

# 5 Leasing Arrangements in a Beef Cattle Enterprise

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## Objectives

- Point out terms that should be discussed in developing a livestock lease agreement.
- Show example calculations for cost and returns.
- Provide overview of farmland lease agreements.

## Beef Cow Rental Arrangements for Your Farm

Managing risk is required for many farm enterprises to be profitable and sustainable. Leasing assets, rather than purchasing them, is a form of risk management because it typically requires less capital. Leasing or sharing arrangements between farm operators and property owners have long been used to acquire control of land. In recent years, leasing has become more common for machinery and livestock. Contractual arrangements—such as livestock leases—can be crafted to lend or transfer capital while also sharing risk. The terms of the agreement depend on the contributions of the owner and operator, as well as the motivation for the lease. A lease agreement may be part of a plan to transfer livestock ownership to a second generation, the means for an older owner to compensate a livestock operator or simply an alternative form of accessing capital. A pasture owner also may use a livestock lease agreement to generate income without committing labor or additional capital.

Through share lease arrangements, the livestock owner typically shares the production risks, expenses and returns with an operator. While the owners may give up some of the risk, they also may give up some of the decision-making power. In developing a lease, owners and operators generally want an arrangement that is equitable to both parties. For a successful relationship between the owner and operator, the following elements should be present:

- The owner and operator both must be willing to risk some capital.
- The owner and operator should demonstrate mutual trust and confidence in each other.

- The operator must convince the owner they have the managerial ability, honesty and integrity to capably manage the livestock enterprise.
- The operator must be confident the owner will deal fairly and honor the contract arrangements for shared returns.

The cow owner may want to check references of the operator, and the operator may want to investigate the owner's reputation to assess if this is someone with whom they want to do business. The owner should compare the return on investment in livestock, fences and buildings with alternative investments to make an informed decision relative to business and personal goals.

A key principal to remember when developing a cow herd lease is to **keep it simple**. It is recommended that a beef cow lease only involve beef cows and bulls. While leasing other items such as pasture, hay land and machinery can be part of a cow herd lease, leasing them in a separate agreement provides better flexibility to deal with changing conditions over time. The time and effort spent developing a simple, straightforward and equitable arrangement in the beginning will be rewarded with better relations between owner and operator and a more efficient beef cow enterprise.

## Livestock Lease Terms

The owner and operator should communicate clearly their expectations for the arrangement. The lease should be a written contract agreed upon by both parties and should note, for instance, whether a partnership is intended because of legal implications. A sample lease form is available online at [aglease101.org](http://aglease101.org). The arrangement can be simple, but it should cover all the important points. The agreement should include the names and addresses of participants and should answer the following questions:

- When does the agreement start? How long does it run?
- Is it automatically renewable? Note that while an automatic renewal may seem appealing, it should not substitute for ongoing communication between parties.
- When and how is termination notice given?
- What are grounds for termination?
- When will the agreement be annually reviewed?

All Web addresses given in this chapter are subject to change. The links to these websites will be updated regularly at the Master Cattleman website at [extension.okstate.edu/programs/master-cattleman.html](http://extension.okstate.edu/programs/master-cattleman.html)

- Which party provides for and pays for feed, water, care, veterinary services, medicine, fencing, etc. What share does each provide? Fencing may not be an issue if pasture is leased separately, but it should be discussed so all parties know their obligations.
- What is the share of the output for each party? How are calves priced if one party buys calves from the other?
- When and where is the share of output divided?
- How are cull animals disposed of and when does culling occur? Who receives the income from culls?
- Who provides replacement breeding livestock? Is there a separate agreement for growing replacement heifers?
- What determines the acceptable amount of death loss for each party? How is death loss documented?
- Who provides bulls? What type and quality of bulls (or semen) are used?
- Are cows insured? Who carries the insurance?
- What facilities are used?
- Are there special requirements or needs regarding feeding and handling of cows or calves?
- Are incentives provided for doing a good job? Are penalties assessed for doing a poor job?
- What records are kept? How are animals identified?
- How are extenuating circumstances (such as drought, blizzard or major health problems) that are not the fault of the operator handled?
- What limits, if any, are placed on the activities of the operator? For example, can the operator add other cattle to the owner's herd?
- How are disagreements settled? Is there a way for either party to get out of the agreement?
- If the owner terminates the agreement prior to the agreed upon end point, how is the operator compensated for expenses up to the date the cows are removed from the producer's premises?

If land is part of the agreement, these additional questions should be addressed:

- How many acres of land and what type of pastures and crops are included? (Include legal descriptions, if possible.)

- What is the expected stocking rate?
- Who is responsible for pasture maintenance and upkeep expenses (e.g., fences, noxious weed control, water systems)?
- Are improvements needed in buildings or facilities? If so, who will pay for them?

## Share versus Cash Lease Agreements

Leasing beef cows on a share basis can have advantages for both parties (Table 5.1). Some of the factors that need to be determined for a share-leasing arrangement to be equitable are:

- Costs to be included.
- Cost of resources contributed by each party and costs to be shared.
- Percent of costs contributed by each party.
- Quality of cattle furnished.
- Methods for valuing inputs and products.
- How death losses or other adverse outcomes will be shared.

As a rule, share arrangements are considered equitable for the parties involved if the value of the shares received (i.e., income) reflects a similar share of the value of contributions made (i.e., costs). That is, income is shared in the same proportion as costs are contributed. It is best if an owner and operator can work together in determining their respective contributions. They might work independently at first, then meet to share their estimates and negotiate final terms of the agreement.

Additional details need to be agreed upon before a lease is signed. Some of these are the condition of the cows when returned, the breeding program to be followed, death loss allowed and vaccination program/veterinary cost for the cows. If the lease is for one year only, the cow owner would typically furnish the bull(s) because the operator would not have any benefit from the next year's calf crop. If the lease is for more than one year, the operator is more likely to provide the bull(s) to control the genetics of the next calf crop.

**Table 5.1. Advantages of share and cash lease agreements to different parties.**

### **Share lease advantages to livestock operator:**

- Makes use of working capital without tying up capital for breeding stock.
- Shares the risk of the operation with the owner.
- Obtains capital over and above the limits of credit agencies.
- Allows borrowing of capital at a fair rate of interest. (This assumes the lease is equitable!)
- Permits an increase in the volume of business.
- Helps the beginning operator get started in livestock production.
- Provides more efficient utilization of labor if the operator is underemployed.

### **Cash lease advantages to livestock operator:**

- Generally provides the operator full control and responsibility for management.
- Allows the operator to benefit from above average prices and production.

### **Share lease advantages to livestock Owner:**

- Allows an owner to maintain a breeding herd, even though labor is not provided.
- Provides a source of rental income.
- Provides an opportunity for returns on capital investment.
- Provides a means of transferring ownership over a period of time.
- Has possible income tax and social security advantages.

### **Cash lease advantages to livestock owner:**

- Provides a fixed income without any operating expenses.

Table 5.1 highlights some of the advantages to the livestock operator and owner of the different types of leases. Tax considerations also may play a role. If the cow owner leases the cows and receives a base cash rate, they will not be subject to self-employment tax on that income. However, a cow owner who shares a portion of the production risk will be subject to self-employment tax on the income received. Production risk occurs if the owner's returns are a portion of the calf crop or if the owner shares a role in the management of the cow herd. The IRS defines the management role as material participation and considers the cow owner to have "materially participated" if:

1. The producer does any three of the following activities:
  - a) Inspects production activities (e.g., calving or feeding). Inspecting property or improvements does not count.
  - b) Consults with the operator about production of the cow enterprise.
  - c) Furnishes at least half of the tools, equipment and livestock used in the enterprise.
  - d) Shares at least half of the production expenses.
2. The cow owner regularly and frequently makes decisions that significantly affect the success of the farm operation.
3. The cow owner works at least 100 hours spread over five or more weeks on activities connected to the cow enterprise.
4. Even if the cow owner does not meet 1, 2 or 3, when considered together, their activities may be enough for a ruling of material participation.

