



Texas Agricultural Extension Service
The Texas A&M University System

B-1582

Leasing Texas Rangelands



Leasing Texas Rangelands

Larry D. White and Robert E. Whitson*

Rangelands make up almost 90 million acres, or about 59 percent of the land surface of Texas. Traditionally, these lands have been managed for livestock grazing and wildlife production, but they are also the major watershed for the state's water resources and provide open spaces for enjoyment by Texans and by visitors to our state. The diverse nature of rangelands allows for food and fiber production, water, wildlife and game production, recreation, nature tourism, and aesthetic satisfaction. Based on the characteristics of their own range resources and the economic market, ranchers can profit from the consumer satisfaction their rangelands provide.

Most Texas rangelands are privately owned, and the landowner possesses the rights of exclusion—that is, the rights to set conditions and terms of access to the property or its services and to determine which enterprises will be conducted on the property. The choice of enterprises depends primarily on the market, the owner's objectives, and the characteristics of the range. With ownership comes the opportunity to operate or lease the various enterprises. The use of leased rangeland for livestock and wildlife production is an important consideration for many producers in Texas. Many current operations include the use of leased lands.

The use of leased lands will probably continue to increase because of several factors, including:

- The need to expand the size of a ranching organization to achieve economic efficiency.

- Decreasing ranch size because of inheritance and purchases.
- The fact that the cost of ranchland is considerably more than its value in agricultural productivity.
- The expanding market for short-term consumer uses (hunting, nature tourism, recreation, etc.).

The same basic requirements apply to all leases. In this publication, the grazing lease is used to illustrate important points for lessee and lessor to consider for any type of leasing activity.

Many rangeland owners consider leasing undesirable for several reasons, including:

- The landowner loses some control over resource uses.
- Range resources and facilities may not be maintained in the same manner that the owner-operator would.
- Contractual arrangements reduce flexibility.
- Lessor and lessee objectives are different, requiring increased communication and arbitration between parties (Figure 1).

However, leasing can be a desirable alternative if:

- Both parties work together and resolve potential conflicts in advance.
- Both parties understand and respect each other's needs, problems, and viewpoints so that appropriate actions are identified and a continuing positive relationship exists.

* Professor and Extension Range Specialist, Texas Agricultural Extension Service, and Professor and Head, Department of Rangeland Ecology and Management, The Texas A&M University System.



Figure 1. Poor management can result in destruction of the resource . A good lease should spell out adequate resource requirements and be priced so that a lessee is not "forced" into overgrazing to meet short-term debt obligations.

- Both parties are able to provide input without undue and impractical demands from either party.
- Each party understands the terms of the agreement and the procedures identified for resolving conflicts.
- The lease agreement is written and/or reviewed by proper legal authority.

General Considerations for Developing a Grazing Lease

The use of leased lands for livestock production is an important consideration for both the lessee and the absentee landowner. The agreement by two parties regarding the use of a given tract of land is critically important because of the impact on the land resource, the livestock operation, and wildlife populations. Once the parties have agreed in principle to the terms and conditions included in the agreement, the lease should be written, prepared, or reviewed by an attorney familiar with agricultural leases. There is no

single “best” leasing agreement that can be recommended. Differences between individuals and resources must be considered. The purpose of this publication is to discuss some of the aspects of leasing lands you should consider when developing a written lease.

A good leasing arrangement is fair to both (or all) parties and is one that will provide for long-term maintenance and/or improvement to all ranch resources. The tenant or lessee must make a fair return for labor, investments, and management. The landowner must receive a fair return for the investment in land and improvements. Stocking rate considerations are a critically important component of a lease because of the impact that stocking rates have on the profitability of the livestock operation and upon the long-term maintenance of the range resource.

Landowners should select a tenant who is knowledgeable about the management of range-land. Consider the past education, business, and financial experience of the potential tenant and inspect the tenant’s existing operation. Most importantly, review the tenant’s proposed



Figure 2. "Hiring" a good lessee who manages your property to meet your needs produces a stable range resource. A good lease is a viable opportunity for the lessor and the lessee.

management plan for the use of the property (Figure 2). This plan should reflect the goals of the landowner as well as the tenant and should include an initial inventory of resources. The resources available as well as the goals of each party must be understood if a proper lease is to be developed.

