | 2,500 | 0 | 0 | 2,500 | 0 |
| TOTAL | $50,000 | $9,954 | $ 0 | $59,953 | $59,955 |

[a] Assuming the lease is a true lease for tax purposes.

Monthly Payments

Those types of farms where income is received throughout the year (dairy, poultry, swine) usually repay debt and leases with monthly payments. Calculation of the **value of the lease** is the same as for annual leases. If the equations (calculators) are used, the number of payments is the number of months and the interest rate is the annual rate divided by 12.

For our example, if payments were monthly, and we used ordinary present value procedures, the calculations would be:

$$\$1,053.58 \times \frac{1-(1+.10)^{-59}}{.10/12}$$

$1,053.58 x 46.4576 = $48,946.80 = present value of next 59 payments

$48,946.80 + 1,053.58 = $50,000 = present value of lease

The asset values and depreciation calculations would be the same for monthly payments as for annual payments.

The value of the outstanding liability may, however, be considerably different with monthly payments. The main factor causing this difference is the magnitude of the payments made in the first year. As illustrated in Table 12 using annual payment calculations for a monthly lease could result in considerable error.

**Table 12. End of Year Liability Value**
**$50,000 Lease, 10 Percent Interest**

| Year | Annual Payments | Monthly Payments with First Payment on: January 1 | July 1 | December 1 |
|---|---|---|---|---|
| 19x1 | $38,009 | $41,450 | $45,664 | $48,946 |
| 19x2 | 29,819 | 32,651 | 37,206 | 40,833 |
| 19x3 | 20,810 | 22,832 | 27,864 | 31,870 |
| 19x4 | 10,901 | 11,984 | 17,543 | 21,968 |
| 19x5 | 0 | 0 | 6,141 | 11,030 |

Preparing an amortization table for a monthly lease like that shown in Table 10 for an annual lease, is possible with a financial calculator (such as an HP-12C), but is most feasible only with a computer. Part of such a table is shown in Table 13. If such a table is constructed, the end of year values can be taken from the monthly value that corresponds to final month of the year. For example, if the lease were initiated on April 1, the 12/31/x1 value would be $43,628 (the 9th payment would be made in December).

**Table 13. Monthly Amortization of a Five Year Lease**
**50,000 Lease, 10 Percent Interest, 60 Months**

| Month | Beginning Balance | Total Payments | Interest Portion | Principal Portion | Ending Balance |
|---|---|---|---|---|---|
| 1 | 50,000 | 1,054 | 0 | 1,054 | 48,946 |
| 2 | 48,946 | 1,054 | 408 | 646 | 48,301 |
| 3 | 48,301 | 1,054 | 403 | 651 | 47,650 |
| 4 | 47,650 | 1,054 | 397 | 657 | 46,993 |
| 5 | 46,993 | 1,054 | 392 | 662 | 46,331 |
| 6 | 46,331 | 1,054 | 386 | 667 | 45,664 |
| 7 | 45,664 | 1,054 | 381 | 673 | 44,991 |
| 8 | 44,991 | 1,054 | 375 | 679 | 44,312 |
| 9 | 44,312 | 1,054 | 369 | 684 | 43,628 |
| 10 | 43,628 | 1,054 | 364 | 690 | 42,938 |
| 11 | 42,938 | 1,054 | 358 | 696 | 42,242 |
| 12 | 42,242 | 1,054 | 352 | 702 | 41,540 |
| 13 | 41,540 | 1,054 | 346 | 707 | 40,833 |
| . | . | . | . | . | . |
| . | . | . | . | . | . |
| 58 | 3,108 | 1,054 | 26 | 1,028 | 2,081 |
| 59 | 2,081 | 1,054 | 17 | 1,036 | 1,044 |
| 60 | 1,044 | 1,053 | 9 | 1,044 | 0 |

The interest payment on the lease is most easily determined by subtracting the change in the value of the total liability from the total lease payments. For our example, this value for 19x1 would be:

Interest Paid = (1,053.58 x 9) - (50,000 - 43,628)
= 9,482 - 6,372
= $ 3,110

Accrued interest on monthly leases will normally be a rather insignificant amount, and thus, will be immaterial to the balance sheet. For this reason, if the lease is for less than $100,000 or makes up less than 20 percent of the value of the farm assets, accrued interest may be ignored without significant misstatement of financial condition.