Because material participation is somewhat difficult to define, the cow owner should consult with a tax adviser if tax consequences are important for their situation.

## Developing Equitable Share Arrangements

Generally, the percentage of profits each party receives is based on their contributions to the enterprise. If the income is divided in a way that does not match each party's contribution to the enterprise, for instance, in a generational transfer of assets, it is essential the owner and operator agree upon the terms. Because of the differences in individual farms and items furnished, the contributions in these arrangements may appear similar when, in reality, they may vary a great deal. Some of the differences may include one or more of the following:

1. **Quality of cattle furnished.** A party who furnishes a cow valued at \$2,000 contributes twice as much per cow as one who furnishes a \$1,000 cow. Selling a 6-month-old bull calf for \$1,500 contributes much more to the receipts than selling a steer for \$750.
2. **Labor.** A party who furnishes the labor for growing all the feed and providing the temporary pasture furnishes much more than one who just feeds protein supplements to a cowherd. This can be accounted for by valuing contributed raised feed at market value. The labor requirements on timber pasture are higher than open pasture.

3. **Pasture.** The value per acre of pasture varies widely. What is important is the pasture cost per cow (which also can vary).
4. **Machinery and equipment.** The value of the machinery and equipment depends on the acres of hay and pasture produced; the amount of roughage harvested and transported; and the quality of handling facilities contributed. As with feed, if hay is valued at market price, it presumably covers cost of production, including machinery and equipment costs as well as labor and management. Machinery costs for feeding cattle also can vary considerably based upon type of feed, number of cows fed with equipment and age/quality (i.e., value) of equipment.

Some production expenses, such as veterinary care and drugs, may be shared. Because these costs affect cash flow and profitability analyses, they should still be considered in the overall analysis of enterprise profitability (even though they do not affect the relative contributions of either party when shared in the same proportion as income).

The leasing agreement should be evaluated occasionally to assure an equitable arrangement over time. Fluctuating prices can cause the proportion of contributions to shift. This could be caused by changes in interest rates, feed costs, value of breeding stock or labor and management costs.

An infinite number of possible arrangements for sharing the income generated from the contributions of livestock, land and the other resources are possible. Therefore, it is important both parties itemize their contributions and the expected values associated with those contributions.

## Determining Costs to be Included

Actual farm records are an excellent place to start when determining the basic input items and costs that should be considered when developing a beef cow lease. Standard budget worksheets (Worksheets 1 and 2, pages 43 and 44) or computer programs can be used to help identify relevant costs and organize the costs for the required calculations. Many state Extension services offer budgets that may serve as a resource (see [agecon.okstate.edu/budgets](http://agecon.okstate.edu/budgets) or [agrisk.umn.edu/budgets](http://agrisk.umn.edu/budgets) for links to other state sites). Standard Performance Analysis (SPA) summaries offer benchmarks for production as well, particularly representing the southern Plains states ([agecoext.tamu.edu/programs/management-programs/beef-cattle-standard-performance-analysis-spa/](http://agecoext.tamu.edu/programs/management-programs/beef-cattle-standard-performance-analysis-spa/)). These are especially helpful when working out a lease agreement for the first time.

Cow herd costs can be calculated either for the whole herd or on a per cow basis. Total herd figures are sometimes easier to obtain from farm records, but the parties must be sure cost items are based on the same number of cows as will be in the lease. For this reason, it often is recommended costs be calculated on a per cow unit basis. A cow unit is the cow, her calf, her share of the bull and her share of a replacement heifer when replacements are raised within the lease. For example, if there are 100 cows in the herd and both the owner and operator agree that 15 heifers need to be retained each year, then the development costs for the heifers should be

entered into the cow unit-cost budget, where the per-heifer cost is multiplied by 15% (i.e., 15 heifers divided by 100 cows). Likewise, the costs associated with bull ownership and care should be adjusted by the bull-to-cow ratio.

Estimates of annual fixed costs for assets such as breeding stock, buildings, machinery and equipment can be approximated using the following steps:

Average investment = (original cost + salvage value) ÷ 2

Annual depreciation = (original cost – salvage value) ÷ years of useful life.

Annual interest = average investment x interest rate.

Annual insurance = average investment x insurance rate.

Annual taxes = average investment x personal property tax rate.

Depreciation is not based on tax depreciation as tax laws change with time and often allow complete “expensing” of items. Used machinery or equipment would have a shorter useful life than new items. In some cases, it may be more appropriate to use a replacement cost or current market value as opposed to original cost in the above formulas. What is important is that the useful life is consistent with the value used. For example, the useful life of a new building will be much longer than one associated with an older building.

A short explanation of each cost item listed in Worksheet 1 on page 43 may help in arriving at an equitable arrangement.

### **Livestock Ownership**

Interest on the average value of cows represents the investment contribution of the owner. The interest rate used should be between the rate that could be earned if money were invested in other alternatives (opportunity cost) and the current rate for borrowed capital.

Depreciation on cows is a contribution of the owner if they are responsible for purchasing or raising the replacements outside of the lease. Total depreciation is the difference between the market value of the cow when she is placed in the herd and her salvage or cull value when she is removed from the herd. To arrive at the annual depreciation, total depreciation is divided by the number of years the cow is expected to remain in the herd. When replacement heifers are raised within the lease, these costs are included in the production inputs, so depreciation is not a factor.

Interest and depreciation on bulls are computed in the same way as for cows. The annual cost of the bull is divided by the number of cows served each year to determine the cost to be allocated against each cow. Schedule A later in this chapter can be used to estimate the depreciation and average investment for both cows and bulls.

Taxes on livestock are the amount of personal property tax (if any) on the cows and bulls.

Cow insurance or death loss could be shared if, for example, the operator guarantees a maximum death loss. The cost of insuring the cow is typically used, but death

loss can be substituted when the contributing party “self-insures” (i.e., does not buy insurance). Do not include both if death loss is reimbursed by insurance. Cow insurance or death loss is usually computed at 0.5% to 1.0% of the average value of the cow.

### **Machinery, Equipment and Buildings Used in the Livestock Enterprise**

Interest and depreciation on buildings, machinery and equipment used in the livestock operation is a contribution of the party who owns the property. One alternative for valuing the contribution is to use the rental rate (for example, cost per hour to rent a tractor), which may work well where markets are established and rental rate information is available. In other cases, it may be appropriate or necessary to calculate annual interest, economic depreciation, interest and taxes on the contributed assets. Assigning a proportion of the value of an asset to the livestock enterprise also is required, if for instance, a tractor or trailer is used for other purposes in addition to the cow enterprise.

The value of buildings, machinery and equipment used in the beef cow enterprise at the end of this chapter varies from operation to operation.

Schedules B and C can be used to estimate the machinery, equipment and building investment used in livestock production. Livestock machinery and equipment would include tractors, wagons, trucks, trailers, loaders, manure spreaders, bale spears, hay feeders, feed bunks, mineral feeders and handling facilities used in feeding, handling and observing livestock. Livestock machinery and equipment does not include hay or silage harvesting equipment if crop or hay contributions are valued using market prices.

Taxes and insurance on buildings and equipment are the costs for taxes and insurance incurred against property used for livestock during the year. These costs typically range from 1% to 2% of the current value of buildings and equipment.

Repairs on buildings and equipment are the costs of maintaining buildings, equipment and fences used for livestock production. Repairs typically average 2.5% to 4% of new costs on an annual basis.