It is very important for the prospective tenant to understand the landowner's goals regarding the property. You cannot develop a good management plan without understanding what the owner wants to accomplish. It is also important to understand the owner's level of knowledge about range, livestock, and wildlife management. For example, changes occur slowly in range condition and, without a good understanding, the owner and tenant may have a difference of opinion regarding the accomplishment of specific goals. Each party also needs to have a good understanding of the other's financial ability to meet the cash flow obligations.

The management plan should include an agreement by both parties to an initial stocking rate, and how this rate can be adjusted over time to meet changing forage availabilities. The lease should also specify an annual maximum and minimum number of animal units that can be carried on the property. The definition of an animal unit must be provided for various classes and kinds of livestock that may be

grazed on the property (Table 1). Provision should also be made for both parties to understand the method to calculate actual numbers of livestock for periodic use of the property (less than 1 year). Additional considerations include planning for desirable wildlife populations and the means to achieve wildlife harvest.

The objective of both parties, before identifying the lease price and the length of the lease, should be to understand the resource, both party's goals and objectives, the level of knowledge of range management, and the mutually agreeable range and wildlife management plan. At this point in the negotiations, the landowner should have developed a good understanding of how a prospective tenant would fit into the future plans for the property. The tenant should

Table 1. Animal Unit Equivalent for Different Classes of Livestock.

<i>Class of stock</i>	<i>Animal unit equivalent</i>
<i>Mature cow*</i>	<i>1.00</i>
<i>Mature cow with calf to wean</i>	<i>1.00</i>
<i>Heifer/steers 400 to 600 lb</i>	<i>0.5</i>
<i>Heifer/steers 600 to 800 lb</i>	<i>0.7</i>
<i>Bulls - mature</i>	<i>1.25</i>
<i>Horses</i>	<i>1.25</i>

*Based on a 1,000 lb animal; if 1,200 lb animal then A.U.E. = 1.20.

have a good understanding of the resource and how the goals of the owner fit into his or her goals for the property. The two parties should be ready to negotiate the length of the lease as well as the lease payment for grazing and/or wildlife uses.

The Lease Price

There are several methods for arriving at a fair lease price. Both parties should identify a range of prices that are “commonly” paid for comparable property, but you must keep in mind that few leases or properties are the same. There are always differences between “comparable” properties. These differences should be understood if comparable lease prices are to be correctly interpreted. Allowing a group of prospective tenants to “bid” on lease property is one method to use. However, bidding may result in a tenant who isn’t right for a given property and a price that cannot be sustained over time unless high stocking rates are used or the wildlife is over-harvested. The initial negotiated grazing lease price should be based upon a conservative annual “average” stocking rate that can be expressed as an annual price per acre or animal unit. However the lease price is expressed, it should have as its basis the animal unit rather than a fixed “per acre” price that does not change with changes in annual forage production. Properly priced leases will allow a tenant to make a profit without the pressure to over-stock.

One of the most important components of the lease is an economic incentive for a tenant to adjust stocking rates up or down depending upon annual forage conditions. It may be beneficial to both parties to significantly reduce stocking rates and/or to completely de-stock the property in cases of extreme drought. However, no lessee can afford to de-stock and continue to pay a fixed annual lease price. An objective of both parties should be to keep a knowledgeable, efficient tenant in business over the long term. A landlord shouldn’t be expected to subsidize an inefficient operator or to continue with an operator who damages the resource.

The procedure for increasing or decreasing the annual stocking rate must be identified. Rainfall records and forage surveys can be used to document changing conditions for deciding appropriate stocking rate adjustments. The adjustment from “average” should be done with

mutual consent, but with provisions to allow an objective third party to make recommendations for adjustments if needed. Stocking rate adjustments are important for resource protection as well as for providing some economic flexibility to the tenant.

Wildlife harvest must also be agreed upon if hunting or other wildlife uses are included in the lease. Many leases are “cheapened” by overselling the available wildlife resource—that is, the tenant sub-leases the hunting to reduce the total cost of the lease. In short-run situations, there is considerable economic pressure to over-harvest the game population.