Using the accounting procedures described above, use of a lease will usually have some effect on owner equity (for example, see Table 14). That is, the asset connected with the lease will be different than the liability. The amount of equity effect will depend on the depreciation method used, and the date during the year on which the lease is initiated. The lease may either increase or decrease owner equity.

**Table 14. Effect of Lease on Owner Equity**
**Annual Payment Lease Initiated April 1**

| End of Year | Gross Asset Value | Net Lease Liability | Owner Equity (Difference) | Accrued Interest | Owner Equity (Total) |
|---|---|---|---|---|---|
| 19x1 | $42,500 | $38,009 | 4,491 | $2,851 | $1,640 |
| 19x2 | 32,500 | 29,819 | 2,681 | 2,236 | 445 |
| 19x3 | 22,500 | 20,810 | 1,690 | 1,561 | 129 |
| 19x4 | 12,500 | 10,901 | 1,599 | 818 | 781 |
| 19x5 | 2,500 | 0 | 2,500 | 0 | 2,500 |

Alternate 1

In light of the paperwork burden implied by the above described procedure, particularly for monthly payment leases, the Task Force allows alternate procedures that produce materially similar results. One approach is to bypass the amortization table and calculate the value of the lease liability at any point in time as the present value of the remaining payments. This procedure provides equivalent answers and is simpler for the completion of any year's balance sheet. Only the amount and number of payments remaining and the interest rate are needed. Only one year's calculations need be made at one time. This is particularly important for long term leases that have been in effect for a few years and are being placed on the balance sheet for the first time.

For our example with monthly payments, at the end of 19x1 there are 51 payments remaining. The present value of these payments is:

$$\$1,053.58 \times \frac{1-(1+.10)^{-51}}{.10/12}$$

= $1,053.58 x 41.4093 = $43,628

At the end of 19x2 there will be 39 payments remaining. The present value of these payments is:

$$\$1,053.58 \times \frac{1-(1+.10)^{-39}}{.10/12}$$

$$= \$1,053.58 \times 33.1799 = \$34,958$$

The current portion of the lease liability is:

$$\$43,628 - 34,958 = \$8,670$$

The interest paid is the total payments made minus the change in the value of the lease during the year (which, after the first year, equals the beginning of year principal due within the next 12 months). For our case the change in the value of the lease is $6,372 for 19x1 and $8,670 for 19x2. Since total payments are $9,482 in 19x1 and $12,643 in 19x2, the interest paid is $3,110 (9,482 - 6,372) for 19x1 and $3,965 (12,643 - 8,670) for 19x2.

This procedure puts considerable focus on present value. Many calculators and computers have the present value functions built in to make calculations reasonably easy. Tables of present values are available in many finance or accounting textbooks and other sources[1]. However, if use of these procedures is inconvenient, graphs such as those shown in Figures 1 and 2 can be used. Use of these graphs will give approximate results. With care in their use, the error should be small.

For our monthly payment example, at the end of 19x2 there are 39 payments left. Using the 10 percent interest line on the graph we get a present value factor of about 33. This gives a present value of $34,768 ($1,053.58 x 33). This is reasonably close to the actual value of $34,958. At the end of 19x1 there were 51 payments left. Their present value from the graph would be $43,197 (41 x 1,053.58).

This alternate procedure only changes the method of obtaining the liability values. The asset and depreciation values are determined in the same manner as illustrated in Table 9 and its accompanying discussion.

Advantages of Alternate 1

1. Easier to employ, particularly when the lease is being entered on a balance sheet for the first time in a year after the first year or the preparer does not have the original calculations.

Disadvantages of Alternate 1

1. Entries may include rounding errors if present values are taken from graphs like Figures 1 and 2.

Alternate 2

Alternate 2 (asset = liability method) uses the same procedures for calculating the liability and interest paid as Alternate 1. The difference is that the asset value is determined without calculating the depreciation schedule. Instead, the asset value is set to be equal to the total liability. For our monthly payment example, using the graphs, the asset value at the end of 19x1 would be $43,197; at the end of 19x2 the value would be $34,768.