### **Pasture**

The land charge for pasture can be calculated two ways: a) landowner’s ownership costs or b) cash rental value. Ownership costs include a return on land investment plus real estate taxes. The cost of fencing, gates and watering systems may be included in the land investment when being used in the livestock enterprise. A fair market value for agricultural purposes is placed on the land and multiplied by the long-range rate of return to land (typically 1% to 4%) to calculate the annual contribution. Real estate taxes are actual costs; however, they may be accounted for in the rate of return, thus it is important to not double count them. The rental value for the landowner is the amount for which the property could be rented to someone else. If the land is being rented by the party providing it, then the contribution is the actual cost of rent. Rental rates may be quicker and easier to use if there is an established market for pasture in

the area. Schedule D can be used to calculate the number of acres of pasture needed per cow unit. (For more information on pasture leases, see [aglease101.org](http://aglease101.org) and NCFMEC-03, “Pasture Rental Arrangements for Your Farm.” [North Central Farm Management Extension Committee])

### Feed and Other Expenses

Software tools may be useful in determining appropriate combinations of forage, hay and feed to meet the cow’s nutritional needs under different pasture situations and feed/hay pricing environments (for example, see [beef.okstate.edu/files/cowculator-2020](http://beef.okstate.edu/files/cowculator-2020)). Hay, silage and other raised feed should be valued at long-run market prices when estimating contributions for a multiple year lease. However, if the lease will only be for one year, then it may be more appropriate to use current market prices. Market value is the price that could be received if the product is sold instead of used on the farm. Cost of production can be used in a whole farm lease agreement; however, market values are generally used because they are simpler to calculate. It is recommended that long-run market values be used for all raised feed for the beef cow herd share agreement. **Note:** If hay, silage and/or grain raised under a separate crop-share lease arrangement is fed, the landowner needs to receive credit for their share. If both parties contribute to the cost of producing feed, each party should receive credit for their contribution. For example, one party may furnish land for hay production and the other party may furnish machinery and labor. However, as stated previously, the cow herd lease arrangement will be much more straightforward with fewer potential complications if other leased assets (e.g., pasture, hay ground, crop land) are handled with a separate agreement.

Protein and mineral supplements should be valued at cost. It is generally recommended that protein and minerals be furnished by the same party providing the hay and forage, so there will be no conflict concerning winter rations.

Veterinary and drug expenses may be contributed by either party, or they may be shared the same as the income is shared. When shared, they are not factored into calculations for determining the equitable shares. (See section on shared and unexpected expenses.)

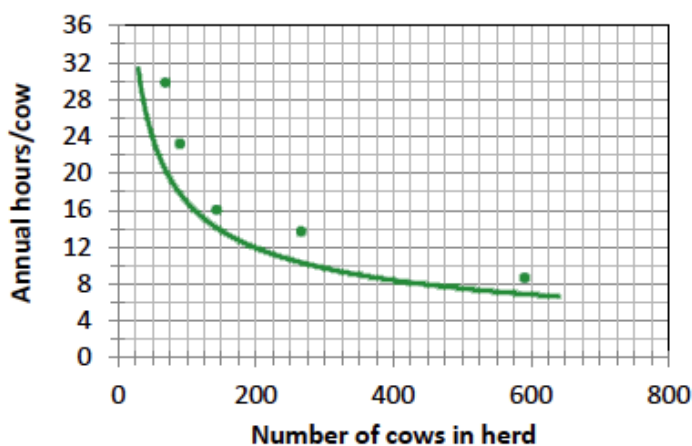
Fuel and oil costs would be for feeding, hauling and observing livestock.

Truck expenses, including repairs, license, insurance, interest and depreciation, should be prorated to the cow herd if the truck is not included in the livestock machinery and equipment. Hired trucking and marketing generally are shared, because they are often deducted from sales.

Utilities and miscellaneous costs should include water charges, electricity, telephone, postage, dues and registration fees that are chargeable to the cow herd.

Labor is a contribution of the party providing it. If labor is hired, the expense is the actual cost to the party who pays for it. If labor is furnished by one or both parties, then labor should be valued at the going rate as though it had been hired. Labor required per cow per year will vary with the size of the herd. Large herds will require around six hours per cow per year, while per cow requirements for smaller herds

may be substantially higher (see Figure 5.1). An additional allowance would be required if replacements are raised within the lease rather than purchased. Management of the cow herd typically will be the responsibility of both parties. The owner of the cows should decide, in consultation with the operator, which cows to cull and which heifers to keep for replacements. The owner, along with the operator, should decide on bulls to use that will maintain or improve the herd quality. The operator should be responsible for the day-to-day decisions involved in managing the cow herd to produce maximum returns. Management can be valued at 0.5% to 1.0% of capital managed or 5% to 10% of value of annual production. Schedule E at the end of this chapter can be used to calculate a management charge. Because management is difficult to define, and because both parties provide management, this contribution often is excluded from the calculations in determining equitable shares.



**Figure 5.1. Estimated labor requirements for beef cow herds.** Source: USDA ERS, EIB #73, McBride and Mathews, March 2011.

### Shared and Unexpected Expenses

Sharing the cost of production-increasing inputs in the same percentage as the value of production encourages the parties to use the optimal amount of the input to maximize net returns to the total business operation. Examples of production-increasing expenses include, but are not limited to, antibiotics, implants and creep feed. Even though shared expenses do not affect relative contributions, they should be calculated for a total cost estimate that can be used for cash flow and profitability analysis. These costs can be entered on Worksheet 1.

Unexpected expenses such as additional feed during a blizzard or drought, catastrophic health problems and other irregular items should be shared, because they are periodic and hard to predict. If shared, unexpected expenses do not change the percent contribution of either party when they occur.

### Total Costs

Total costs reflect the combined contributions of both parties. The number may lead to concern by lease parties about the profitability of the cow herd operation,

which is a risk each party assumes. If gross returns per cow exceed total costs per cow, each party will get full value for all costs plus a “profit.” If gross returns are less than total costs, then each party will not receive full value for their contribution. However, this does not necessarily mean that each party does not benefit from the operation. Livestock owners may realize benefits such as capital gain advantages and pride of ownership. Livestock operators may be able to use hard-to-market feed and off-season labor.

### Determining Contributions of Each Party and Percent Contributed

After the annual contribution for all production inputs is determined (Worksheet 1, total column), costs are allocated to the party who contributes each particular input (owner and operator columns). If a certain input factor is provided by both parties, it is divided between them. Worksheet 1 can be expanded to include more than two parties if needed. As noted earlier, the value of homegrown grains and forages raised on land owned by one party and farmed by the other party are prorated based on the crop-share agreement. When the allocations are completed, the inputs are added to determine the total contribution by each party.

To determine the percent contributed by each party, divide the amount contributed for each individual party by the total contribution of all parties. Expenses to be shared should be shared in these same percentages.

### Determining Income

Value of production is shared in the same proportion as costs are contributed. Value of production may or may not be the same as sales. When replacement heifers or cows are purchased or provided from other sources outside the lease, value of production equals total calf sales. Calf sales are shared based on the percent contribution. However, when replacement heifers are retained and not sold, their estimated value plus calf sales equals value of production. Total value of production is shared based on the percentage of contribution.

The method of providing replacement cows or heifers has a major impact on items that are considered as contributions and on how cash income is shared. In all cases, the cull bull income would go to the party that provided the bull(s). When replacement females are provided by the owner and not raised as part of the lease, depreciation and death loss are part of the owner’s contribution; when replacements are raised as part of the lease, depreciation and death loss are not part of the owner’s contributions, leading to a smaller share of contributions unless other adjustments are made. Table 5.2 highlights several ways of calculating contributions and sharing income for alternative ways of how replacements are handled in the lease (described in more detail in notes that follow).

1. Replacements are purchased by the owner. All calves are sold and proceeds are split based on contributions. Cull cow sales go to the owner and the owner provides replacements. This is the simplest and most clear-cut method.

