

Cow-Calf Herd Grazing Lease Alternatives Evaluator: User Manual

The purpose of these decision aids is to assist lessor (landowner) and lessee (tenant) evaluate lease pricing alternatives to develop long term win-win lease agreements. Spreadsheets facilitate organization of all owned and leased land acres and carrying capacity information. Then evaluate lease pricing for alternatives. Cow-calf grazing lease alternatives for economic evaluation are described as follows:

1. **Lease per acre** – the simplest pricing lease is the per acre lease. The lessor is insured a lease irrespective of the production variability associated and grazing land or cattle performance. The lessor should expect lower lease income with this alternative than AUM lease arrangements where variability in the grazing and cattle performance will determine the lease paid.
2. **Animal unit month (AUM)** – shifts grazing production risk to the lessor. This lease alternative does require an accurate monthly cattle inventory and agreement on AU equivalent by cattle category of cattle.
3. To accommodate many grazing situations, it is necessary to **combine AUM lease for grazing with acres for hay production.**

The written lease provisions and continued landowner-tenant communications can address many risk issues like drought conditions. Having good current and historical production data supports favorable lease agreements for both parties.

Lessor economic factors of considerations when pricing a grazing lease.

- a) The landowner's overall goal is to maximize **net land lease income** after payment of land ownership costs while insuring maintenance of resources.
- b) Insure lessee is capable to make lease payment in a timely manner.
- c) Short term lease is more secure than long term if performance falters or there is increase on lease rates in the market. However, longer term leases are favorable for the lessee.
- d) Lessee is accountable to maintain the grazing resources and improvements. In other words, operates a grazing system in a sustainable manner.
- e) Lessee keeps accurate and timely monthly stocking rate records to calculate payment fees that measure grazing productivity and resource management.
- f) Maintains complete records on fertilizer, chemical and other inputs use.
- g) Lessor has a cost sharing arrangement with tenant to maintain improvements and additions that enhance productivity and value of the land resource.
- h) Lessor needs accurate carrying capacity information to monitor lessor's grazing management system. Minimum and maximum stocking rates and flexibility need to be in the lease agreement.
- i) This information will also provide stocking information for open space valuation (OSV) exemption compliance.

Lessee or Tenants Economic Considerations

- a) Longer term grazing leases are more favorable.
- b) Being able to adjust stocking rate for changing weather and market conditions requires flexibility in lease stocking rate and seasonal timing of grazing.
- c) Grazing capacity (acres/AU) or productivity are primary considerations in pricing.
- d) Monthly or seasonal grazing capacity is very valuable.
- e) Willingness of lessor to maintain improvements and cost share is necessary.
- f) Lessor participation cattle management for compensation needs to be spelled out.

A **written lease agreement** that addresses issues to protect both parties and facilitates communication for both parties is essential. See references for guides for preparation of a grazing lease and check list to insure lease agreements are complete.

Grazing Lease Evaluation Decision Aids

These decision aids focus on grazing leased land production capacity, lease income, and costs associated with lease alternatives. Recording data will generate payments and provide a measure of productivity and net income. These decision aids address questions for both the lessor or landowner and the lessee or tenant information and data record needs. This information will support preparing the written lease and monitoring ongoing lease implementation. These decision aids are useful for both parties involved in grazing leases. Income to the lessor is a cost to the lessee.

Grazing Land Use Inventory and Lease Economic Evaluation of Alternatives

1. Land Inventory Owned and Leased and Lease Check List

- a. Owner Land Inventory and Land Productivity – Owned and Leased
- b. Owned and Lease Land Productivity Summary by Lease
- c. Total Ranch Land Lease Income Calculator
- d. Written Grazing Lease Check List for Land Owner and Tenant

2. Lease Price Evaluator

- a. Acre Versus AUM Lease Costs and Net Income
- b. AUM lessee and Lessor Cost and Income Calculator

These decision aids assist in organizing data that describes current grazing land use – owned and leased. Definitions that follow will assist in organization of grazing and cost information. Many ranches have multiple leases. Getting all productivity and costs “down on paper” allows comparison. Grazing land productivity measured in AUM of grazing is often quite variable these spreadsheets help organize production information. The data required will show where data is lacking to properly measure productivity, income or cost.