Length of the Lease

There is no single rule for easily identifying the correct length of a grazing lease. In general, a longer lease term allows a tenant to receive some of the benefits from management that improves the resource. However, a tenant who is not properly managing the property may become an obstacle for the landlord who is trying to improve the land resource.

Fixing a lease period for longer than a 3- to 5-year period can become a problem if a change in tenant becomes necessary. The length of a lease is less of a problem if the landlord has experience with a tenant and the lease in question is not the first experience for both parties. While lease prices can be adjusted for inflation or other variables, when the lease is longer than 5 years, these adjustments have to be very carefully structured to avoid potential disputes. With long-term leases (longer than 5 years), both parties may experience unforeseen problems with finances, health, or death or simply develop differences in goals that may lead to conflict. Therefore, a well defined 3- to 5-year lease may be most appropriate.

Options for lease renewals, as a part of the lease agreement, are not recommended because of the potential for conflicts due to unforeseen circumstances. Unforeseen circumstances could include financial ability to pay, health problems, drought, changes in goals, or personality conflicts. As long as both parties remain satisfied, a lease can easily be renewed prior to the end of a lease period for an agreeable term with appropriate changes in stocking rates and/or lease prices.

Other Considerations

Conservation practices that are to be implemented, including each party's responsibility, should be clearly identified in the lease. Brush management alternatives, as well as other improvements such as water development or fencing, should be identified and located on aerial photos of the ranch. The landowner should be willing to cost-share longer term investments to ensure that the tenant has an economic incentive to invest in certain practices. The underlying principle should be to provide both parties an economic incentive to adopt viable improvement practices. Short-term leases, 3 years or less, make it harder to provide an economic incentive for the tenant to adopt a conservation practice.

The size of the livestock grazed should also be considered when establishing stocking rates. A cow isn't just a cow. Larger cows eat a great deal more forage than small ones. Use a mutually agreeable conversion to fit the kind and classes of animals that might be grazed (Table 1).

The landowner and tenant should become mutual cooperators with the local Soil and Water Conservation District. Incentives can be identified to encourage the tenant to attend educational activities sponsored by the Texas Agricultural Extension Service (or other appropriate educational activities). The tenant could also be provided with an economic incentive to "try" a new practice that might prove to be useful. However, until a practice is proven, the economic and technical adoption of a given practice should not be the sole responsibility of the tenant.

Developing an Equitable Grazing Lease

The written grazing lease serves as a guide to both parties regarding:

- Responsibilities.
- Conditions.
- Payment.
- Operations.
- Land and facilities description.
- Allowable stocking rate.
- Access.

- Use by others.
- Arbitration procedure.
- Obligations of heirs.
- Other matters particular to the individual situation.

A successful grazing lease for both parties requires a "partnership" with total ranch planning. The proposed length of the "partnership" greatly affects planning and operations. Leases that include more than one product should have subsections addressing management, pricing, and responsibilities for each enterprise, even though a flat rate annual payment may be used.

The written grazing lease agreement serves three purposes:

- It stimulates the lessor and lessee to examine all parts of the lease arrangement (total ranch plan and individual enterprise budgets) and agree on lease provisions before the ranch is leased.
- It provides a clearer understanding between the parties and increases security for each.
- It results in a more efficient ranch with greater profit potential to both parties.

Economic Considerations

The lessee may be pressured to expand the cow herd size when rangeland is leased for a fixed amount per acre. The lease is a fixed cost (overhead) that does not change with the production level or the number of cows grazed. The more units grazed, the lower the fixed cost per unit will be, and the incentive will be to over-stock.

Leasing on a per animal basis becomes a variable cost that changes as the production level changes. As stocking rates increase on a fixed amount of land, less forage is available per animal unit, reducing animal performance and increasing the need for costly feed replacements. This increase in variable costs, coupled with the lower animal performance, reduces the net returns per animal unit. Thus, increasing variable costs provides an incentive for the tenant **not** to increase the stocking rate beyond the carrying capacity of the resource. A fixed per-acre lease is cheaper per animal grazed and is an incentive to overstock to increase profits, risking damage to the range resource.