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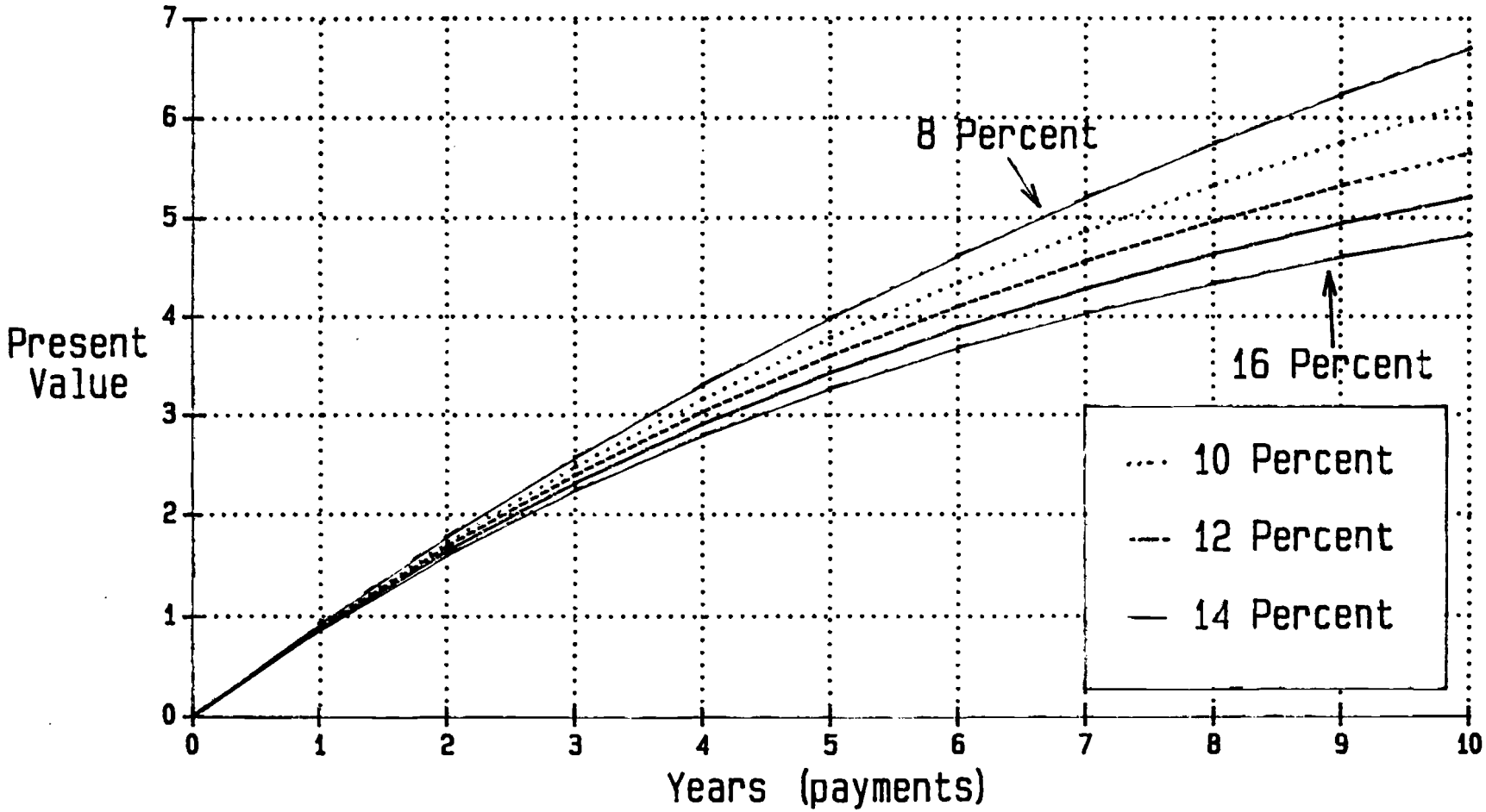
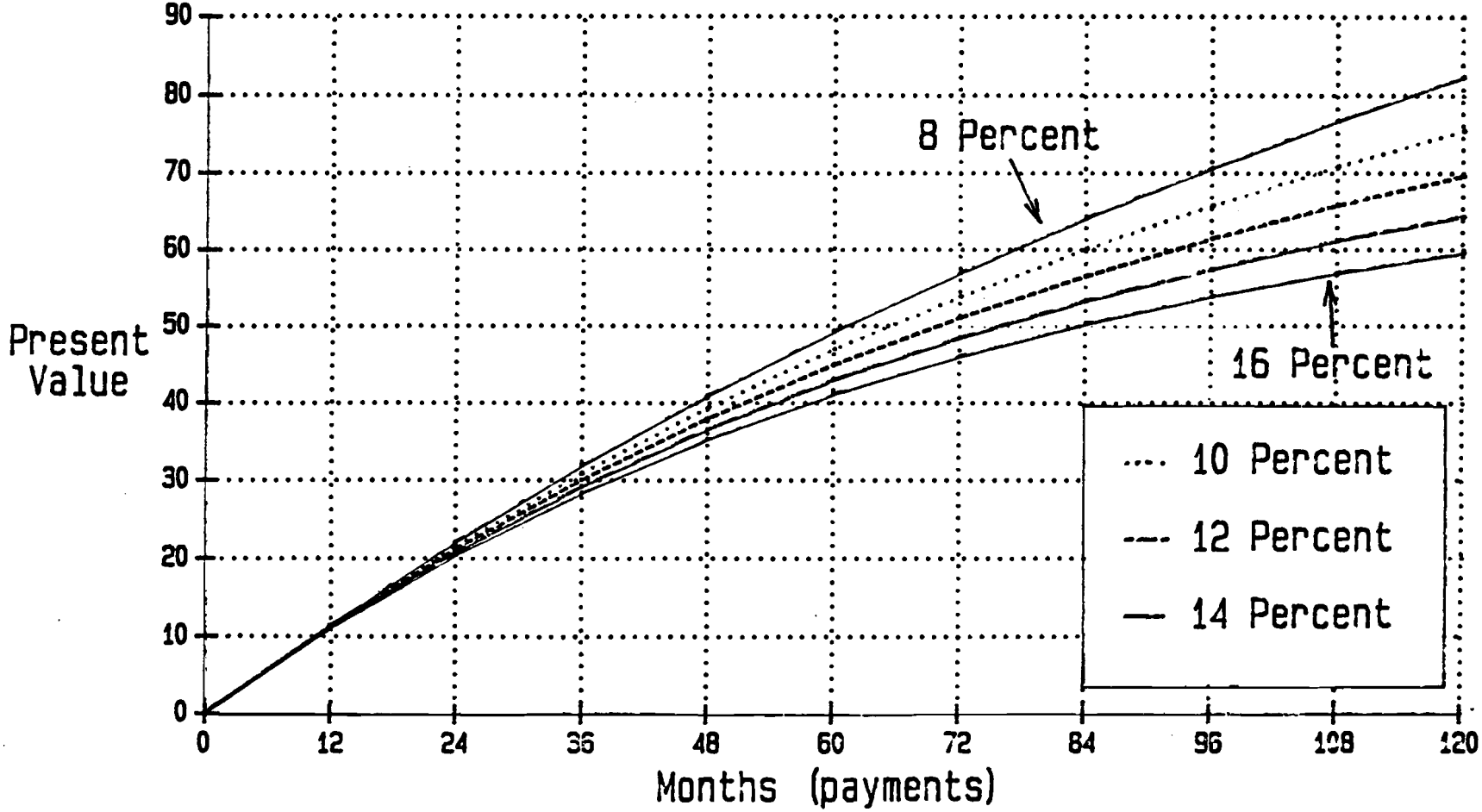
[1] For example, LaDue, E.L. "Present Value, Future Value and Amortization, Formulas and Tables" Cornell University, A.E. Ext. 90-17.