The lease price evaluator decision aid compares an acre lease to an AU grazing lease. Irrespective of the lease basis acre or AU these decision aids provide a way to compare alternative pricing. These decision aids are data intensive but also facilitate doing “what if” evaluation and lease price negotiations. Including property tax provides a way to see the impact of this tax on the lessor’s net income.

The lease check list facilitates the review of the written lease to insure all areas are covered and ongoing performance by both the lessor and lessee. Or to improve the lease (see reference list for information sources).

Spreadsheet based record systems are available for recording monthly data to provide monthly and annual summaries for leases. See the manual titled “**Cow-Calf Grazing Lease Records to Measure Productivity Income and Costs**”. Spreadsheets are provided to help evaluate the grazing lease alternatives and record data to calculate monthly and annual lease payments. The purpose is to facilitate the collection of relevant data and evaluate alternatives so both the lessor and lessee have informed decisions.

Spreadsheet Operation

All cells in blue are for input values. Cells in black have protected equations. Spreadsheets are not password protected which allows users modification to meet their needs.

Definitions Related to Grazing Leases

Ranch improvements include fences, gates, water gaps, cattle working facilities including corrals and chutes, buildings like barns, storage facilities, watering equipment and facilities ranging from wells and pumps to livestock watering tanks or ponds. Repairs and maintenance are an ongoing ranch expense on improvements.

The grazing lease contract spells out expensing sharing responsibility for the lessor and lessee for repairs, maintenance or investment in improvements. For example, for fencing repairs often the lessor pays for material and tenant pays for labor and management costs.

Land Use Definitions

Grazing acres -- cow-calf enterprise definitions of forage terms - The Forage and Grazing Terminology Committee American Forage and Grassland Council, 1991.

Native unimproved (rangeland and meadows) - Land on which the indigenous vegetation is predominantly grass, grass-like plants, forbs or shrubs and is managed as a natural ecosystem.

Native improved - Land devoted to the production of introduced forages for harvest primarily by grazing; managed as a natural ecosystem.

Improved perennial - Land devoted to the production of introduced perennial forage for harvest primarily by grazing. Improved perennial pasture land must be managed to arrest success processes.

Annual pasture or forage crop - A crop of cultivated annual plants or plant parts produced to be grazed or harvested for use as feed for animals.

Woodlands (grazeable forestland) - Forest lands that produce, at least periodically, sufficient understory vegetation that can be grazed. Forage is indigenous or, if introduced, it is managed as though it were indigenous.

Crop aftermath - Forage remaining on the land as a consequence of harvest of a crop. At times, crop residues are used for grazing (i.e. rice stubble or wheat stubble). To calculate the acreage, multiply the number of acres times the time spent grazing. For example, 100 acres of crop aftermath grazed for 2 months would yield 16.7 acres ($100 \times 2/12 = 16.7$).

Lease equivalent - Lease equivalent is the annual rate that could be received if the owned grazing land were leased (i.e. opportunity cost or earnings foregone by using the land instead of leasing it). When the economic cost of grazing is calculated, the net lease (discussed below) is added to the financial grazing costs to determine total economic grazing cost.

Lessor cost - Lessor costs are expenses that would be incurred by the lessor, in the event that the land is leased, to maintain the land in suitable grazing condition. The amount and types of costs included here are dependent on the type of lease agreement that would be signed. Examples of lessor costs include the owner's share of fertilizer, weed control, and mowing expense. Land tax would also be an expense that most landowners pay in the event that they leased their land. These expenses should reflect the actual expenses incurred as shown in the financial analysis. When net lease is calculated, this value is subtracted from the lease equivalence.