The total cost associated with a given beef production level is the sum of the fixed and variable costs. Total income is the number of production units times the value per unit times the production per unit. “Profit or loss” is the difference between total income and total expenses.

Range Considerations

The range resource is the basis for current and future livestock and wildlife lease operations. The amount, kind, and quality of vegetation determines the carrying capacity for animal production. The seasonal and annual forage production varies in relation to rainfall effectiveness and past and current management.

By using a “user fee” concept, a rancher is providing certain resources for lessee use and conversion into salable products. The lessee assumes the primary risk associated with weather, market, and production of the product unless a cost/profit-share lease agreement is used. The lessor should receive an equitable price for the resources provided relative to the net product value.

The basic factor affecting net product value is the forage resource’s capability to support the number of animals grazed. Decisions on stocking rate are critical to short- and long-term resource production and range improvement costs. A lease should be based on a per-animal-unit basis (Table 1) for the following reasons:

- Increasing animal units grazed beyond resource capability will decrease individual animal performance (Figure 3). This decreases the potential income per animal so that a lessee has no incentive to over-graze or over-harvest the ranch resources leased. Weather conditions affect the amount of forage grown; so the proper stocking rate requires annual if not seasonal adjustments.
- Drought years are the most critical for maintaining resource productivity and net returns to the lessee. A fixed lease rate per acre forces a lessee to maintain higher stocking rates and hope for rain to meet lease payments. On an animal unit basis, the lessee has greater flexibility in reducing animal numbers relative to the forage supply without affecting potential net

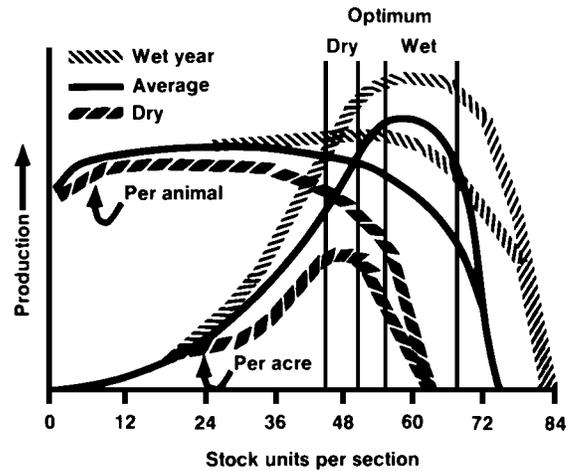


Figure 3. The potential relationship between animal production per head and per section for wet to dry rainfall years is shown here. The production per section was calculated from the expected effect of increasing stocking rate on individual animal performance. Values are hypothetical and should not be used to adjust stocking rate.

income per animal unit. This results in less income stability to the lessor, but more stability to the lessee. Generally, a lease should specify a minimum and maximum stocking rate to include drought considerations. The minimum stocking rate provides a stable minimum income to the lessor, whereas the maximum protects the resource.

- Leases on a per-animal-unit basis result in the lessee paying for the actual resources used. The lessor must know the lessee’s plans for the kind of stock to be grazed, numbers in each class, the months to be grazed, etc., before the total lease amount can be determined. For example, using Table 1, the total lease fee can be calculated for the cow/calf enterprise stockflow as shown in Table 2. Using the animal unit equivalents (AUE) and the stock/flow inventory, calculate the animal unit months (AUM’s) of grazing, total and divide by the lease rate per animal unit month to determine the amount due.

The “proper” stocking rate depends on ranch goals and should vary with the forage supply—that is, wet versus dry years. Maximum total

Table 2. Stockflow (Number of Animals on Ranch Throughout Year).