2. Replacements are kept but raised in a separate operation. A market value is placed on the replacement heifers as if they were sold. When the remaining calves are sold, 1) the operator and owner share all calf sales and the owner purchases the operator’s share of the replacement heifers; or 2) the operator receives a higher percentage of cash sales because the cow owner receives the replacement heifers as a share of income. In either case, the operator’s income equals operator percentage share times the sum of cash sales and the value of replacement heifers. The cow owner would receive all cull cow income, would own the replacement heifers and be responsible for the cost of growing them to maturity.
3. Share value of production of calves (calf sales plus value of replacement heifers). This method is the same as method 2, except the cow owner’s share of contribution and receipts would be smaller. Owner’s cost would be lower because the cost of growing the replacement heifers is included in contributions. The cow owner would own the replacement heifers and would receive all cull cow sales.
4. Share all sales. All calf and cull cow sales would be shared based on percentage of contribution. Cow sales are substituted for the value of replacement heifers. This method is simpler and works well when cull cows are about equal in value to heifers and the size of the herd stays the same. The owner has less capital gain sales and more ordinary income for tax purposes.

A beef cow share-leasing arrangement that is **fair**, **equitable** and **simple** can be very satisfactory for all parties. The worksheets in this chapter and supporting schedules can be used to determine the value of contributions and percentages for sharing income. Blank worksheets are available in the livestock leasing bulletin on [AgLease101.org](http://AgLease101.org), from which much of this chapter was reprinted. A companion computer spreadsheet (Beef Cow Lease worksheets.xlsx) also is available that can be used to estimate the equitable share rent and cash rents. The Excel spreadsheet is available at [atagmanager.info/livestock-meat/production-economics/ksu-beef-cow-lease-simple](http://atagmanager.info/livestock-meat/production-economics/ksu-beef-cow-lease-simple) or the [aglease101.org/](http://aglease101.org/) website.

### Cash Leasing Beef Cows

With certain conditions, renting cows for cash might be preferable to a share arrangement. For example, a farmer/rancher contemplating retirement might be interested in renting out their cows. A young farmer who may be limited on capital might be interested in renting extra cows to utilize pasture. In either case, neither party may be interested in renting for long periods of time. The same information used to determine the value of contributions under a share arrangement is used to determine cash rent desired and an ability to pay rent. Compensation is expected for a return on investment, depreciation, taxes and death losses. The prospective renter should estimate the returns from a cow (or herd) to determine how much rent could be paid.

**Table 5.2. Income sharing arrangements with alternative ways of handling replacements.**

|                                      | <i>Replacements purchased by owner<br/>(from outside source)</i>            |  | <i>Replacements retained but raised in a<br/>separate operation</i>                     |  |
|--------------------------------------|---|--|---|--|
|                                      | <i>Operator</i>   | <i>Owner</i>                             | <i>Operator</i>   | <i>Owner</i>                             |
| <b>Contribution to lease (costs)</b> |   |  |   |  |
| Cow depreciation                     | 0%  | 100%                                     | 0%  | 100%                                     |
| Cow interest                         | 0%  | 100%                                     | 0%  | 100%                                     |
| Cow death loss                       | 0%  | 100%                                     | 0%  | 100%                                     |
| Replacements                         | 0%  | 100%                                     | 0%  | 100%                                     |
| <b>Income from herd</b>              |   |  |   |  |
| Calf sales                           | % based on<br>contributions   | % based on<br>contributions              | % based on<br>contributions   | % based on<br>contributions              |
| Cull cow sales                       | 0%  | 100%                                     | 0%  | 100%                                     |
| Heifers retained<br>for replacement  | N/A   | N/A                                      | % based on<br>contributions <sup>1</sup>  | % based on<br>contributions <sup>1</sup> |
|                                      | <i>Replacements raised within lease with<br/>value of production shared</i> |  | <i>Replacements raised within lease with<br/>value of cash sales shared<sup>3</sup></i> |  |
|                                      | <i>Operator</i>   | <i>Owner</i>                             | <i>Operator</i>   | <i>Owner</i>                             |
| <b>Contribution to lease (costs)</b> |   |  |   |  |
| Cow depreciation <sup>2</sup>        | 0%  | 0%                                       | 0%  | 0%                                       |
| Cow interest                         | 0%  | 100%                                     | 0%  | 100%                                     |
| Cow death loss                       | 0%  | 100%                                     | 0%  | 100%                                     |
| Replacements                         | % based on<br>contributions   | % based on<br>contributions              | % based on<br>contributions   | % based on<br>contributions              |
| <b>Income from herd</b>              |   |  |   |  |
| Calf sales                           | % based on<br>contributions   | % based on<br>contributions              | % based on<br>contributions   | % based on<br>contributions              |
| Cull cow sales                       | 0%  | 100%                                     | % based on<br>contributions   | % based on<br>contributions              |
| Replacement<br>heifers               | % based on<br>contributions <sup>1</sup>                                    | % based on<br>contributions <sup>1</sup> | N/A   | N/A                                      |

- 1 Heifers retained for replacement would be valued at the time of other calf sales with the owner purchasing the operator's share. The owner is responsible for the costs of growing replacement heifers to maturity.
- 2 There is no depreciation on cows in a cowherd that includes the costs of raising replacement heifers (i.e., the average age of the cowherd is constant through time).
- 3 This arrangement works best when the value of a cull cow is approximately the same as a heifer calf.

### **Determining the Cash Rental Rate**

Cash rental rates can be determined three ways:

1. Livestock ownership costs. Ownership costs are the same as discussed in the share lease section. They are depreciation, interest on investment, insurance or death loss and personal property taxes, if any. Section 1 of Worksheet 2 can be used to calculate ownership costs.
2. Livestock owner net share rent. Net share rent for the livestock owner is the owner's share of value of production less shared expenses and a risk adjustment. The net share rent is adjusted for risk because the owner no longer has any production or price risk (Worksheet 2, Section 2).
3. Operator's net return to livestock. Operator's net return to livestock is the value of production minus the operator's production expenses. The net return to livestock represents the most an operator could pay given the estimated costs. Worksheet 2, Section 3, can

be used to calculate the operator's costs and net return to livestock.

Evaluation of the three rates can provide an opportunity for discussion and negotiation to determine an acceptable cash rental rate. Cash rental rates need to be reevaluated on a regular basis. Cattle prices can change significantly from year to year, changing the return to fixed assets. Because risk is not shared between owner and operator, the lease may need to be re-evaluated or changed to a share arrangement.

### **Leasing Bulls**

Another way for the cow owner to reduce expenses is to lease, rather than own, a bull. The producer must compare the costs and benefits of leasing a bull with owning a bull. Leasing eliminates the capital expenditure of purchasing a bull. The cost of purchasing a bull depends on the cattle market and quality of the bull. Most bull owners in the leasing business charge \$700 or more per breeding season.

A leased bull is generally only kept during the breeding season, so operating costs are reduced. For example, the cost of feeding a bull is estimated at \$350 per year. The costs of veterinary and medicine, marketing and death loss (1%) approximate \$35. Labor is estimated at about \$45 per year, resulting in total cash costs of \$430 per bull per year.

Another cost of owning a bull is depreciation and interest. Table 5.3 gives an example of the costs of depreciation and interest on average investment for a bull depreciated for three and four years using a 5% interest rate and \$1,500 salvage value with different purchase prices.

The cow owner also must consider how leasing a bull could affect the health of their herd. Leasing virgin bulls is ideal to ensure that a venereal disease such as vibriosis or trichomoniasis is not introduced into the herd. This may not be an option, so owners should consult a veterinarian to ensure leased bulls are healthy.

If they have adequate capital and a large cowherd over which to spread operating costs, producers may want to own one or more bulls to ensure they have a quality bull for use each season. There also is the benefit of the salvage value when the bull is sold.