Figure 1. Present Value of $1 with Annual Payments




Approximate present value of a lease with 8 payments of $3,000 per year remaining and an assumed interest rate of 12 percent = $3,000(5.0) = $15,000

Figure 2. Present Value of $1 with Monthly Payments




Approximate present value of a lease with 42 payments of $2,000 per month remaining and an assumed interest rate of 13 percent = $2,000(34) = $68,000

The depreciation is the difference between the end of year values. Thus, 19x1 depreciation would be $6,803 (50,000 - 43,197) and 19x2 depreciation would be $8,429 (43,197 - 34,768). Using this procedure makes the depreciation equal to the principal portion of the lease payments (i.e., the principal due within the next 12 months on the beginning of year balance sheet, after the first year).

This alternate procedure for determining the asset values is extremely easy to employ after the liability values have been calculated. It does, however, change the pattern of depreciation over the life of the asset. As illustrated in Tables 15 and 16, this procedure puts more of the depreciation later in the life of the asset, particularly for the longer term leases. However, since a wide variety of depreciation methods, and corresponding depreciation patterns, are allowed, this pattern may be acceptable for many situations.

**Table 15. Alternate Depreciation Patterns[a] 5 Year Lease, 10 Percent Interest, April 1**

| Year | Straight-Line Depreciation | Asset Equals Liability Method | |
|---|---|---|---|
| | | Annual Payments | Monthly Payments |
| 19x1 | $ 7,500 | $11,991 | $ 6,372 |
| 19x2 | 10,000 | 8,190 | 8,670 |
| 19x3 | 10,000 | 9,009 | 9,579 |
| 19x4 | 10,000 | 9,910 | 10,581 |
| 19x5 | 10,000 | 10,900 | 11,690 |
| 19x6 | 2,500 | 0 | 3,108 |

[a] Using present value equations for determining amortization values.

One advantage of this method is that the lease has no effect on owner equity except the accrued interest effect. The lease asset and lease liability are equal.

**Table 16. Alternate Depreciation Patterns[a] 12 Year lease, 10 Percent Interest, April 1**

| Year | Straight-Line Depreciation | Asset Equals Liability Method | |
|---|---|---|---|
| | | Annual Payments | Monthly Payments |
| 19x1 | $3,125 | $6,671 | $2,083 |
| 19x2 | 4,167 | 2,338 | 2,428 |
| 19x3 | 4,167 | 2,572 | 2,684 |
| 19x4 | 4,166 | 2,829 | 2,964 |
| 19x5 | 4,167 | 3,112 | 3,275 |
| 19x6 | 4,167 | 3,423 | 3,617 |
| 19x7 | 4,166 | 3,766 | 3,996 |
| 19x8 | 4,167 | 4,142 | 4,315 |
| 19x9 | 4,167 | 4,556 | 4,877 |
| 19z0 | 4,166 | 5,012 | 5,388 |
| 19z1 | 4,167 | 5.513 | 5,952 |
| 19z2 | 4,167 | 6,065 | 6,575 |
| 19z3 | 1,041 | 0 | 1,168 |

[a] Using present value equations for determining amortization values.

## DEPRECIATION METHODS

The Farm Financial Standards Task Force recommends that depreciation systems distribute the cost or other basic value of tangible capital assets, less salvage value, over the estimated life of the unit (which may be a group of assets) in a systematic and rational manner. It is the Task Force's opinion that current tax depreciation will not be seriously misleading for most farm situations. Tax depreciation will normally approximate actual depreciation. Thus, tax depreciation is accepted as appropriate for income statement purposes.

Since all tax methods force the total depreciation to equal the amount paid (cost), long run total depreciation will be correct. Also, if a farm purchases an approximately constant amount of machinery each year, total depreciation for the farm for any year will be appropriate (except immediately after changes in tax laws).

Tax depreciation may not be appropriate if it deviates considerably from economic depreciation of the asset. Economic depreciation is defined as the allocation of the cost of the asset over the economic life of the asset in a manner that is consistent with the proportion of the physical or economic value of the asset that is used up in each period. For example, if a machine with an initial cost of $100,000, a useful life of 10 years, and a 20 percent salvage value, is equally useful during the life of the asset, straight-line depreciation may represent economic depreciation. Research indicates that other methods, such as sum of the years digits, 150 percent declining balance and double declining balance over the life of the asset, are more representative for many assets. Actual exact economic depreciation is unknown for most assets. Thus, any comparison of tax depreciation with economic depreciation will require judgement. The Task Force does not expect perfect equivalence. Methods that allocate the cost of the asset over a period close to the economic life in a reasonable manner will likely be acceptable.

Preparers and users of financial statements need to be aware of changes in tax laws. If basic laws change, or a business qualifies for special treatment that allows extremely fast or slow write-off of assets, net income of the business may be misleading.

The primary example in current tax law is Section 179 Special Election that allow the write-off of 100 percent of any asset in the year of purchase. This is limited to $10,000 in each year. The effect of this election is to increase expenses (depreciation) in the year of purchase and reduce expenses (depreciation) over the rest of the depreciable life of the property. It will also increase deferred taxes, compared to normal depreciation schedules, because the tax basis of the property immediately becomes zero. If a business is sufficiently small that the immediate write-off of $10,000, rather than taking regular depreciation, would materially influence net income, practices relative to Section 179 property should be noted on the income statement.

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