Class of animal	Months											
	O	N	D	J	F	M	A	M	J	J	A	S
Mature cow	348	348	348	348	348	348	348	348	348	348	348	348
Heifers 400 to 600 lb.	113	113	113	113	113	113	113	113	74	74	74	74
Heifers 600 to 800 lb.	74	74	74	74	74	74	74	74	74	74	74	74
Steers 400 to 600 lb.	20	20	20	20	20	20	20	0	0	0	0	0
Bulls	23	23	23	23	23	23	23	23	20	20	20	20
Horse	2	2	2	2	2	2	2	2	2	2	2	2

productivity (or total gain in animal products) occurs at approximately half the maximum number of animals that could be grazed. At lower stocking rates, total production is depressed by the low number of animals, and at higher stocking rates it is depressed by the poor performance of the individual animals. In the short term, the maximum profit occurs at the stocking intensity where the margin between gross returns and variable costs is greatest. However, there is an area where small changes in stocking intensity do not significantly affect profitability. This zone of maximum profit always occurs at stocking intensities that are lower than those for maximum biological productivity. If highest profit is the ranch goal, then profits will be greater if the gain per animal is maximized (variable costs such as interest, veterinary services, death loss, and decline in livestock prices are high relative to selling price). However, if variable costs are low relative to selling price, profits are greater if gain per acre is maximized at the expense of a decrease in gain per animal.

A stockflow would be constructed each year and updated as changes occur so that an appropriate total fee and stocking rate can be determined. Thus, a lessor ensures that the livestock grazed are within the minimum/maximum agreed stocking rate and the appropriate lease fee is collected for the actual resources used.

Accountability regarding the actual stocking rate depends on honesty between the lessee and lessor, but the lessor can do periodic counts, especially when livestock are worked. Absentee landowners have greater difficulty maintaining accurate livestock counts, especially in rough

terrain. In most cases, verifying the number of animal units being grazed is not a problem. Spot-checking the numbers and kind and classes of livestock at roundup, during shipping, during visits to the ranch, or by helicopter is effective.

Minimum Lease Price

A minimum lease price is established by the lessor and the lessee, followed by arbitration. Landowners should not consider a lease price that does not at least pay land taxes, management expenses, and depreciation of improvements used by the lessee. The lessee, in turn, should not consider a minimum payment that does not allow a reasonable profit for expected price and livestock production conditions. A cost-return budget proposed by each party is used to identify the minimum (landowner) and maximum (lessee) payment possible.

Variable-Price Lease

A variable-price lease is most valuable to long-term leases (5 to 10 years). Both parties have problems with a fixed price for long-term leases, so a lease price may be renegotiated yearly or a variable pricing structure established in the original lease. Economic and range conditions that quickly change can result in economic disaster to the lessee or landowner who is locked into a high or low lease price. For the landowner, the principal advantage of developing a variable lease program is the economic incentive for proper range management, which produces a maximum sustained rental income from the resource over time. A

possible disadvantage to the landowner can result from variations in annual returns. A principal benefit to a lessee from a variable lease includes fewer problems involving economic survival during periods of economic stress. The manager can concentrate on longer-term managerial considerations rather than short-term problems brought about by a combination of low cattle prices and fixed lease payments.

Key steps in developing a variable lease include:

- Determining what constitutes the proper use of rangeland vegetation.
- Estimating the maximum land charge the lessee could pay on an animal-unit basis and make a reasonable profit under expected price and production conditions.
- Re-evaluating changes in rangeland productivity over time.
- Considering livestock price deviation from expected levels.
- Making the terms of the lease sufficient to allow range and livestock management practices to become effective.

Summary

Developing a good lease requires considerable effort. The lease must be fair to both parties, and both parties must eventually meet their desired goals or problems will probably

develop. No single aspect of the development of a good lease is more important than correctly identifying a stocking rate, identifying a workable management plan, and providing for economic incentives to adopt conservation practices that include a flexible stocking rate. A reasonable length of time for the lease should be carefully discussed, but unforeseen problems can develop with a long-term lease. One of the most important factors associated with long-term use of leased property involves good communication and a clear understanding of the goals of each party. A written lease agreement with resources and services provided by both parties is essential. The procedure for pricing the lease should be an animal unit basis rather than an area basis. Maximum and minimum stocking rates for "normal" and drought years should be agreed upon. Regularly update the stock flow plan and actual stock flow to determine the total payment due to the lessor. Range improvements that increase animal performance or stocking rate should be reflected in the total lease payment (not necessarily paid entirely by lessee). A variable lease price procedure allows the landowner to assume some of the economic risks associated with an enterprise but with higher income in good years compared to a fixed lease.

A combination of these recommended procedures and a good choice of potential tenants should result in better management of all resources and equitable income to both parties.