**Table 5.3. Annual cost of depreciation and interest on investment for alternative bull purchase prices and years of use (\$1,500 salvage value and 5% interest rate).**

|                     | Bull purchase price |         |         |         |
|---------------------|---------------------|---------|---------|---------|
|                     | \$3,000             | \$5,000 | \$7,000 | \$9,000 |
| Own for three years |                     |         |         |         |
| Depreciation        | \$500               | \$1,167 | \$1,833 | \$2,500 |
| Interest            | \$113               | \$163   | \$213   | \$263   |
| Total               | \$613               | \$1,329 | \$2,046 | \$2,763 |
| Own for four years  |                     |         |         |         |
| Depreciation        | \$375               | \$875   | \$1,375 | \$1,875 |
| Interest            | \$113               | \$163   | \$213   | \$263   |
| Total               | \$488               | \$1,038 | \$1,588 | \$2,138 |

## Farmland Lease Agreements

Leasing land often is a cost-effective means of acquiring forage. Cash leases and share leases are common rental arrangements for land in Oklahoma. Cash leases may require a fixed payment, either cash or a specified yield, for instance, 10 bushels of wheat or one ton of hay. In share leases, income and certain costs are shared between tenant and landlord and management decisions may be made jointly. Rental agreements and rates are influenced by many factors including:

- The location and quality of land.
- Improvements on the land.
- The landowner's costs.
- The tenant's expected earnings.
- Previous rates charged.
- Competition for the land.
- Government programs.
- Tax laws.
- The general economy.
- The party's willingness and ability to bear risks.
- Desired land management practices.
- The personal relationship between tenant and landlord.

Landowners and tenants must choose a type of lease agreement such as fixed or flexible cash arrangements, share arrangements or some combination. Each type of arrangement has advantages and disadvantages. Some of these advantages and disadvantages are discussed in Table 5.1.

Landowners and tenants should each consider the following questions when choosing a type of lease arrangement:

- What portion of the income do I receive?
- What portion of the costs do I contribute?
- What portion of the risk do I bear?
- What crop and land management practices will be followed?
- What will be the condition of the land after the term of the lease?

As most pasture leases in Oklahoma are cash leases, the focus of the remainder of the chapter will be on cash lease agreements for farmland.

## Determining a Fair Rent for the Cash Lease

The market approach provides a good starting point for negotiations. With the market approach, the going cash rental rate for the area is used as a guideline. Although this method appears simple on the surface, many questions must be answered.

- What land in the area is of the same quality with respect to productivity?
- How much is a neighbor paying their landlord?
- If this land is of superior quality, how much more is the additional quality worth?

Published results of surveys conducted by OSU and the Oklahoma office of the USDA Natural Agricultural Statistics Service provide information on rental rates. See OSU Extension current report CR-216 *Oklahoma Pasture Rental Rates* at [extension.okstate.edu/fact-sheets/](http://extension.okstate.edu/fact-sheets/) and Cash Rents by County at [nass.usda.gov/](http://nass.usda.gov/) for more information.

A second approach is to calculate the cost of land ownership and add an appropriate return on equity. Land ownership costs include:

1. Property taxes on the land.
2. Repairs, depreciation, taxes and insurance on any improvements on the land used by the tenant in the farming operation.
3. A suitable return on the landowner's investment.

A third approach, the residual income method, estimates the fair cash rent using the tenant's expected net return. The expected total income is the sum of expected price times yield plus other income such as wheat pasture rental or government program payments. The time period for the life of the agreement should be considered when estimating prices. The tenant's total costs are:

1. Variable production expenses such as seed, fertilizer, planting and harvest costs.

2. Fixed production expenses including depreciation, taxes, insurance and interest on equipment and machinery investments.
3. Return to management and labor.

The expected net return (income less total costs and the return to management and labor) is the maximum rent the tenant can afford to pay.

The tenant and the landlord may want to estimate cash rents using more than one method, compare the results and negotiate a final figure. By using several different methods, the parties have a chance to see a range of estimated rents, reflecting different points of view. Careful negotiations will provide a balanced agreement that encourages honesty and cooperation between both parties.

A fair rental agreement must be reviewed and adjusted regularly to remain equitable. Changes in prices, costs and yields can make a fair agreement lopsided in a short period of time. A flexible cash arrangement can reduce the frequency of necessary adjustments and distribute more of the risk between the parties.

However, flexibility does change some of the risks and opportunities faced by the parties. Adding flexibility for price and yield risks shifts more risk to the landowner, but will allow them to reap the advantages in good years. In accordance, the tenant will face less risk, but lose some of the benefits of exceptional price and/or yield years. Parties should keep this in mind before adding flexibility to their agreement.

For more detailed information, including example calculations and worksheets, refer to NCFMEC-03, Pasture Rental Arrangements For Your Farm. This publication, leasing forms and other publications are free to download at [aglease101.org/](http://aglease101.org/).

## Putting the Agreement in Writing

A written agreement offers a number of advantages:

- It encourages a detailed statement of the agreement that assures a better understanding by both parties.
- It serves as a reminder of the terms originally agreed upon.
- It provides a valuable guide for the heirs if either the operator or livestock owner dies. The agreement should be carefully reviewed each year to ensure the terms of the agreement are still applicable and desirable.
- It serves as documentation for tax purposes.

Every lease should include certain items. These are the names of the parties involved, an accurate description of the property being rented, the livestock lease terms described earlier and the signatures of the parties. Absent a statutory or constitutional limitation, the duration of the lease can be any length of time agreed upon by the parties. Most leases are for at least one full year. Operators sometimes request leases for more than one year, particularly if they must invest more capital in equipment or improvements needed.

The lease also needs to clearly specify ownership of the cattle. Sometimes, a lessee may have a loan secured by their cattle. However, the definitions of “cattle” in the loan documents may be so broad as to include all cattle possessed

by the rancher. As a result, the owner of leased cattle runs the risk of their cattle being seized and sold if the lessee defaults on their loan obligations. To minimize this risk, the lease document needs to be very clear that:

1. Title to the leased cattle remains with the lessor.
2. The lessee will take whatever steps are necessary to prevent the leased cattle from becoming “collateral” for any of the lessee’s debts.
3. The lessee will reimburse the lessor in the event of any seizure and sale of the lessor’s cattle.
4. The lessee will not brand, mark or identify the leased cattle in any way that could cause them to be mistaken for the lessee’s own cattle. The lessor also should take care to brand, tag or otherwise identify the cattle with their own marks before turning over possession of the cattle to minimize these risks.

In general, most transactions involving real estate require a contract in writing to be enforceable. In most states, oral leases for not more than a year are enforceable. Because specific legal terms surrounding leasing vary from state to state, livestock owners and operators are encouraged to check with their local Extension service or a knowledgeable lawyer as to the specific laws for their state. As a practical matter though, it is always a good idea to put the agreement in writing regardless of its duration. Putting an agreement in writing helps both parties understand their rights and duties and can help resolve many disagreements before they even start.

Livestock owners, as well as operators, should enter long-term leases only after very careful consideration — a lease contract “marries” parties to undesirable and desirable provisions alike. Often, it is better to include a provision for buy-out terms or compensation for unexhausted improvements made by one party rather than to have a long-term lease that fixes terms for an extended time period. One of the functions of a written lease is to anticipate possible developments and to state how to handle such problems if they actually do develop.

## Conclusion

A livestock lease is an excellent way for cattle owners, landowners and caretakers to pool their livestock and land resources. If the arrangement is properly laid out ahead of time, the lease can help each party share production risk. The lease should cover all parameters of production and possible situations that could arise over the duration of the contract. The parties entering into the arrangement should clearly define their expectations with respect to sharing of costs and receipts. The owner and caretaker should choose an arrangement that best matches their resources and desired returns.

Cash leasing agreements have advantages and disadvantages to both landowners and tenants. Both parties need to recognize the risks and opportunities they face under a cash agreement. By working together to determine a fair rental charge, the parties will have a greater understanding

of the other's position. This understanding should lead to better landowner and tenant relations and keep the agreement fair to both parties.

Arriving at a fair agreement is more likely if several of the methods discussed are used in negotiating the final rental charge. Each method views the agreement from a different perspective and further clarifies each party's position.

Developing an equitable lease agreement requires both the parties to provide estimates of their contributions to production costs (both fixed and variable expenses). The share lease worksheets or spreadsheets can be a helpful tool in drafting an equitable agreement. Although customs in the area may dictate some terms of lease, other terms can be used to tailor the individual situation.