Opportunity cost owned grazing land (net lease equivalent) - The net lease equivalent is the difference between the expected lease rate of owned grazing land (lease equivalent) and the costs that would be incurred by the lessor(lessor) in the event that the land is leased. The net lease equivalent figure is added to the financial grazing costs to determine total economic grazing cost.

Definition: Animal Unit Months (AUM)*

Grazing plans and stocking records can use Animal Unit Months (AUMs) to describe the carrying capacity of a pasture. This is a common system used to standardize the forage needs of cattle and the forage available to measure grazing land productivity or needs for planning purpose or to measure productivity. Grazing leases priced by AUM require the monthly cattle head by category to calculate the monthly payment by the lessee.

In this system, a 1,000 lb. animal is considered 1 AU making a 600 lb. animal 0.6 AU and a 1,200 lb. animal 1.2 AU. A 1,200 lb. cow and 300 lb. calf would be 1.5 AU.

Furthermore, 780 lb. of air dried grass is considered 1 AUM. This means a 1,000 lb. animal would consume 780 lb. of air dried forage (approximately 90% of the moisture removed) in one month's time.

Using the suggested alternative grazing record spreadsheets require recording monthly head of cattle by their AUM to measure productivity and also to monitor stocking rate. This information facilitates the prevention of overstocking for protection of the grazing land resource. Historical AUM use should be part of the lease negotiations and communications for both parties.

*University of Nebraska Lincoln “Sustainable Pasture Usage – Understanding AUMs (Animal Unit Months)”, Institute of Agriculture and Natural Resources (<http://inar.unl.edu>), May 2013

List of Lessor Costs Associated with Grazing Land and Improvements Leases

Repair and Maintenance*

- Fences, Gates and Water Gaps
- Working Facilities -Corrals
- Working Equipment - Chute, Scales, etc.
- Buildings - Barns, House, etc.
- Water System
- Roads

Ownership Costs

- Depreciation of Improvements Investments
- Property Tax
- Property Damages

Insurance

- Land Owner Liability

Pasture Brush and Weed Control*

- Chemical
- Contract Services

Operating Cost Associated with Land Lease*

- Utilities
- Administrative and Legal Management
- Operating Costs and Depreciation Cost of Vehicle and Equipment

Improved Pasture or Hay Land*

- Chemical Weed Control
- Fertilizer
- Machinery

*Cost share must be spelled out in the written agreement.

References for Preparing a Written Grazing Lease

Grazing Leases Publications Information Sources – From Dr. Tiffany Dowell Lashmet, Assistant Professor and Extension Specialist

<https://agrilife.org/texasaglaw/published-materials/>

Key Publications:

Dowell, Tiffany, “Negotiating a Fair Cash Lease Rate in Texas” Texas A&M AgriLife Extension, EAG-052,3/18.

Dowell, Tiffany, “Five Strands: A landowner’s Guide to Fence Law in Texas”, Texas A&M AgriLife Extension EAG-029, 1/17.

Dowell, Tiffany, “Texas Grazing Lease Checklist”, Texas A&M AgriLife Extension EAG-029, 5/14.

Dowell, Tiffany et. Al. “Rancher Agriculture Leasing Handbook: Grazing, Hunting and livestock”

Sources of Grazing Lease Price Data

National Ag Statistics Service website with lease rates by

state/region/county: [https://www.nass.usda.gov/Surveys/Guide to NASS Surveys/Cash Rents by County/](https://www.nass.usda.gov/Surveys/Guide%20to%20NASS%20Surveys/Cash%20Rents%20by%20County/)

Texas Chapter of American Society of Farm Managers & Rural Appraisers Value of Land report with lease rates: <http://www.txasfmra.com/wp-content/uploads/Texas-Rural-Land-Value-Trends-2016-Final.pdf>

Grazing Record Spreadsheet

University of Nebraska – Lincoln – UNL BEEF

Grazing Record Spreadsheet for Documentation and Planning

<https://beef.unl.edu/cattleproduction/grazing-records-spreadsheet-documentation-planning>