## References

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- North Central Farm Management Extension Committee, "Beef Cow Rental Arrangements For Your Farm." NCFMEC-06, February 2013. [aglease101.org/](http://aglease101.org/).
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- USDA National Agricultural Statistics Service, "Oklahoma Cash Rent" [nass.usda.gov/Statistics\\_by\\_State/Oklahoma/Publications/Oklahoma\\_Farm\\_Statistics/index.php](http://nass.usda.gov/Statistics_by_State/Oklahoma/Publications/Oklahoma_Farm_Statistics/index.php).

**Worksheet 1. Beef Cow Share Lease Agreement Worksheet – Per Cow\***

Replacements Purchased or Raised Outside of Lease       Replacements Raised within Lease

| Livestock Investment (Schedule A)  | Contribution  |               |               |
|--|---------------|---------------|---------------|
|  | Total         | Operator      | Owner         |
| Depreciation <sup>A</sup> (do not include cow depreciation if replacements are raised within the lease): |               |               |               |
| Cow  | \$ <u>44</u>  | \$ _____      | \$ <u>44</u>  |
| Bull   | \$ <u>13</u>  | \$ _____      | \$ <u>13</u>  |
| Interest:  |               |               |               |
| Cow \$ <u>825</u> average investment × <u>6</u> % interest =   | \$ <u>50</u>  | \$ _____      | \$ <u>50</u>  |
| Bull \$ <u>86</u> average investment × <u>6</u> % interest =   | \$ <u>5</u>   | \$ _____      | \$ <u>5</u>   |
| Taxes and Insurance:   |               |               |               |
| Cow \$ <u>825</u> average investment × <u>1</u> % rate =   | \$ <u>8</u>   | \$ _____      | \$ <u>8</u>   |
| Bull \$ <u>86</u> average investment × <u>1</u> % rate =   | \$ <u>1</u>   | \$ _____      | \$ <u>1</u>   |
| Cow Death Loss:  |               |               |               |
| \$ <u>825</u> average investment × <u>1</u> % rate =   | \$ <u>8</u>   | \$ _____      | \$ <u>8</u>   |
| <b>Subtotal</b>  | \$ <u>129</u> | \$ _____      | \$ <u>129</u> |
| <b>Livestock Machinery, Equipment and Building Investment (Beef Cow Share) (Schedules B &amp; C)</b>     |               |               |               |
| Depreciation on machinery <sup>B</sup>   | \$ <u>31</u>  | \$ <u>31</u>  | \$ _____      |
| Interest on machinery:   |               |               |               |
| \$ <u>214</u> average investment/cow <sup>B</sup> × <u>6</u> % interest =                                | \$ <u>13</u>  | \$ <u>13</u>  | \$ _____      |
| Taxes and insurance on machinery:  |               |               |               |
| \$ <u>214</u> average investment/cow <sup>B</sup> × <u>0.5</u> % rate =                                  | \$ <u>1</u>   | \$ <u>1</u>   | \$ _____      |
| Depreciation on buildings <sup>C</sup>   | \$ <u>36</u>  | \$ <u>36</u>  | \$ _____      |
| Interest on buildings:   |               |               |               |
| \$ <u>362</u> average investment/cow <sup>C</sup> × <u>6</u> % interest =                                | \$ <u>22</u>  | \$ <u>22</u>  | \$ _____      |
| Taxes and insurance on buildings:  |               |               |               |
| \$ <u>362</u> average investment/cow <sup>C</sup> × <u>0.5</u> % rate =                                  | \$ <u>2</u>   | \$ <u>2</u>   | \$ _____      |
| <b>Subtotal</b>  | \$ <u>105</u> | \$ <u>105</u> | \$ _____      |

(Worksheet 1 continued on next page)

\*All values are rounded to the nearest dollar in the example presented in this worksheet.

**Worksheet 1. Beef Cow Share Lease Agreement Worksheet – Per Cow\* (Cont.)**

**Pasture, Feed and Other Expenses (List only if not shared the same as income)**

|   | Contribution  |               |              |
|---|---------------|---------------|--------------|
|   | Total         | Operator      | Owner        |
| a. <input type="checkbox"/> Return to Land Investment (1% to 4%)    |               |               |              |
| Pasture:  |               |               |              |
| \$ ____ per acre × ____ acre/cow unit <sup>D</sup> × ____% return = | \$ _____      | \$ _____      | \$ _____     |
| b. <input checked="" type="checkbox"/> Cash Rental Value            |               |               |              |
| Pasture <sup>D</sup> <u>10.4</u> acres/cow unit @ <u>20</u> /acre = | \$ <u>208</u> | \$ <u>208</u> | \$ _____     |
| Hay <sup>D</sup> <u>763</u> tons/cow unit @ <u>70</u> /ton =        | \$ <u>53</u>  | \$ <u>53</u>  | \$ _____     |
| Silage <sup>D</sup> _____ tons/cow unit @ _____ /ton =              | \$ _____      | \$ _____      | \$ _____     |
| Crop residue <sup>D</sup> _____ tons/cow unit @ _____ /ton =        | \$ _____      | \$ _____      | \$ _____     |
| Grain <sup>D</sup> _____ lbs/cow unit @ _____ /lb =                 | \$ _____      | \$ _____      | \$ _____     |
| Protein <sup>D</sup> <u>374</u> lbs/cow unit @ <u>0.17</u> /lb =    | \$ <u>64</u>  | \$ <u>64</u>  | \$ _____     |
| Salt and minerals <u>55</u> lbs/cow unit @ <u>0.24</u> lb =         | \$ <u>13</u>  | \$ <u>13</u>  | \$ _____     |
| Veterinary, drug, etc.  | \$ <u>42</u>  | \$ <u>42</u>  | \$ _____     |
| Breeding costs (AI, breeding soundness exam)                        | \$ <u>1</u>   | \$ <u>1</u>   | \$ _____     |
| Fuel and oil for feeding, hauling, and observing                    | \$ <u>26</u>  | \$ <u>26</u>  | \$ _____     |
| Utilities and miscellaneous   | \$ <u>47</u>  | \$ <u>47</u>  | \$ _____     |
| Repairs on machinery and equipment                                  | \$ <u>36</u>  | \$ <u>36</u>  | \$ _____     |
| Repairs on buildings and fences                                     | \$ <u>11</u>  | \$ <u>11</u>  | \$ _____     |
| Hauling   | \$ _____      | \$ _____      | \$ _____     |
| Marketing   | \$ <u>8</u>   | \$ <u>8</u>   | \$ _____     |
| Insurance   | \$ _____      | \$ _____      | \$ _____     |
| Taxes   | \$ _____      | \$ _____      | \$ _____     |
| Labor: <u>9.25</u> hours @ \$ <u>15.00</u> /hour =                  | \$ <u>139</u> | \$ <u>139</u> | \$ _____     |
| Operating interest: (\$ <u>324</u> /2) @ <u>5</u> % =               | \$ <u>16</u>  | \$ <u>16</u>  | \$ _____     |
| (sum of all other costs excluding management)                       |               |               |              |
| Management <sup>E</sup>   | \$ <u>92</u>  | \$ <u>72</u>  | \$ <u>20</u> |
| Subtotal  | \$ <u>756</u> | \$ <u>736</u> | \$ <u>20</u> |
| <b>TOTAL CONTRIBUTION</b>   | <u>990</u>    | <u>841</u>    | <u>149</u>   |
| <b>PERCENT</b>  | <u>100</u>    | <u>84.9</u>   | <u>15.1</u>  |
| Shared Expenses   |               |               |              |
| _____   | \$ _____      | \$ _____      | \$ _____     |
| _____   | \$ _____      | \$ _____      | \$ _____     |
| <b>TOTAL SHARED EXPENSES</b>  | \$ _____      | \$ _____      | \$ _____     |
| <b>Total Contribution + Total Shared Expenses =</b>                 |               |               |              |
| <b>TOTAL EXPENSE</b>  | \$ _____      | \$ _____      | \$ _____     |

\*All values are rounded to the nearest dollar in the example presented in this worksheet.

<sup>A-E</sup> Lettered superscript designated the supplemental detail schedule that can be used to calculate the input value.

## Worksheet 2. Beef Cow Share Lease Agreement Worksheet – Per Cow

### 1. Livestock Ownership Cost (Schedule A)

Depreciation<sup>A</sup> (do not include cow depreciation if replacements are raised within the lease):

|                      |  |    |           |
|----------------------|--|----|-----------|
| Cow                  |  | \$ | <u>44</u> |
| Bull                 |  | \$ | <u>13</u> |
| Interest:            |  |    |           |
| Cow                  | \$ <u>825</u> average investment × <u>6</u> % interest = | \$ | <u>50</u> |
| Bull                 | \$ <u>86</u> average investment × <u>6</u> % interest =  | \$ | <u>5</u>  |
| Taxes and Insurance: |  |    |           |
| Cow                  | \$ <u>825</u> average investment × <u>1</u> % rate =     | \$ | <u>8</u>  |
| Bull                 | \$ <u>86</u> average investment × <u>1</u> % rate =      | \$ | <u>1</u>  |
| Cow Death Loss:      |  |    |           |
|                      | \$ <u>825</u> average investment × <u>1</u> % rate =     | \$ | <u>8</u>  |

OWNERSHIP COST PER COW UNIT PER YEAR \$ 129

### 2. Livestock Owner's Net Share Rent

|   |  |    |            |
|---|--|----|------------|
| Value of production <sup>E</sup>        | \$ <u>726</u> × <u>15.1</u> % owner share (from Worksheet 1) | \$ | <u>109</u> |
| Less equitably shared expenses per head |  | \$ |            |
| EQUALS NET SHARE RENT                   |  | \$ | <u>109</u> |
| Reduction for risk, net share rent      | \$ <u>109</u> × <u>10</u> % risk (5 to 10%)                  | \$ | <u>11</u>  |
| NET SHARE RENT REDUCED FOR RISK         |  | \$ | <u>98</u>  |

### 3. Operator Net Return to Livestock

|  |  |    |            |
|--|--|----|------------|
| Value of production <sup>E</sup>                 |  | \$ | <u>726</u> |
| Costs:   |  |    |            |
| Pasture <sup>D</sup>                             | <u>10.4</u> acres/cow unit @ <u>\$20</u> /acre = | \$ | <u>208</u> |
| Hay <sup>D</sup>                                 | <u>.763</u> tons/cow unit @ <u>\$70</u> /ton =   | \$ | <u>53</u>  |
| Silage <sup>D</sup>                              | _____ tons/cow unit @ _____ /ton =               | \$ | _____      |
| Crop residue <sup>D</sup>                        | _____ tons/cow unit @ _____ /ton =               | \$ | _____      |
| Grain <sup>D</sup>                               | _____ lbs/cow unit @ _____ /lb =                 | \$ | _____      |
| Protein <sup>D</sup>                             | <u>374</u> lbs/cow unit @ <u>\$0.17</u> /lb =    | \$ | <u>64</u>  |
| Salt and minerals                                | <u>55</u> lbs/cow unit @ <u>\$0.24</u> /lb =     | \$ | <u>13</u>  |
| Veterinary, drug, etc.                           |  | \$ | <u>42</u>  |
| Breeding costs (AI, breeding soundness exam)     |  | \$ | <u>1</u>   |
| Fuel and oil for feeding, hauling, and observing |  | \$ | <u>26</u>  |
| Utilities and miscellaneous                      |  | \$ | <u>47</u>  |
| Repairs on machinery and equipment               |  | \$ | <u>36</u>  |
| Repairs on buildings and fences                  |  | \$ | <u>11</u>  |
| Hauling  |  | \$ | _____      |
| Marketing  |  | \$ | <u>8</u>   |
| Insurance  |  | \$ | _____      |
| Taxes  |  | \$ | _____      |

(Worksheet 2 continued on next page)

## Worksheet 2. Beef Cow Share Lease Agreement Worksheet – Per Cow (Cont.)

|  |                |
|--|----------------|
| Labor: <u>9.25</u> hours @ \$ <u>15.00</u> /hour =           | \$ <u>139</u>  |
| Operating interest: (\$ <u>324</u> / 2) @ <u>5</u> % =       | \$ <u>16</u>   |
| (sum of all other costs excluding management)                |                |
| Management <sup>E</sup>                                      | \$ <u>72</u>   |
| Depreciation on machinery <sup>B</sup>                       | \$ <u>31</u>   |
| Interest on machinery:                                       |                |
| \$ <u>214</u> average investment/cow × <u>6</u> % interest = | \$ <u>13</u>   |
| Taxes and insurance on machinery:                            |                |
| \$ <u>214</u> average investment/cow × <u>0.5</u> % rate =   | \$ <u>1</u>    |
| Depreciation on buildings <sup>C</sup>                       | \$ <u>36</u>   |
| Interest on buildings:                                       |                |
| \$ <u>362</u> average investment/cow × <u>6</u> % interest = | \$ <u>22</u>   |
| Taxes and insurance on buildings:                            |                |
| \$ <u>362</u> average investment/cow × <u>0.5</u> % rate =   | \$ <u>2</u>    |
| <b>TOTAL COST</b>  | \$ <u>841</u>  |
| <b>AVAILABLE FOR RENT</b>                                    | \$ <u>-115</u> |

<sup>A-E</sup> Lettered superscript designated the supplemental detail schedule that can be used to calculate the input value.

### Schedule A. Breeding Herd Investment Cost Per Cow

|   | Number of cows <u>50</u> |                      | Number of cows per bull <u>25</u> |                |                           |                                 |
|---|--------------------------|----------------------|-----------------------------------|----------------|---------------------------|---------------------------------|
|   | Beginning Value, \$/hd   | Salvage Value, \$/hd | Years                             | % to Beef Cows | Depreciation <sup>1</sup> | Average Investment <sup>2</sup> |
| Cows  | \$ <u>1,000</u>          | \$ <u>650</u>        | <u>8</u>                          | <u>100</u> %   | \$ <u>44</u>              | \$ <u>825</u>                   |
| Bulls   | \$ <u>2,800</u>          | \$ <u>1,500</u>      | <u>4</u>                          | <u>100</u> %   | \$ <u>325</u>             | \$ <u>2,150</u>                 |
| Bull depreciation and investment per cow <sup>3</sup> |                          |                      |                                   |                | \$ <u>13</u>              | \$ <u>86</u>                    |
| <b>TOTAL PER COW<sup>4</sup></b>                      |                          |                      |                                   |                | \$ <u>57</u>              | \$ <u>911</u>                   |

<sup>1</sup> Depreciation per Cow = (beginning value – salvage value) / years × % to beef cows

<sup>2</sup> Average Investment per Cow = (beginning value + salvage value) / 2 × % to beef cows. Market value may be used to represent the beginning value.

<sup>3</sup> Divide bull average investment and depreciation by number of cows per bull.

<sup>4</sup> Sum of the cows and bull per cow values for depreciation and average investment

**Schedule B. Livestock Machinery and Equipment Investment Per Cow**

| Machine                              | Beginning Value, \$/hd | Salvage Value, \$/hd | Years | % to Beef Cows | Depreciation <sup>1</sup> | Average Investment <sup>2</sup> |
|--------------------------------------|------------------------|----------------------|-------|----------------|---------------------------|---------------------------------|
| Tractor                              | \$ 35,000              | \$ 20,000            | 10    | 12 %           | \$ 180                    | \$ 3,300                        |
| Pickup Truck                         | \$ 39,200              | \$ 5,000             | 10    | 10 %           | \$ 342                    | \$ 2,210                        |
| Hay Feeders                          | \$ 3,200               | \$ 0                 | 10    | 100 %          | \$ 320                    | \$ 1,600                        |
| Bale Spear                           | \$ 280                 | \$ 0                 | 10    | 100 %          | \$ 28                     | \$ 140                          |
| Manure Loader                        | \$ 1,000               | \$ 0                 | 10    | 100 %          | \$ 100                    | \$ 500                          |
| Manure Spreader                      | \$ 560                 | \$ 0                 | 10    | 100 %          | \$ 56                     | \$ 280                          |
| Scraper                              | \$ 350                 | \$ 0                 | 10    | 100 %          | \$ 35                     | \$ 175                          |
| Gooseneck Trailer                    | \$ 8,400               | \$ 0                 | 10    | 60 %           | \$ 504                    | \$ 2,520                        |
| <b>TOTAL for Cow-Calf Enterprise</b> |                        |                      |       |                | \$ 1,565                  | \$ 10,725                       |
| <b>TOTAL PER COW<sup>3</sup></b>     |                        |                      |       |                | \$ 31                     | \$ 214                          |

<sup>1</sup> Depreciation = (beginning value – salvage value) / years × % to beef cows

<sup>2</sup> Average Investment = (beginning value + salvage value) / 2 × % to beef cows. Market value may be used to represent the beginning value.

<sup>3</sup> Total per cow = total for cow-calf enterprise (sum of column) / number of cows in herd

**Schedule C. Livestock and Feed Storage Buildings and Fence Investment Per Cow**

| Building                             | Beginning Value | Salvage Value | Years | % to Beef Cows | Depreciation <sup>1</sup> | Average Investment <sup>2</sup> |
|--------------------------------------|-----------------|---------------|-------|----------------|---------------------------|---------------------------------|
| Barn                                 | \$ 20,000       | \$ 0          | 20    | 100 %          | \$ 1,000                  | \$ 10,000                       |
| Hay Barn                             | \$ 10,000       | \$ 0          | 20    | 100 %          | \$ 500                    | \$ 5,000                        |
| Corrals                              | \$ 6,175        | \$ 0          | 20    | 100 %          | \$ 309                    | \$ 3,087                        |
| <b>TOTAL for Cow-Calf Enterprise</b> |                 |               |       |                | \$ 1,809                  | \$ 18,087                       |
| <b>TOTAL PER COW<sup>3</sup></b>     |                 |               |       |                | \$ 36                     | \$ 362                          |

<sup>1</sup> Depreciation = (beginning value – salvage value) / years × % to beef cows

<sup>2</sup> Average Investment = (beginning value + salvage value) / 2 × % to beef cows. Market value may be used to represent the beginning value.

<sup>3</sup> Total per cow = total for cow-calf enterprise (sum of column) / number of cows in herd

**Schedule D. Pasture Acres and Feed Amounts Per Cow Unit**

Replacements Purchased or Raised Outside of Lease       Replacements Raised within Lease

**Pasture**

Acres/cow and calf 10.0 × 1 unit = 10.0  
 Acres/replacement heifer \_\_\_\_\_ × \_\_\_\_\_ % replacement = \_\_\_\_\_  
 Acres/bull 10.0 ÷ 25 number of cows/bull = .40  
 Total Pasture Acres Per Cow Unit 10.4

**Hay**

Pounds/day/cow and calf 12 × 120 number of days ÷ 2,000 = 0.720  
 Pounds/day/replacement heifer \_\_\_\_\_ × \_\_\_\_\_ number of days ÷ 2,000 × \_\_\_\_\_ % replacement = \_\_\_\_\_  
 Pounds/day/bull 10 × 120 number of days ÷ 2,000 ÷ \_\_\_\_\_ number cows/bull = 0.043  
 Total Tons of Hay Per Cow Unit 0.763

**Silage**

Pounds/day/cow and calf \_\_\_\_\_ × \_\_\_\_\_ number of days ÷ 2,000 = \_\_\_\_\_  
 Pounds/day/replacement heifer \_\_\_\_\_ × \_\_\_\_\_ number of days ÷ 2,000 × \_\_\_\_\_ % replacement = \_\_\_\_\_  
 Pounds/day/bull \_\_\_\_\_ × \_\_\_\_\_ number of days ÷ 2,000 ÷ \_\_\_\_\_ number cows/bull = \_\_\_\_\_  
 Total Tons of Silage Per Cow Unit \_\_\_\_\_

**Crop residue**

Pounds/day/cow and calf \_\_\_\_\_ × \_\_\_\_\_ number of days ÷ 2,000 = \_\_\_\_\_  
 Pounds/day/replacement heifer \_\_\_\_\_ × \_\_\_\_\_ number of days ÷ 2,000 × \_\_\_\_\_ % replacement = \_\_\_\_\_  
 Pounds/day/bull \_\_\_\_\_ × \_\_\_\_\_ number of days ÷ 2,000 ÷ \_\_\_\_\_ number cows/bull = \_\_\_\_\_  
 Total Tons of Residue Per Cow Unit \_\_\_\_\_

**Grain**

Pounds/day/cow and calf \_\_\_\_\_ × \_\_\_\_\_ number of days = \_\_\_\_\_  
 Pounds/day/replacement heifer \_\_\_\_\_ × \_\_\_\_\_ number of days × \_\_\_\_\_ % replacement = \_\_\_\_\_  
 Pounds/day/bull \_\_\_\_\_ × \_\_\_\_\_ number of days ÷ \_\_\_\_\_ number cows/bull = \_\_\_\_\_  
 Total Pounds of Grain Per Cow Unit \_\_\_\_\_

**Protein**

Pounds/day/cow and calf 3 × 120 number of days = 360  
 Pounds/day/replacement heifer \_\_\_\_\_ × \_\_\_\_\_ number of days × \_\_\_\_\_ % replacement = \_\_\_\_\_  
 Pounds/day/bull 4 × 90 number of days ÷ 25 number cows/bull = 14  
 Total Pounds of Protein Per Cow Unit 374

## Schedule E. Estimated Management Charge

### Method 1. Capital Managed

Breeding Herd Investment Per Cow, Schedule A

Market Value: Cow \$ 1,400 + (Bull \$ 2,500 ÷ 25 number of cows/bull) \$ 1,112

Machinery and Equipment Investment Per Cow, Schedule B \$ 214

Building and Fence Investment Per Cow, Schedule C \$ 362

Land Investment Per Cow = 10.4 acres/cow (Schedule D) × land value  
\$ 1,600/acre \$ 16,640

Total Capital Managed Per Cow \$ 18,328

Management Charge (typically 0.5 to 1.5%) 0.75

Management Charge Per Cow = Total Capital Managed per Cow × Management  
Charge \$ 137.46

### Method 2. Value of Production

Steers 550 lbs/head × 50% × 87 % calf crop<sup>1</sup> @ sale price \$ 165 = \$ 394.76

Heifers 525 lbs/head × 50% × 87 % calf crop<sup>1</sup> @ sale price \$ 145 = \$ 331.14

Cull Cows<sup>2</sup> \_\_\_\_\_ lbs/head × \_\_\_\_\_ % replacement rate @ sale price  
\$ \_\_\_\_\_ = \$ \_\_\_\_\_

Value of Production Per Cow \$ 725.90

Management Charge (typically 5 to 10%) 7.5%

Management Charge Per Cow = Value of Production per Cow × Management  
Charge = \$ 54.44

### Method 3. Average of Capital Managed and Value of Production Methods

Management Charge Per Cow: Capital Managed \$ 137.46

Management Charge Per Cow: Value of Production + \$ 54.44

Average Value = \$ 184.82 ÷ 2 = \$ 92.41

<sup>1</sup> Percent calf crop raised in a typical year

<sup>2</sup> Include cull cows only if cull income is shared and reduce heifer percentage by percent replacement.  
Example: (50% - 15% replacement = 35% heifers)

